# MENTORS'

## BBA (IBA) ADMISSION TEST PREPARATION BOOK

**This Book Contains**

A comprehensive Vocabulary List (2500 words with synonyms, Bengali meanings and antonyms)

**Detailed Discussion on each test-relevant subject area**

| | |
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| **01** | Diagnostic Test with Answers |
| **03** | Model Tests with Answers |
| **23** | Real Questions of IBA with Solutions |
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| | Special Tips for Interview |
| **03** | BUP Admission TEST Questions with Answer. |


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পরিবেশক

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# Preface

MENTORS' এর পক্ষ থেকে সবাইকে শুভেচ্ছা। দেশের দ্রুত অগ্রসরমান অর্থনীতির সাথে তাল মিলিয়ে ব্যবসায় প্রশাসন Graduate দেরও চাহিদা বাড়ছে জ্যামিতিক হারে। মেধাবীদের একটা বড় অংশই আজ Business বা BBA degree নেবার জন্য উদগ্রীব। Infact শিল্প সমৃদ্ধির এই যুগে ব্যবসায় প্রশাসন বিষয়টি সারা দুনিয়াতেই এখন প্রধান বিষয়। এ কারণেই Career Oriented শিক্ষার্থীরা ব্যবসায় প্রশাসন degree নিতে অধীর আগ্রহী। দেশের সেরা শিক্ষা প্রতিষ্ঠান হিসাবে শিক্ষার্থীদের পছন্দের তালিকার শীর্ষে রয়েছে IBA। আসন সংখ্যা সীমিত হবার কারণে অনেক মেধাবী শিক্ষার্থীও এখানে ভর্তির সুযোগ থেকে বঞ্চিত হয়। ব্যবসায় প্রশাসন ডিগ্রীর জন্য দেশে রয়েছে বেশ কিছু Private ও স্বায়ত্বশাসিত প্রতিষ্ঠান যাদের যথেষ্ট সুনাম রয়েছে দেশে ও বিদেশে। অনেক ক্ষেত্রে দেখা যায় শিক্ষার্থীরা সস্তায় বিভিন্ন বিশ্ববিদ্যালয়গুলোতে গিয়ে BBA ডিগ্রী নেয়। শিক্ষা মানুষের সবচেয়ে বড় সম্পদ এবং এটা সারাজীবনের জন্য। আপনি কোথায় ভর্তি হচেছন সেই Institution সমন্ধে জেনে ভর্তি হবেন। প্রথমেই যা বিবেচ্য, ঐ প্রতিষ্ঠান থেকে শিক্ষা গ্রহণ করে চাকুরীর বাজারে আপনার গ্রহণযোগ্যতা কতটুকু? এটা সর্ব ক্ষেত্রেই প্রযোজ্য যে, শিক্ষার জন্য দরকার মেধা নতুবা অর্থ কিংবা দুটোই। আপনি মেধা পরীক্ষায় উত্তীর্ণ হয়ে IBA তে ভর্তি হন - নতুবা অর্থ এবং কিছুটা মেধা দিয়ে BUP, NSU, BRAC, IUB, AIUB, EWU এর মত ভাল প্রতিষ্ঠানে ভর্তি হতে পারেন।

সকল প্রতিষ্ঠানের BBA ভর্তি পরীক্ষার syllabus প্রায় একই ধরণের। সুতরাং এই একটি বই থেকেই পরীক্ষার্থীরা সমস্ত বিশ্ববিদ্যালয়গুলোর ভর্তি পরীক্ষার ধারণা পাবে। যে কোন গাইড বই থেকে শিক্ষার্থীরা বিগত বছরগুলোর প্রশ্নের সম্যক ধারণা নেয়। শিক্ষার্থীদের উচিত যত বেশী পারা যায় তত প্রশ্নের সমাধান করা। শিক্ষার্থীদের উচিত এই Integrated গাইডটির প্রতিটি অংশ পুংখানুপুংখভাবে পড়া ও সমস্ত প্রশ্নগুলো অনুশীলন করা।

সাধারণত BBA তে ভর্তি পরীক্ষায় তিনটি সেকশন থাকে। ইংরেজী, অংক ও এনালাইটিকাল এবিলিটি। ইংরেজীতে সাধারণ গ্রামারের পাশাপাশি শূন্যস্থান পূরন, Vocabulary, Reading Comprehension, Analogy, Written Essay ইত্যাদি থাকে। অংকে থাকে Basic Algebra, Arithmetic ও Basic geometry। মূলত ভর্তি পরীক্ষায় HSC level এর English এবং SSC level এর Mathematics থাকে। Analytical হচ্ছে English এবং Mathematics এর সমণ্বয় যাতে পরীক্ষার্থীদের General IQ ও এর Basic Aptitude এর Test নেওয়া হয়। ভর্তি পরীক্ষায় উর্ত্তীণ হতে হলে পরীক্ষার্থীকে প্রতিটি section এ নূন্যতম 40%- 60% marks পেতে হবে। সাধারণত overall (60-70)% নম্বর পেলে written test এ উর্ত্তীণ হওয়া যাবে। Written test উর্ত্তীণদের Viva পরীক্ষা নেওয়া হয়। Viva-য় সাধারণত শিক্ষার্থীর Physical Appearance, বুদ্ধিদীপ্ততা, subject knowledge ইত্যাদি দেখা হয়। এখানে সঠিক ইংরেজীতে কথা বলাও একটি গুরুত্বপূর্ন বিষয়।

IBA ভর্তির জন্য এই বইটি একটি অন্যতম সহায়ক গ্রন্থ নিঃসন্দেহে। শিক্ষার্থীরা ওইঅ ভর্তি হতে চাইলে তাদেরকে অন্যান্য বইয়ের ও সাহায্য নিতে হবে অবশ্যই। এক্ষেত্রে SAT-1 এবং TOEFL বই অনুশীলন করলে ভাল ফলাফল পাওয়া যাবে। প্রতি বছরই Guide টির পরিমার্জন, সংযোজন ও পরিবর্তন করা হয়। তার পরেও Guide টিতে কিছু ভুল ত্রুটি থাকা অসম্ভব নয়। বইটির উন্নতির জন্য আমরা যে কোন Suggestion সানন্দে গ্রহন করবো। বইটি পড়ে শিক্ষার্থীদের কোন সংশয় থাকলে আমাদের সাথে সাথে যোগাযোগ করতে পারেন।

IBA এর পাশাপাশি BUP, NSU, BRAC, IUB, AIUB, EWU প্রভৃতি Private বিশ্ববিদ্যালয়ের BBA এর ডিগ্রী যথেষ্ট সমাদৃত দেশে এবং বিদেশে। এই বইয়ের প্রশ্নগুলো এবং Review Section গুলো পড়লে শিক্ষার্থীদের ঐসব বিশ্ববিদ্যালয়ের ভর্তি পরীক্ষার Syllabus ও complete হয়ে যাবে। বাড়তি Preparation এর জন্য আমাদের Private Universities Guide Book টি ও পড়তে পারেন।

সবার ভবিষ্যত সুন্দর হউক।

MENTORS' Family

# বইটির ব্যবহার - নির্দেশনা

প্রথমেই BBA-র ভর্তি পরীক্ষার প্রশ্নপত্রে না গিয়ে আপনি Guide এর Diagnostic test টি দেন। এখান থেকেই আপনি বুঝতে পারবেন আপনার strengths এবং weakness গুলো। Guide টির Review section গুলো ভালোভাবে পড়ে নিন। Review section গুলোতে আপনি অনেক tips পাবেন ভর্তি পরীক্ষা related বিষয়গুলোর। Review section গুলোতে অনেক practice exercise আছে সেগুলো সমাধান করবেন। ভর্তি পরীক্ষার বিভিন্ন section এ পারদর্শী হয়ে উঠবেন এখান থেকেই। Review section এর পরবর্তী ধাপে BBA ভর্তি পরীক্ষার Question গুলোর সমাধান করবেন। সর্বশেষে আপনি self assessment test গুলো দিবেন। এই test গুলোতে আপনি 60%+ নম্বর পেলে বুঝবেন আপনি BBA তে ভর্তি পরীক্ষায় পাশের জন্য উপযুক্ত। Guide টির পাশাপাশি শিক্ষার্থীদের উচিত হবে SAT-ও, TOEFL বই গুলোর সাহায্য নেয়া।

Guide টির শেষ অধ্যায়ে viva পরীক্ষার Tips দেওয়া আছে ওগুলো লক্ষ্য রাখবেন। IBA-তে যেহেতু Written test এর উর্ত্তীনদেরও Viva নেওয়া হয় তাই এজন্যও দরকার সঠিক প্রস্তুতি। Guide টির শেষাংশে দুটি Mock Viva দেওয়া আছে। নিজেকে সেভাবে তৈরী করুন।

- প্রথমে Diagnostic Test টি দিন।
- Guide টির Review Section গুলো পড়ুন।
- Review Section গুলোর Practice Exercise গুলো সামাধান করুন।
- BBA ভর্তি পরীক্ষার Question গুলোর সমাধান করুন।
- Self Assessment Test গুলো দিন।

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# বিদেশে ভর্তি ও ভিসা

প্রিয় শিক্ষার্থী,

শুভেচ্ছা। MENTORS' এর সেবা গ্রহণ করার জন্য আপনাকে ধন্যবাদ জানাচ্ছি। MENTORS' থেকে আমরা ২০০৮ সাল থেকে বাংলাদেশের মেধাবী শিক্ষার্থীদের উচ্চ শিক্ষার জন্য পৃথিবীর বিভিন্ন দেশের বিভিন্ন শিক্ষা প্রতিষ্ঠানে পাঠাচ্ছি। উচ্চ শিক্ষার জন্য বিদেশী শিক্ষা প্রতিষ্ঠানে ভর্তি ও ভিসার জন্য শিক্ষার্থীরা সঠিক দিক নির্দেশনার অভাবে অনেক ক্ষেত্রেই Misguided হন। ফলশ্রুতিতে তাদের সময় ও অর্থের পাশাপাশি নিজস্ব Career ধ্বংস হবার উপক্রম হয়। ভর্তি, ভিসা ও স্কলারশীপের জন্য MENTORS' এক অন্যন্য প্রতিষ্ঠান। MENTORS' এবছর থেকে শিক্ষার্থীও অভিভাবকদের জন্য বিদেশে উচ্চ শিক্ষার জন্য ONE STOP SERVICE চালু করেছে। ONE STOP SERVICE এ যা থাকছে:

শিক্ষার্থীর শিক্ষাগত যোগ্যতা, Ambition ও Guardian দের আর্থিক সামর্থ্য বিবেচনা করে শিক্ষার্থীকে তার পছন্দনীয় দেশ এবং এক বা একাধিক উচ্চশিক্ষা প্রতিষ্ঠানের জন্য নির্বাচিত করা হয়। Country ও Institutes নির্বাচন করার পর নিম্মোক্ত ধাপগুলো অনুসরন করা হচ্ছে।

1. **Language Proficiency:** শিক্ষার্থীদেরকে MENTORS' থেকে IELTS, TOEFL, SAT বা GMAT, GRE করানো হবে। কাঙ্খিত ফল লাভের জন্য ONE STOP SERVICE এর শিক্ষার্থীদের বিশেষ যত্ন নেওয়া হচ্ছে।
2. **Admission & Scholarship:** Language এবং Aptitude Test (প্রয়োজনে) এর Result শিক্ষাপ্রতিষ্ঠানে পাঠিয়ে ভর্তি Confirm করা হয়। Institute এর সকল শর্তাদি এবং fund ability-র উপর base করে শিক্ষার্থীকে Scholarship-এর জন্য সাহায্য করা হয়।
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## SUBJECT AREAS TO BE COVERED

1. ***LANGUAGE AND COMMUNICATION:*** *This section will test your proficiency in English Language. Grammatical Questions, Vocabulary, Analogy, Sentence Completion, Reading comprehension etc. are the elements of this section. You need to go through TOEFL, GRE, GMAT etc. to get good marks in this section.*

2. ***MATHEMATICS:*** *This section will test your basic concept of mathematics. There can be Arithmetic, Algebraic, and Geometric questions. Basically the questions will follow the standard of SAT-1 and GMAT.*

3. ***ANALYTICAL ABILITY:*** *This section will test your aptitude and reasoning ability. Critical reasoning, puzzle questions, data sufficiency, and IQ questions are parts of this section. The questions will follow the standard of GRE and GMAT.*

4. ***WRITTEN ENGLISH:*** *This section will test your ability to write English in a proper way. Essays, paragraphs, thematic writing, sentence re-writing, argument writing, dialogue writing etc. are the elements of this section.*

***Marks Distribution (Tentative) for IBA admission Test***

| | | |
|---|---|---|
| *Language & communication* | *30/25 questions* | *0/25 marks* |
| *Mathematics* | *30 questions* | *30 marks* |
| *Analytical Ability* | *30/25/20 questions* | *30/25/20 marks* |
| *Written English* | *2 / 3 types* | *25/20 marks* |

5. ***VIVA:*** *If one is qualified in the written part, there will be an interview to test his/her English speaking ability and appearance.*

***Questions for other institutes will be based on the same syllabus, but the mark distribution pattern may vary. See the questions of other institutes to get the idea of the question patterns.***

# Chapter 1
# Judge Yourself

## Diagnostic Test

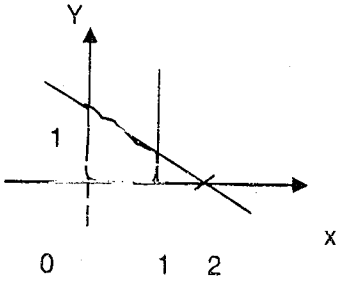
**Total Time : 120 Minutes**

এই বইটি পড়া শুরু করার পূর্বে আপনার জানা উচিত হবে BBA এর ভর্তি পরীক্ষায় কি ধরণের প্রশ্ন আসে। পরীক্ষার প্রশ্নের ধারা সম্বন্ধে আপনাকে ধারণা দেওয়ার জন্য এই Diagnostic Test অন্তর্ভূক্ত করা হয়েছে। এই এবংঃ দিলে আপনি বুঝতে পারবেন কি পরিমাণ সময় কোন অংশে ব্যয় করতে হবে। একই সাথে আপনি আপনার সবল ও দুর্বল দিকগুলো ভালভাবে বুঝতে পারবেন।

## Section I: MATHEMATICS

**30 Questions** **30 Marks**

1. Elena purchased brand X pens for $4.00 a piece and brand Y pens for $2.80 a piece. If Elena purchased a total of 12 of these pens for $42.00, how many brand X pens did she purchase?
   A. 4 B. 5 C. 6 D. 7 E. 8
2. The population of a bacteria culture doubles every 2 minutes. Approximately how many minutes will it take for the population to grow from 1,000 to 500,000 bacteria?
   A. 10 B. 12 C. 14 D. 16 E. 18
3. If Jack had twice the amount of money that he has, he would have exactly the amount necessary to buy 3 hamburgers at $0.96 a piece and 2 milk shakes at $1.28 a piece. How much money does Jack have?
   A. $1.60 B. $2.24 C. $2.72 D. $3.36 E. $5.44
4. If a photocopier makes 2 copies in $\frac{1}{3}$ second, then at the same rate, how many copies does it make in 4 minutes?
   A. 360 B. 480 C. 576 D. 720 E. 1440
5. If m is an integer such that $(-2)^{2m} = 2^{9-m}$, then m =
   A. 1 B. 2 C. 3 D. 4 E. 6
6. If $0 \le x \le 4$ and $y < 12$, which of the following CANNOT be the value of xy?
   A. –2 B. 0 C. 6 D. 24 E. 48
7. A straight pipe 1 yard in length was marked off in fourths and also in thirds. If the pipe was then cut into separate pieces at each of these markings, which of the following gives all the different lengths of the pieces, in fractions of a yard?
   A. $\frac{1}{6}$ and $\frac{1}{4}$ only B. $\frac{1}{4}$ and $\frac{1}{3}$ only C. $\frac{1}{6}, \frac{1}{4}$, and $\frac{1}{3}$ only
   D. $\frac{1}{12}, \frac{1}{6}$, and $\frac{1}{4}$ only E $\frac{1}{12}, \frac{1}{6}$, and $\frac{1}{3}$ only
8. Today Rose is twice as old as Sam and Sam is 3 years younger than Tina. If Rose, Sam, and Tina are all alive 4 years from today, which of the following must be true on that day?
   I. Rose is twice as old as Sam II. Sam is 3 years younger than TinaIII. Rose is older than Tina
   A. I only B. II only C. III only D. I and II E. II and III
9. A fruit-salad mixture consists of apples, peaches, and grapes in the ratio 6 : 5 : 2, respectively, by weight. If 39 pounds of the mixture is prepared, the mixture includes how many more pounds of apples than grapes?
   A. 15 B. 12 C. 9 D. 6 E. 4
10. A certain car increased its average speed by 5 miles per hour in each successive 5 minute interval after tne first interval. If in the first 5 minute interval its average speed was 20 miles per hour, how many miles did the car travel in the third 5 minute interval?
    A. 1.0 B. 1.5 C. 2.0 D. 2.5 E. 3.0



11. In the rectangular coordinate system above, the shaded region is bounded by straight lines. Which of the following is NOT an equation of one of the boundary lines?
A. x = 0 B. y =0 C. x = 1 D. x – y = 0 E. x + 2y = 2

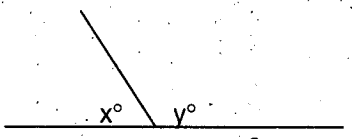
12. If the perimeter of a rectangular garden plot is 34 feet and its area is 60 square feet, what is the length of each of the longer sides?
A. 5 ft B. 6ft C. 10 ft D. 12 ft E. 15 ft

13. Thirty percent of the members of a swim club have passed the lifesaving test. Among the members who have not passed the test, 12 have taken the preparatory course and 30 have not taken the course. How many members are there in the swim club?
A. 60 B. 80 C. 100 D. 120 E. 140

14. If a basketball team scores an average (arithmetic mean) of x points per game for n games and then scores y points in its next game, what is the team's average score for the n + 1 games?
A. $\frac{nx+y}{n+1}$ B. $x+\frac{y}{n+1}$ C. $x+\frac{x}{n}$ D. $\frac{n(x+y)}{n+1}$ E. $\frac{x+ny}{n+1}$

15. An author received \$0.80 in royalties for each of the first 100,000 copies of her book sold, and \$0.60 in royalties for each additional copy sold. If she received a total of \$260,000 in royalties, how many copies of her book were sold?
A. 130,000 B. 300,000 C. 380,000 D. 400,000 E. 420,000

16. Starting from Town S, Fred rode his bicycle 8 miles due east, 3 miles due south, 2 miles due west, and 11 miles due north, finally stopping at Town T. If the entire region is flat, what is the straight-line distance, in miles, between Towns S and T?
A. 10 B. $8\sqrt{2}$ C. $\sqrt{157}$ D. 14 E. 24




17. In the figure above, if $\frac{x}{x+y}=\frac{3}{8}$, then x =
A. 60 B. 67.5 C. 72 D. 108 E. 112.5

18. On 3 sales John has received commissions of \$240, \$80, and \$110, and he has 1 additional sale pending. If John is to receive an average (arithmetic mean) commission of exactly \$150 on the 4 sales, then the 4th commission must be
A. \$164 B. \$170 C. \$175 D. \$182 E. \$185

19. The annual budget of a certain college is to be shown on a circle graph. If the size of each sector of the graph is to be proportional to the amount of the budget it represents, how many degrees of the circle should be used to represent an item that is 15 percent of the budget?
A. 15° B. 36° C. 54° D. 90° E. 150°

20. If x * y = xy – 2(x + y) for all integers x and y, then 2 * (-3) =
A. – 16 B. –11 C. – 4 D. 4 E. 16

21. A hiker walked for two days. On the second day the hiker walked 2 hours longer and at an average speed 1 mile per hour faster than he walked on the first day. If during the two days he walked a total of 64 miles and spent a total of 18 hours walking, what was his average speed on the first day?
A. 2 mph B. 3 mph C. 4 mph D. 5 mph E. 6 mph

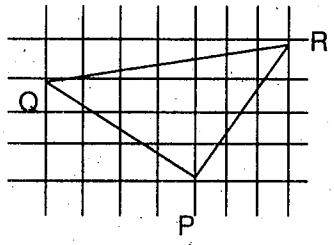
22. The cost to rent a small bus for a trip is x dollars, which is to be shared equally among the people taking the trip. If 10 people take the trip rather than 16, how many more dollars, in terms of x, will it cost per person?
A. $\frac{x}{6}$ B. $\frac{x}{10}$ C. $\frac{x}{16}$ D. $\frac{3x}{40}$ E. $\frac{3x}{80}$

23. A certain electronic component is sold in boxes of 54 for $16.20 and in boxes of 27 for $13.20. A customer who needed only 54 components for a project had to buy 2 boxes of 27 because boxes of 54 were unavailable. Approximately how much more did the customer pay for each component due to the unavailability of the larger boxes?
A. $0.33 B. $0.19 C. $0.11 D. $0.06 E. $.003

24. In the equation $kx + y = 16$, k is a constant. If $y = 6$ when $x = 2$, what is the value of y when $x = 4$?
A. –8 B. –4 C. 11/4 D 5 E. 12

25. The greatest prime factor of 162 is
A. 2 B. 3 C. 29 D. 31 E. 81

26. If the cost of x gallons of unleaded gasoline priced at $1.24 per gallon equals the cost of x + 2 gallons of regular gasoline priced at $1.16 per gallon, then x =
A. 29.0 B. 24.0 C. 16.5 D. 14.5 E. 12.0




27. In the figure above, the grid consists of unit squares and P , Q, and R points of intersection of the grid as shown. What is the perimeter of triangular region PQR?
A. 15 B. 17 C. 20 D. $5 + 5\sqrt{2}$ E. $10 + 5\sqrt{2}$

28. If a and b are integers and $a - b = 6$, then $a + b$ CANNOT be
A. 0 B. less than 6 C. greater than 6 D. an even integer E. an odd integer

29. City Y has installed 30 parking meters at 15 foot intervals along a straight street. What is the number of feet between the first meter and the last meter?
A. 200 B. 420 C. 435 D. 450 E. 465

30. $11 \times 13 \times 17 \times 19 \times 23$
A decrease of 1 in which of the factors above would result in the greatest decrease in the product?
A. 11 B. 13 C. 17 D. 19 E. 23

## Section II: LANGUAGE & COMMUNICATION

**30 Questions** **30 Marks**

***Reading Comprehension***

The microbe hunters dominated the first two decades of this century. These hunters had tracked down one after another of the microbes responsible for the most dreaded scourges of many centuries: tuberculosis, cholera, and diphtheria. But there remained some terrible diseases for which no microbe could be incriminated: scurvy, pellagra, rickets, and beriberi. Then it was discovered that these diseases were caused by the lack of vitamins, a trace substance in the diet. The diseases could be prevented or cured by consuming foods that contained the vitamins. So, in the decades of the 1920's and 1930's, nutrition became a science and the vitamin hunters replaced the microbe hunters.

In the 1940's and 1950's, biochemists strived to learn why each of the vitamins was essential for health. They discovered that key enzymes in metabolism depend on one or another of the vitamins as coenzymes to perform the chemistry that provides cells with energy for growth and function. Now, these enzyme hunters occupied center stage.
You are aware that a new breed of hunters who are tracking genes—the blueprints for each of the enzymes—and are discovering the defective genes that cause inherited diseases—diabetes,

cystic fibrosis, has replaced the enzyme hunters. These gene hunters, or genetic engineers, use recombinant DNA technology to identify and clone genes and introduce them into bacterial cells and plants to create factories for the massive production of hormones and vaccines for medicine and for better crops for agriculture. Biotechnology has become a multibillion-dollar industry.
In view of the inexorable progress in science, we can expect that the gene hunters will be replaced in the spotlight. When and by whom? Which kind of hunter will dominate the scene in the last decade of our waning century and in the early decades of the next? I wonder whether the hunters who will occupy the spotlight will be neurobiologists who apply the techniques of the enzyme and gene hunters to the functions of the brain. What to call them? The head hunters will return to them later.

1. What is the main topic of the passage?
   (A) The microbe hunters (B) The potential of genetic engineering
   (C) The progress of modern medical research (D) The discovery of enzymes
2. The word "incriminated" in line 3 is closest in meaning to
   (A)investigated (B) blamed (C)eliminated (D) produced
3. Which of the following can be cured by a change in diet?
   (A) Tuberculosis (B) Cholera (C) Cystic fibrosis (D) Pellagra
4. The word "strived" in line 7 is closest in meaning to
   (A) failed (B) tried (C) experimented (D) studied
5. How do vitamins influence health?
   (A) They are necessary for some enzymes to function
   (B) They protect the body from microbes.
   (C) They keep food from spoiling.
   (D) They are broken down by cells to produce energy.
6. In the third paragraph, the author compares cells that have been genetically altered by bio technicians to
   (A) gardens (B) factories (C) hunters (D) spotlights
7. The phrase "occupy the spotlight" in line 19 is closest in meaning to
   (A) receive the most attention (B) go the furthest (C) conquer territory (D) lighten the load
8. The author implies that the most important medical research topic of the future will be
   (A) the functions of the brain (B) inherited diseases
   (C) the operation of vitamins (D) the structure of genes
9. Which of the following best describes the author's tone in the last paragraph of the passage?
   (A) Critical (B) Speculative (C) Appreciative (D) Emotional
10. With which of the following statements would the author be most likely to agree?
   (A)The focus of medical research will change in the next two decades.
   (B)Medical breakthroughs often depend on luck.
   (C)Medical research throughout the twentieth century has been dominated by microbe hunters.
   (D)Most diseases are caused by defective genes.

***Direction : Find the proper synonym of the following words.***

11. ***Neutralize***
    a. entangle b. strengthen c. combat d. counteract e. converse
12. ***Insinuate***
    a. destroy b. accuse c. do wrong d. hint e. release
13. ***Illicit***
    a. unlawful b. overpowering c. ill-advised d. small-scale e. unreadable
14. ***Benign***
    a. kind b. fatal c. ignorant d. contagious e. decorative
15. ***Reverie***
    a. abusive language b. love song c. backward d. daydream e. holy man
16. ***Apprehensive***
    a. fearful b. firm c. curious d. sincere e. quiet

17. ***Fluctuate***
a. fall b. waver c. impede d. rise e. hasten

18. ***Auxiliary***
a. greedy b. assisting c. self-governing d. military e. well-proportioned

19. ***Facile***
a. extraordinary b. queer c. easy d. breakable e. impossible

20. ***Augment***
a. increase b. predict c. disclose d. challenge e. testify

***Direction : Fill in the gaps with appropriate expressions***

21. _____ Boomers, New Yorker & Helvetia, Shabab Prefers Boomers most.
A) From B) Between C) Of D) Among E) For

22. Ashik is probably _____
A) the highest CGPA of 7th Batch B) one of most popular guy in IBA hostel
C) the most CGPA of 7th batch D) does not ever comes late for his class
E) going to have lunch with Adnan

23. Mr. Harry Potter is very _____ his daughter's education
A) concerning for B) concerned about C) concerned in D) concerned of E) None

24. Batul insisted that her scholastic record _____ Bill Clinton's
A) was better or at least as good as B) was better than or at least as good as
C) was as good or better than D) at its least was as good as E) None

25. The guy at the door made us ____ our identification card before we were allowed to enter the Jukebox Concert.
A) showed B) show C) showing D) to show E) None

***Direction : Detect the erroneous part of each of the following sentences. If there is no error, answer is (E).***

26. Sugar provide (A) man with quick energy, but (B) it has neither vitamins, minerals, nor (C) other body-building (D) material.

27. Before baking a cake (A), you should (B) list, gather (C), and measure (D) the ingredients.

28. Only by taking a balanced (A) diet regularly (B) can Naomi loose (C) some weight (D).

29. When it comes (A) to Badminton, Sadat was (B) so (C) good (D) as Raihan.

30. Raj managed (A) to jumping out (B) of the window before the police could trace (C) where he had been hiding (D).

## Section III: ANALYTICAL ABILITY

**10 Questions** **10 Marks**

***QUESTIONS 1-5***

Within an array there are four significant positions— positions I through 4. When the elements forming the array—R, S, T, and U—are stationary, there is one of them in each of the four positions. Periodically, there are reordering of the elements in accordance with the following laws:

During each reordering, exactly one of the elements, the anchor, retains its position, and each of the other three elements moves to a new position.
Only R and U can be anchors.
U can be the anchor only when it is in position 3 or position 4.
Any reordering anchored by U must be followed by a reordering anchored by R.
R can be the anchor in up to two consecutive reordering.
Any given array consists of the four elements in the order of their positions from 1 through 4.

1. If U R T S is an array and if exactly one reordering occurs, which of the following can be the array resulting from that reordering?
   (A) R S T U (B) S R T U (C) S R U T
   (D) T R U S (E) U S R T
2. If R T S U is an array and if exactly one reordering occurs, with the result that S is in position 1, which of the following must also be a result of that reordering?
   (A) R is in position 3 (B) R is in position 4 (C) T is in position 2
   (D) T is in position 3 (E) U is in position 3.
3. If R moves from position 4 to position 1 in the course of a reordering, which of the following can also occur in the course of that reordering?
   (A) S moves from position 1 to position 2 (B) S moves from position 1 to position 3
   (C) S moves from position 1 to position 4 (D) T moves from position 2 to position 3
   (E) T moves from position 3 to position 2.
4. If the array U S T R has resulted from a reordering, and if exactly two additional reordering occur, with the result that S is again in position 2, which of the following must have been the array after the first of the two additional reordering?
   (A) STUR (B) T S U R (C) T U S R (D) U R S T (E) U T R S
5. If S R U T is an array and if exactly two reordering occur, the first anchored by R and the second anchored by U, which of the following must be true directly after the second of the two reordering?
   (A) R is in position 1. (B) S is in position 1. (C) R is in position 2.
   (D) T is in position 3. (E) U is in position 4.
6. "Some men are certainly tall, others are certainly not tall; but of intermediate men, we should say, 'tall'? Yes, I think so or no, I shouldn't be inclined to call him tall."
   Which of the following most accurately reflects the intention of the writer of the above?
   (A) Men intermediately tall, partake of "tallness" to a moderate degree.
   (B) To call men tall who are not strikingly so must be to use the concept with undue imprecision.
   (C) Every empirical concept has a degree of vagueness.
   (D) There is really no need to be as indecisive as the writer of the above.
   (E) Calling someone tall or short depends upon one's whim.
7. Average family income is right were it was 20 years ago, even though in most families these days, husbands and wives are working.
   The above statement implies all of the following except:
   A) Even though nominal family income may have increased, inflation has risen at an equal rate
   B) More husbands and wives are working today than 20 years ago.
   C) It was more prevalent for one spouse to work 20 years ago than today
   D) Wives earn more than husbands today
   E) The price level was lower 20 years ago
8. Every town with a pool hall has its share of unsavory characters. This is because the pool hall attracts gamblers and all gamblers are unsavory.
   Which of the following, if true, cannot be inferred from the above?
   A) All gamblers are unsavory B) All pool halls attract gamblers
   C) Every town has unsavory characters D) All gamblers are attracted by pool halls
   E) An explanation of what attract gamblers
9. Over the last 20 years the rate of increase in total production in Workland has been second to none in the world. However , the growth is more modest when calculated per capita of total population. Over the last ten years progress has been much slower .
   If the information above is accurate, which of the following must be true?
   (A) Workland has a very large population.
   (B) Productivity per capita has not grown as fast during the past ten years.
   (C) Total production has increased faster than population growth.
   (D) The birth rate has declined.
   (E) The per capita production rate has not declined.

10. Between 1940 an 1945-gasoline consumption in the U.S. dropped about 35 percent because of wartime rationing. In the same period, lung cancer in U.S. white males declined by approximately the same percentage. Between 1914 and 1950 lung cancer mortality increased nineteen fold and the rate of gasoline consumption increased at the same rate. Which of the following facts, if true, would weaken the above argument?
    (A) For each of the years between 1939 and 1949, lung cancer among urban blacks in the United States remained at the same level.
    (B) The amount of lead in gasoline increased between 1916 and 1944
    (C) After 1950 gasoline consumption jumped.
    (D) During World War II, people suffering from cancer were forbidden to drive.
    (E) Women first began driving in large numbers between 1941 and 1951

## Section IV: WRITTEN ENGLISH

1. **Rewrite the following sentences in concise form** **2 × 5 = 10 marks**
    a. I've come early in order that I can talk to you.
    b. There is a program tonight that you might like.
    c. I wonder if you could help me for a few minutes.
    d. The mist hung like a veil and obscured the top of the mountain.
    e. There are several causes of malnutrition, one of which is vitamin deficiency.

2. Write an short essay incorporating the ideas of two different groups– **Nuclear Technology** **[10 marks]**

### *Answer Key: Diagnostic Test*

***Section I: Mathematics***

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1.D | 2. E | 3. C | 4. E | 5. C | 6. E | 7. D | 8. B | 9.B | 10. D |
| 11. D | 12. D | 13. A | 14. A | 15. D | 16. A | 17. B | 18. B | 19. C | 20. C |
| 21. B | 22. E | 23. B | 24. B | 25. B | 26. A | 27. E | 28. E | 29. C | 30. A |

***Section II: Language & Communication***

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1.C | 2. B | 3. D | 4. B | 5. A | 6. B | 7. A | 8. A | 9.B | 10. A |
| 11. D | 12. D | 13. A | 14. A | 15. D | 16. A | 17. B | 18. B | 19. C | 20. C |
| 21. B | 22. E | 23. B | 24. B | 25. B | 26. A | 27. E | 28. E | 29. C | 30. B |

***Section III: Analytical Ability***

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1.C | 2. D | 3. A | 4. A | 5. E | 6. C | 7. A | 8. C | 9.B | 10. A |

***Section IV : Written English***

1. ***Rewrite the following sentences in concise form***
    *a. I've come early to talk to you.*
    *b. You may like tonight's program*
    *c. Could you help me for a few minutes?*
    *d. The veil like mist obscured the top of the mountain.*
    *e. Vitamin deficiency is also one of the cause of malnutrition.*

2. ***Nuclear Technology***

*Many people are afraid of nuclear technology because of the dangers associated with its use. And belligerent (যুদ্ধংদেহী) leaders and terrorists (সন্ত্রাসী) may cause great human disaster by the use of nuclear weapons of mass-destruction (ব্যাপক ধ্বংসাত্মক). Though it is true that nuclear weapons pose the greatest threat to life, I personally support the use of nuclear technology for constructive (গঠনমূলক) purposes can bring human benefit.*

*The most worrying aspect (শংকার বিষয়) of nuclear technology is its use for military purposes by many high and mighty countries. Enough atomic bombs have already been made which are capable of completely destroying the planet. An increasing number of countries now have nuclear weapon or have the technology required to make such bombs, and there is an ongoing debate*

*about how to control the threat of nuclear weapon. After the fall of Russia, many Russian scientists have found their nuclear technology expertise is in high demand in countries that have an ambition with nuclear technology. Many believe that, at that time, technology has been secretly made available to many aspiring countries like, Iraq, North Korea, India, Pakistan and others. Experts believe that now a days, many confrontational (সংঘাতপ্রবন) countries and terrorist organizations have nuclear know how which they could use for terrorism and mass destruction. However, it would have been better if it had never been used to create nuclear weapons. If life on earth is to continue, we must control nuclear weapons of mass destruction*

*Nuclear power stations provide an important source of cheap power in many industrialized nations and some developing countries. Nuclear technology has been widely used in medical science. X-rays are widely used technology that helps medical diagnosis. Radio therapy is widely used to help cure some diseases such as cancer. Controlled and Measured radiation is applied on malignant (ক্ষতিকারক) cancerous cells to kill them or stop their spreading.*

*In conclusion, nuclear technology certainly has many positive uses and offers lots of promise. But we have to bear in mind that it is dangerous if not handled properly or goes in the wrong hands. Nuclear technology should be only used for the true benefit of the mankind. If we forget this, we have to take the responsibility of our own destiny.*

**Section IV: Written English**

1. ***Rewrite the following sentences in concise form***
   a. *I've come early to talk to you.*
   b. *You may like tonight's program*
   c. *Could you help me for a few minutes?*
   d. *The veil like mist obscured the top of the mountain.*
   e. *Vitamin deficiency is also one of the **causes** of malnutrition.*

2. ***Nuclear Technology***

Many people are afraid of nuclear technology because of the dangers associated with its use. And belligerent (যুদ্ধংদেহী) leaders and terrorists (সন্ত্রাসী) may cause great human disaster by the use of nuclear weapons of mass-destruction (ব্যাপক ধ্বংসাত্মক). Though it is true that nuclear weapons pose the greatest threat to life, I personally support the use of nuclear technology for constructive (গঠনমুলক) purposes can bring human benefit.

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# Chapter 2
# Language and Communication

**Vocabulary**

**Analogy**

**Sentence Completion**

**Grammar**

**Reading Comprehension**

# Vocabulary

Vocabulary অর্থ শব্দ ভান্ডার বা শব্দসম্ভার। বর্তমান বিশ্বের প্রতিযোগিতামূলক জীবনের প্রতিটি ক্ষেত্রে Vocabulary এর গুরুত্ব অনস্বীকার্য। শুধু পরীক্ষায় ভাল করার জন্য নয় Vocabulary এর প্রয়োজন আজ দৈনন্দিন জীবনের প্রতিটি ক্ষেত্রে। কোনভাবেই একে এড়িয়ে যাওয়ার উপায় নেই। তাই সবার প্রতি আমাদের পরামর্শ অত্যন্ত Structured পদ্ধতিতে এই বইয়ের Vocabulary list টি পড়ে ফেলুন এবং যত বেশি সম্ভব শব্দ মনে রাখার চেষ্টা করুন।

IBA এর Admission test এর Language and Communication (MCQ English) Section এর শতকরা প্রায় পঞ্চাশ ভাগ প্রশ্ন থাকে Vocabulary নির্ভর এসব প্রশ্নের মধ্যে রয়েছে Synonyms (সমার্থক শব্দ), antonyms (বিপরীত শব্দ), analogy (একই সম্পর্কযুক্ত জোড়া শব্দ), Sentince completion(উপযুক্ত শব্দ দিয়ে শূন্যস্থান পূরন) ইত্যাদি। তাছাড়াও Reading comprehension বোঝার জন্য বা grammatical Questions এর অর্থ বোঝার জন্যও Vocabulary এর প্রয়োজন রয়েছে। Admission test এর Analytical Ability section এর কিছু কিছু প্রশ্নে নির্দিষ্ট কিছু শব্দের অর্থ জানা থাকলে উত্তর বের করা সহজতর হয়। Mathematics Section question pattern বোঝার জন্যও অনেক ক্ষেত্রে Vocabulary অত্যন্ত গুরুত্বপূর্ন। Vocabulary এর দক্ষতার উপর নির্ভর করে Written English section এর essay বা paragraph writing. অর্থাৎ পুরো পরীক্ষার প্রতিটি ক্ষেত্রেই Vocabulary এর গুরুত্ব অনুধাবন করা যায়।

Vocabulary কিভাবে উন্নত করবেন সে ব্যাপারে আমাদের কিছু Suggestion অবশ্যই রয়েছে। তবে একেকজনের শেখার পদ্ধতি একেকরকম হওয়াও বিচিত্র কিছু নয়। শুধু মনে রাখবেন Vocabulary Practice করতে হবে নির্দিষ্ট পদ্ধতিতে এবং অবশ্যই নিয়মিত।

Vocabulary শেখার অন্যতম জনপ্রিয় পদ্ধতি হচ্ছে Flash cards. এই পদ্ধতিতে ছোট একটি কাগজের টুকরোর একদিকে অপরিচিত শব্দটি লিখে অন্যপাশে Synonyms (সমার্থক দুয়েকটি ইংরেজি শব্দ) এবং বাংলা অর্থ লিখতে হয়। এভাবে অনেকগুলো Flash cards তৈরী করতে হয়। তারপর কাগজের টুকরোগুলো একস্থানে নিয়ে (২০/২৫টি একত্রে) একটি stack তৈরী করতে হয়। stack টি পকেটে বা ব্যাগে রেখে অবসর সময়ে উল্টেপাল্টে দেখা যায়। পদ্ধতিটি কার্যকর সন্দেহ নেই। কিন্ত একই সাথে সময়সাপেক্ষ এবং কষ্টকরও বটে। যারা Long term plan নিয়ে Vocabulary শিখতে চায়, তাদের জন্য পদ্ধতিটি চমৎকার। কিন্ত যারা ৪/৫ মাস সময়ের মধ্যে নির্দিষ্ট একটি লক্ষ্য মাথায় রেখে Vocabulary শিখতে চায় তাদের জন্য আমারা বিকল্প একটি পদ্ধতি suggest করতে পারি।

এই বিকল্প পদ্ধতিতে একটি প্যাডের কাগজ নিয়ে কাগজের একপাশে ১০টি অপরিচিত ইংরেজি শব্দ লিখতে হবে। অপর পাশে serial অনুযায়ী synonyms এবং বাংলা অর্থ লিখতে হবে। এভাবে ৬ দিন ৬টি আলাদা কাগজের Vocabulary শিখে ফেলতে হবে এবং সপ্তম দিন আগের ৬টি কাগজের ৬০টি শব্দ revision দিতে হবে। এভাবে প্রতি সপ্তাহে ৬০টি অপরিচিত শব্দ ২টি করে synonyms সহ আরো ১২০টি শব্দ = মোট ১৮০টি শব্দ আনুমানিক ৫০টি common শব্দ =১৩০টি নতুন শব্দ শেখা সম্ভব। এই পদ্ধতিতে ১ মাস (৪ সপ্তাহে ) ১৩০ X ৪ = ৫২০ টি এক ৪ মাসে ৫২০ X ৪ = ২০৮০ টি নতুন শব্দ শেখা সম্ভব সহজেই।

এই বইতে একটি Vocabulary list দেয়া আছে। এই list টিতে প্রায় ২৫০০ টি শব্দ এবং synonyms/ Antomym সহ আরও প্রায় ৫০০০ শব্দ আছে। এই list থেকে random basis এ শব্দ বেছে নিয়ে আমাদের suggested পদ্ধতিতে Vocabulary শিখতে পারেন অথবা list থেকে সরাসরি পড়তে পারেন।

N.B. You will find antonyms where we could put them. Many of the words do not have an antonym in the list as there is no suitable one.

***Reference Books:***

Oxford Dictionary of Synonyms & Antonyms
Barron's GRE
Barron's SAT

# Vocabulary List

| Word | Synonyms | Bengali meaning | Antonyms |
|---|---|---|---|
| Alien (adj) | unfamiliar, strange, foreign | বহিরাগত, পরদেশী | familiar |
| Alienate (Vt) | estrange, disaffect | নিরাসক্ত করা, চটানো | involve |
| Allege (V) | declare, profess, assert | অভিযোগ করা | deny |
| Allegiance (N) | loyalty, fidelity, commitment | কর্তব্য নিষ্ঠা, আনুগত্য | disloyalty |
| Allegory (N) | fable, metaphor | রূপক বর্ননা , প্রতীকাশ্রয়ী কাহিনী | |
| Alleviate (vt) | mitigate, pacify, soothe | লাঘব করা, উপশম করা | aggravate |
| Alliance (n) | Association, coalition | মৈত্রী | seperated |
| Allocate (vt) | assign, distribute | ভাগ করে দেয়া, বন্টন | |
| Allude (Vi) | refer, imply | পরোক্ষভাবে উলেখ করা, ইঙ্গিত করা | |
| Allure (vt) | attract, fascinate, captivate | প্রলুব্ধ করা, মুগ্ধ করা | |
| Allusion (n). | Quotation, reference | পরোক্ষ উল্লেখ | |
| Ally (n). | alliance, league, align | সহযোগী মিত্র | enemy |
| Alter (v) | change, vary, modify | পরিবর্তন করা | maintain |
| Alternate (n) | substitute, switch, rotate | পর্যায়ক্রমে, পালা করে | |
| Alternative (n) | option, another, choice | পরস্পর পরিবর্তন সাপেক্ষ | |
| Altruism (n) | philanthropy, unselfishness | পরার্থবাদ, পরহিতব্রত | selfishness |
| Amalgamate (vt) | combine, incorporate, merge | যুক্ত করা, মিলিত করা | seperate |
| Amass (vt) | accumulate, collect | রাশীকৃত বা পুঞ্জিভুত করা | distribute |
| Amateur (adj) | nonprofessional, unpaid | অপেশাদার, আনাড়ি | professional |
| Ambiguous (adj) | vague, equivocal, uncertain | দ্ব্যর্থক, অনিশ্চিত অর্থ | clear |
| Ambitious (adj) | aspiring, determined | উচ্চাকাঙ্খী, উচ্চাভিলাসী | unmotivated |
| Amenable (adj) | agreeable, acquiescent | প্রতিবেদনশীল, বাধ্য | unwilling |
| Amend (vt) | revise, rectify, alter | উন্নত হওয়া, উন্নতিসাধন করা | worsen |
| Amiable (adj) | congenial, affable, sociable | ত্রুটি সংশোধন করা | disagreeable |
| Amicable (adj) | friendly, harmonious | শান্তিপূর্ন, বন্ধুত্বপূর্ন | disagreeable |
| Ample (adj) | plenty, sufficient | পর্যাপ্ত পরিমান | Insufficient, lacking |
| Amplify (v) | intensify, enlarge, augment | প্রশস্ততর বা পুর্নতর হওয়া | reduce |
| Analogous (adj) | similar, corresponding | অনুরূপ, সদৃশ | different |
| Anecdote (n) | story, tale, yarn | বাস্তব কোন ব্যক্তি বা ঘটনা সম্পর্কে সংক্ষিপ্ত কাহিনী | |
| Anguish (n) | suffering, torment, agony | নিদারুন যন্ত্রনা | content |
| Animated (adj) | lively, vivacious, energetic | জীবন্ত, সজীব, প্রানবন্ত | lifeless |
| Annex (Vt) | take possession of, seize | অধিকার করা, যুক্ত করা | surrender |
| Annihilate (Vt) | destroy, vanish, extinguish | নিশ্চিহ্ন করা, সম্পুর্নরূপে ধবংস করা | protect |
| Annotate (Vt) | gloss, note, interpret | টীকা রচনা করা বা যোগ করা | |
| Annoy (Vt) | irritate, vex, aggravate | অসন্তোষ করা, জ্বালাতন করা | please |

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| Annul (v) | cancel, abolish, repeal | আইন বা চুক্তি বাতিল বা রদ করা অর্কাযকর ঘোষনা | prolong |
| Anomalous (adj) | irregular, abnormal, strange | ব্যতিক্রমী | usual |
| Anomaly (n) | exception | অস্বাভাবিক বা ব্যতিক্রমী বস্তু | usual |
| Anonymous (adj) | unknown, unnamed | নামহীন, অপ্রকাশিত নাম | distinguished |
| Antagonism (N) | opposition, hostility, enmity | সক্রিয় বিরোধীতা | coopeartion |
| Antagonist (N) | opponent, rival, adversary | প্রতিদ্বন্দ্বী, প্রতিপক্ষ | friend |
| Antique (adj) | archaic, obsolete, outdated | প্রাচীন কাল থেকে বিদ্যমান, অতীতের নিদর্শন | new |
| Antiquity (n) | ancient times | প্রাচীন কাল, মহৎ যুগ | |
| Anxious (adj) | worried, concerned, eager | উদ্বিগ্ন, চিন্তিত | relaxed |
| Apathetic (adj) | Indifferent, listless, droopy | সমবেদনা বা আগ্রহহীন, উদাসীন | energetic |
| Aperture (n) | Opening, hole, gap | রন্ধ্র, ফাঁক, ছিদ্র | |
| Apex (n) | acme, summit, zenith, peak | শীর্ষবিন্দু, উচ্চতম বিন্দু | base |
| Apologize (vt) | saying sorry, express regret | দুঃখ প্রকাশ করা | |
| Apparel (n) | attire, garment | পোষাক, আবরন | |
| Appeal (vi/n) | plea,beseech, implore | সনির্বন্ধ আবেদন করা | |
| Applaud (Vt.) | acclaim, clap | করতালি দিয়ে অভিনন্দন | boo |
| Appraise (Vt) | estimate, evaluate, assess | মূল্য নির্ধরিন করা, যোগ্যতা নিরূপন করা | |
| Appreciate (Vt) | welcome, be grateful for | সঠিক মূল্যায়ন করা, প্রভূত মূল্য দেয়া | |
| Apprehend (Vt) | fear; capture, detain | বুঝতে পারা, আশঙ্কা করা, ধরে রাখা | |
| Apprehension (n) | worry, anxiety | উপলব্ধি, চেতনা বোধ | confidence |
| Apprentice (n) | disciple, trainee, learner | শিক্ষানবিশ | |
| Appropriate (adj) | proper, suitable, fitting | যথাযথ, যথোচিত মানান সই | inappropriate |
| Apt (adj) | appropriate, suitable | তীক্ষ্ণ বুদ্ধি, তীক্ষ্ণধী | inappropriate |
| Aptitude (n) | talent, knack, ability | প্রবনতা, স্বাভাবিক বা অর্জিত ক্ষমতা | inability |
| Arable (adj) | farmable, fruitful | চাষযোগ্য | fruitless |
| Arbitration (n) | negotiation, adjudication | সালিশ নিস্পত্তি, মধ্যস্থতা করা | |
| Arbitrator (n) | mediator, arbiter, judge | মধ্যস্থতাকারী, নিস্পত্তি কারী | |
| Archaic (adj) | old, ancient, dated | অপ্রচালিত শব্দ | modern |
| Ardent (adj) | passionate, enthusiastic, fervent, zealous | অতিশয় আকুল, অত্যন্ত উৎসাহী | halfhearted |
| Ardor (n) | enthusiasm, passion, love | আকুলতা উৎসাহ | indifference |
| Arduous (adj) | strenuous, difficult, hard | দুঃসাধ্য, কষ্টকর | easy |
| Arid (adj) | barren, infertile, dry, parched | অনুর্বর, শুস্ক, বৃষ্টিপাতহীন | humid |
| Aristocrat (n) | noble, peer of the realm | অভিজাত শ্রেনীর লোক | common people |
| Armament (n) | guard, munitions, shield | সামরিক বাহিনী ও যুদ্ধাস্ত্র | |
| Armor (n) | protective covering, shield | বর্ম, ধাতব আচ্ছাদন | |

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| Aroma (n) | fragrance, scent, perfume | সৌরভ, সুগন্ধ | bad smell |
| Arouse (vt) | awake, evoke, stimulate | উদ্রেক করা, জাগানো | dampen |
| Array (vt) | order, display, collection | যুদ্ধের জন্য বিন্যস্ত করা | |
| Arrogance (n) | Conceit, haughtyness | ঔদ্ধত্য | humility |
| Arrogant (adj) | haughty, disdainful | উদ্ধত | humble |
| Article (n) | piece of writing, editorial | | |
| Ascend (vi) | climb, rise, soar | আরোহন করা, চড়া | descend |
| Ascent (n) | climb, rise | আরোহন, সমুত্থান | descent |
| Ascertain (vt) | determine, make sure | নিশ্চিত করা, নির্ধারন করা | |
| Ascetic (adj) | austere, rigorous, strict | কৃচ্ছব্রতী কঠোর তপস্বী | hedonistic |
| Aspect (n) | facet, feature, characteristic | রূপ, চেহারা, মুখাবয়ব | |
| Asperse (vt) | slander, malign, insult | কুৎসা, কটাক্ষ | compliment |
| Aspersion (n) | insult | কুৎসা করা, কটাক্ষ করা | compliment, praise |
| Aspiration (n) | avidity, ambition, goal | আকাঙ্খা, উচ্চাকাঙ্খা | aimless |
| Aspire (vi) | crave, yearn, seek, aim | উচ্চাভিলাসী হওয়া | |
| Assail (vt) | attack, assault | প্রচন্ড আঘাত হানা, র্জজরিত করা | protect |
| Assassin (n) | killer, murderer, hired gun | গুপ্তঘাতক, আততায়ী | |
| Assassinate (vt) | kill, shoot, gun down | গোপনে হত্যা করা | |
| Assault (vt. n.) | attack, assail, mugging | আকস্মিক আঘাত | |
| Assemble (vt) | gather, congregate, collect | সমবেত হওয়া, মিলিত হওয়া | disband |
| Assembly (n) | congregation, meeting | সভা, সম্মেলন, সমাবেশ | |
| Assert (vt) | declare, state, avow | দাবী করা, ঘোষনা করা | deny |
| Assess (vt) | estimate, evaluate, review | স্থির করা, ধার্য করা | |
| Assiduous (adj) | diligent, industrious | অধ্যবসায়ী, নিষ্ঠাবান | lazy |
| Assign (vt) | allot, distribute, dispense | বরাদ্দকরা, স্থিরকরা, ধার্য করা | |
| Assimilate (vt) | absorb, incorporate, take in | শোষন করা, অঙ্গীভূত করা | reject |
| Assist (vt) | aid, help, support | সাহায্য বা সহযোগীতা করা | hinder |
| Associate (v) | unite, combine, partner | সংশিষ্ট, সংযুক্ত, জড়িত করা | disconnected |
| Assuage (vt) | alleviate, mitigate, soothe | প্রশমিত করা, উপশম করা | aggravate |
| Astonish (vt) | surprise, astound | বিস্ময় বিহবল করা, চমৎকৃত করা | |
| Astonished (adj) | surprised, amazed | বিস্ময় বিহবল, চমৎকৃত | |
| Astound (vt.) | surprise, astonish | বিস্ময়ে অভিভূত বা স্তম্ভিত করা | |
| Astute (adj) | shrewd, canny, smart | বিচক্ষন, চতুর | stupid |
| Atheism (n) | non-belief, scepticism | নিরীশ্বরবাদ, নাস্তিক্য | faith |
| Attainment (n) | accomplishment, achievement | অর্জন, সিদ্ধি, প্রাপ্তি | failure |
| Attend (vt) | join, be present at | মনোনিবেশ করা | miss |
| Attendant (n) | waiter, assistant | অনুচর, সহচর | |
| Attribute (n) | characteristic, quality, trait | স্বাভাবিক গুন বা ধর্ম | |
| Attrition (n) | wear and tear, abrasion | ঘর্ষন জনিত, ক্ষয় | |
| Audition (n) | test, trial | কণ্ঠস্বর পরীক্ষন | |

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| Auditor (n) | assessor, examiner | শ্রোতা, হিসাবনিরীক্ষক | |
| Augment (vt) | enlarge, increase | বাড়া, বৃদ্ধিপাওয়া, সমৃদ্ধ করা | diminish |
| Aura (n) | atmosphere, mood, feeling | আলৌকিক আভা, সুক্ষ্মতা | |
| Auspicious (adj) | promising, favorable | শুভ, অনুকুল, মাঙ্গলিক | inauspicious |
| Austerity (n) | severity, strictness | কঠোরতা, কঠিন্য, নির্মম নীতি পরায়নতা | gentleness |
| Authentic (adj) | genuine, real, bonafide | খাঁটি, প্রকৃত, যথার্থ | fake, counterfeit |
| Authoritative (adj) | reliable, trustworthy | | unreliable |
| Authorize (vt) | empower, permit, approve | ক্ষমতা দান করা, ক্ষমতা দেওয়া | forbid |
| Autocrat (n) | dictator, tyrant | একনায়ক, স্বৈরশাসন | |
| Autonomy (n) | Independence, sovereignity | স্বায়ত্বশাসন, স্বাতন্ত্র | dependence |
| Avalanche (n) | flood, rush, landslide | তুষারধ্বস, হিমপ্রপাত | |
| Avarice (n) | greed, lust, cupidity | ধনলিপ্সা, লালসা | generosity |
| Avaricious (adj) | greedy, rapacious | লোলুপ, লোভী | generous |
| Aversion (n) | dislike, distaste, hatred | বিরূপতা, অনীহা | liking |
| Avert (vt) | shift, prevent, avoid | | |
| Aviator (n) | pilot | বৈমানিক | |
| Avid (adj) | eager, keen, greedy | উন্মুখ, উৎসুক, লোলুপ | lukewarm, apathetic |
| Avow (vt) | acknowledge, declare, admit, affirm, confirm | অঙ্গীকার করা, প্রকাশ্যে ঘোষনা করা, দোষস্বীকার করা | deny |
| Awe (n. / vt.) | reverence, veneration, dread | ত্রাস, সম্ভ্রম, আতঙ্ক | disdain |
| Awkward (adj) | clumsy, inept, embarrassed | বেমানান, বেঢপ, আনাড়ি | relaxed |
| Axis (N) | shaft, alliance | অক্ষ, অক্ষরেখা | |
| Bait (n) | lure, attraction | টোপ, প্রলোভনের বস্তু | repel |
| Bald (adj) | hairless, receding | টেকো, টাকবিশিষ্ট | |
| Balk (vt) | recoil, cringe, shy away | অন্তরায়, প্রতিবন্ধক | stand your position |
| Ballot (n) | vote, poll | উদ্‌গ্রহনপত্র, ব্যালট | |
| Balmy (adj) | refreshing, mild, temperate, moderate | স্নিগ্ধ, সুখস্পর্শ, উপশাসক | wintry |
| Ban (vt) | prohibit, forbid, outlaw | নিষিদ্ধ ঘোষনা করা, | allow |
| Bandit (n) | robber, pirate | দস্যু, পথতস্কর | |
| Banish (vt) | exile, expel, deport | নির্বাসিত, বিতারিত হওয়া | |
| Bankruptcy (n) | Insolvency, ruin, liquidation | দেউলিয়া | |
| Banquet (n) | Feast, formal meal | ভোজ, সম্ভোজন | |
| Barbarian (n) | uncivilized | অসভ্য, বর্বর | civilized |
| Bare (v. Adj) | exposed, uncovered | অনাবৃত, খালি, উন্মোচিত | covered |
| Barely (adv.) | Merely, hardly, scarcely | রিক্তভাবে, নামমাত্র, স্বল্প | easily |
| Barren (adj) | infertile, arid, unproductive | অনুর্বর, উষর, নিষ্ফলা | fertile |
| Barrier (n) | obstacle, block, barricade | প্রতিবন্ধক | |
| Barter (n. Vt) | trade, exchange, switch | বিনিময়, অদলবদল করা | |
| Bashful (adj.) | coy, shy, timid | লাজুক, ব্রীড়াময় | forward |

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| Bask (vt) | bathe, immerse, lie around | রোদ পোহানো, আগুন পোহানো | |
| Baste (vt.) | lash, beat, stitch, seam | প্রহার করা, পেটানো, টাক দেয়া কাপড়ে? | unpick |
| Batter (vt) | beat, hammer, assault | ভাঙা বা চুর্ন করার জন্য আঘাত করা | |
| Bear (vt) | carry, support, stand | বহন করা, থাকা, ভালুক | |
| Beat (adj) | exhausted, tired, worn out | বারবার আঘাত করা | lively |
| Beforehand (adv) | in advance, earlier | আগে, পূর্বে, আগে ভাগে | later, afterward |
| Beget (vt) | arise, bring about, cause | জন্ম দান করা, কোন কিছুর কারন হওয়া | |
| Begrudge (vt) | grudge, stint, envy | অসন্তুষ্ট বা বিদ্বেষপরায়ন হওয়া | like, admire |
| Beguile (vt) | lure, entice | আকর্ষন করা | repel |
| Belie (vt) | conceal, disprove | ভ্রান্ত বা অসত্য ধারনা দেয়া, প্রমান করতে অসমর্থ | |
| Believer (n) | Faithful, supporter, advocate | ঈমানদার, বিশ্বাসী | skeptic |
| Belittle (vt) | depreciate, despise, disparage | খর্ব করা, মূল্যমান হ্রাস করা | praise |
| Belligerent (adj) | hostile, aggressive | যুদ্ধরত, যুধ্যমান | peaceful, friendly |
| Benefactor (n) | sponsor, patron | জনহিতকারী | detractor |
| Beneficial (adj) | useful, profitable, lucrative | লাভজনক, হিতকর | detrimental |
| Beneficiary (n) | recipient of benefits | উপকার ভোগ কারী | |
| Benevolent (adj) | charitable, generous, kind | দয়ালু, সদাশয় | malevolent |
| Benign (adj) | kind, benevolent | সদয়, সহৃদয়, শান্ত | malignant |
| Berate (vt) | rebuke, scold, reproach | তীব্র, ভৎসনা করা | praise |
| Bereave (vt) | deprive, be devoid of | বঞ্চিত হওয়া, বিচ্ছিন্ন হওয়া | |
| Beset (vt) | overwhelm, besiege, | চারদিক থেকে অবরোধ বা ঘেরাও করা | |
| Besiege (vt) | enclose, surround | অবরোধ করা | make free |
| Bestow (vt) | bequeath, give, confer | | |
| Beverage (n) | drink, brew, potion | পানি ব্যতীত যে কোন পানীয় | |
| Bewilder (vt) | befuddle, confuse, puzzle | হতভম্ব করা, বিভ্রান্ত করা | explain |
| Bias (n) | prejudice, partiality | পক্ষপাত, ঝোঁক | impartiality |
| Bicker (vi) | argue, brawl, quarrel | গুরুত্বহীন বিষয় নিয়ে ঝগড়া করা | agree |
| Bidding (n) | request, command, order | আদেশ, হুকুম | |
| Bigoted (adj) | narrow-minded, dogmatic | সংকীর্নতা বাদী | open-minded |
| Bizarre (adj) | odd, strange, weird | অদ্ভুত, বিচিত্র, উদ্ভট | ordinary |
| Bland (adj) | mild, gentle, insipid | বিনয়ী, নম্র, মৃদু | spicy |
| Bleach (vt) | blanch, whiten | রং করা, সাদা করা | dye |
| Bleak (adj) | desolate, gloomy, austere | মলিন, বিবর্ন, জনহীন | cheerful |
| Bleed (vt) | Hemorrhage, loose blood | রক্তপাত করা, রক্তমোক্ষন করা | |
| Blemish (n. /vt) | defect, flaw, mark, stain | দাগ, ত্রুটি, দোষ | |
| Blend (v. /n) | combine, mix, merge | মিশ্রন করা, মিশানো | |

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| Blessed (adj) | holy, sacred | পবিত্র, মহিমান্বিত | |
| Blessing (n) | wishful approval | আশীর্বাদ দান | |
| Bliss (n) | ecstasy, paradise | পরম সুখ, স্বর্গসুখ | misery |
| Blunder (v) | mistakes, bungle, mess up | বোকার মত ভুল করা | |
| Blunt (adj. v) | obtuse, dull, rounded | ভোঁতা, স্পষ্টবাদী, নীরস | sharp |
| Boast (vi. Vt) | brag, self-praise, show-off | দম্ভোক্তি, দম্ভ | |
| Boastful (adj) | bragging, conceited, arrogant | দাম্ভিক, আত্মম্ভরিতাপূর্ন | modest |
| Bold (adj) | daring, brave | দুর্দমনীয় | cowardly |
| Bondage (n) | repression, opression | দাসত্ব, বন্দীত্ব | free |
| Boon (n) | blessing, benefit | বর, অনুগ্রহ, প্রার্থনা | disadvantage |
| Boredom (n) | tedium, monotony | একঘেয়েজনিত বিরক্ত বা ক্লান্তি | variation |
| Boundless (adj) | vast, limitless | অসীম | restricted |
| Bow (vt. N) | bend over, stoop | অভিবাদন করা | |
| Brag (vt) | boast, talk big, show off | গর্ব করা, বড়াই করা | |
| Brawl (vi) | bicker, quarrel, scuffle | তুমুল ঝগড়া, যুদ্ধ | |
| Breach (n) | opening, break, violate | লঙ্ঘন, ভঙ্গ | abide by, honor |
| Breed (vt. N) | raise; rear, bring up, type | উৎপাদন করা, সন্তান উৎপাদন করা শিক্ষা দেয়া | |
| Breeze (n) | gentle wind, waft | মৃদুমন্দ বায়ু, আধপোড়া কয়লা | |
| Brew (vt) | ferment, plot, prepare | মদ চোলাই করা | |
| Brim (n) | margin, edge, rim | কিনারা | |
| Brink (n) | margin, edge, rim | কিনারা | center |
| Brisk (adj) | swift, energetic, fast | সতেজ, কর্মচঞ্চল, দ্রুত | slow |
| Brittle (adj) | Fragile, breakable | ভঙ্গুর, সহজে বিনষ্ট | sturdy |
| Bruise (vt.n) | contusion, damage | কালশিরে, আঘাতে সৃষ্ট দাগ | |
| Brutal (adj) | atrocious, vicious, cruel | বর্বর,নিষ্ঠুর,নৃশংস | Good-natured |
| Bud (n.v) | sprout, blossom | মুকুল, কলি, কুঁড়ি | |
| Budge (vi /vt) | Move, shift, dislodge | নড়ানো, নড়াচড়া | |
| Bulk (n) | mass, volume | পরিমান, আয়তন, স্তুপ | small, retail |
| Bulky (adj) | cumbersome, large | স্থূলকায়, বিপুল | compact |
| Burglar (n) | thief, robber, intruder | সিধেল চোর | |
| Burning (adj) | on fire, ablaze, aflame | তীব্র, জলন্ত | |
| Burnish (vt) | polish, shine | উজ্জ্বলিত করা, ঘসা মাঝা | tarnish |
| Calamity (n) | catastrophy | চরম দুর্দশা | |
| Caliber (n) | quality, capacity, talent, ability | সামর্থ্য | |
| Canny (adj) | crafty, clever, shrewd | হুশিয়ার,চতুর, বিচক্ষন | naive |
| Capable (adj) | able, competent | শক্তিমান, সমর্থ, সক্ষম | incapable |
| Capacious (adj) | large, voluminous, roomy | সুপরিসর, প্রশস্ত | small, cramped |
| Captivate (vt) | attract, enthrall. fascinate | বিমোহিত করা, বিমুগ্ধ করা, সম্মোহিত করা | repel |
| Captivity (n) | imprisonment. custody, detention | | freedom |

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| Cardinal (adj) | essential, basic, fundamental | প্রয়োজনীয়, অপরিহার্য, অত্যাবশ্যকীয় | secondary, unimportant |
| Carnage (n) | killing, massacre, slaughter | ব্যাপক হত্যা | |
| Carnal (adj) | corporeal, bodily, physical | ইন্দ্রিয়গত, দেহগত | mental |
| Castigate (vt) | criticize, reprimand, scold | নিন্দা করা, অভিযুক্ত করা, দোষারোপ করা | praise |
| Casual (adj) | informal, relaxed | লৌকিকতা বর্জিত | |
| Casualty (n) | victim, sufferer, subject | | |
| Cataclysm (n) | catastrophe, disaster | মহাবিপদ | |
| Catastrophe (n) | calamity, disaster, upheaval | বিপর্যয়, আকস্মিক বিপত্তি, নাটকে বর্নিত দ্বন্দমুহূর্তের পরের অংশ | |
| Categorical (adj) | definite, positive, absolute, unconditional | পরম/ চরম, ব্যাতিক্রম হীন, স্পষ্ট, সন্দেহাতীত, শর্তহীন | conditional |
| Cathedral (n) | church, chapel | গির্জা | |
| Caustic (adj) | abrasive, corrosive, scathing | ক্ষারীয়, ক্ষয়কর | mild |
| Cavern (n) | cave, grotto | খাদ, গভীর গিরিগুহা | |
| Ceaseless (adj) | incessant, endless, continual | বিরতি হীন, অবিরাম | short-lived |
| Celebrity (n) | person of note, star, famous | প্রসিদ্ধ বা বিশিষ্ট ব্যক্তি | |
| Celestial (adj) | astronomical, heavenly | স্বর্গীয়, দৈব | |
| Censure (n. vt) | fault, criticize, reprimand | নিন্দা | praise |
| Ceremonial (n. adj) | Ritual, traditional, formal | আনুষ্ঠানিক | |
| Ceremonious (adj) | formal, solemn, dignified | আড়ম্বর পূর্ন, ভদ্রতাপূর্ন, অনুষ্ঠান পূর্ন | unceremonious |
| Chafe (vt) | rub, scrape, irritate, abrade | ক্ষয় করা, রাগানো, বিরক্ত হওয়া | |
| Charisma (n) | charm, appeal, magnetic personality | আধ্যাত্মিক শক্তি, অনন্য সাধারন প্রতিভা | |
| Charitable (adj) | generous, benevolent | উদার, সদাশয় | tightfisted |
| Chary (adj) | cautious, wary | সর্তক, সাবধানী, সংযত | careless |
| Chaste (adj) | pure, virtuous | সৎ, চরিত্রবতী | dishonest, unfaithful |
| Cherish (vt) | treasure, take care, value | লালন করা, যত্নে পালন | |
| Chide (vt) | blame, rebuke, reproach | ভৎর্সনা করা | praise, appreciate |
| Chirp (vt) | peep, cheep, squeak | পাখির কিচির মিচির | |
| Choke (vt) | strangle, throttle, suffocate | শ্বাস রোধ | |
| Chore (n) | task, job, errand | গৃহস্থলীর ছোট খাটো কাজ, দৈনন্দিন কাজ | |
| Chronic (adj) | constant, unceasing | দীর্ঘস্থায়ী, বহু পুরাতন, তীব্র | acute |
| Cipher (n) | code, secret message | গুপ্ত লিখন, হিসাব করা, সংকেত লিপি | |
| Circuitous (adj) | indirect, roundabout, twisty | বৃত্তাকার, ঘোরান | straightforward |
| Circumspect (adj) | prudent, cautious | সতর্ক | reckless |

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| Circumvent (vt) | avoid, get around, evade | | |
| Cite (vt) | quote, refer to, mention | উদ্ধৃত করা | |
| Clamor (n) | uproar, hubbub, shout | হৈ চৈ | whisper, quiet |
| Clandestine (adj) | secret, covert | গোপনীয়, গুপ্ত | open |
| Clarify (vt) | elucidate, make clear, explain | পরিস্কার করা | confuse |
| Climax (n) | peak, culmination, final moment | চরম পরিনতি | |
| Clinch (vt) | Settle, seal, confirm | দৃঢ় মুষ্ঠিতে আকড়ে ধরা | |
| Cling (vi) | adhere, stick, grip | এঁটে থাকা | let go |
| Clog (vt) | block, jam, bung up | প্রতিবন্ধক | free |
| Clumsy (adj) | awkward, inept, ungainly | জবরজং | relaxed |
| Cluster (n. v) | bunch, concentrate, group | গুচ্ছ | seperated |
| Clutter (n. v) | litter, disarray, mess | বিশৃঙ্খল অবস্থা, হট্টগোল | order |
| Coarse (adj) | rough, crude, uncouth | রুক্ষ, কর্কশ | refined |
| Coax (vt) | wheedle, persuade | প্রলুব্ধ করা, মিস্টি কথায় ভুলানো | |
| Cogent (adj) | convincing, compelling | দৃঢ় প্রত্যয়ৎপাদক, অকাট্য | weak, unconvincing |
| Cohere (vt) | connect, fit, join | অন্তর্ভুক্ত, একত্রে এঁটে থাকা | free |
| Coherent (adj) | logical, unified, rational | অন্তর্ভূক্ত, সঙ্গতিপূর্ন | Inconsistent, illogical |
| Cohesion (n) | unity, solidity | এঁটে থাকা, সুসঙ্গতি, একত্রে থাকার স্বভাব | disarray |
| Cohesive (adj) | unified, consistent | সুসঙ্গতিপূর্ন, অন্তর্ভূক্ত রাখে এমন | disjointed |
| Coil (n. vt) | curl, wind, loop | কুন্ডলী করা | |
| Coincide (vi) | concur, agree, match | সমকালীন হওয়া, মিল হওয়া | |
| Collaborate (vi) | cooperate, team up | সহযোগী | |
| Collateral (n) | security, guarantee | | |
| Colloquial (adj) | informal, conversation | কথোপকথন | formal |
| Colossal (a) | immense, huge | অতিকায়, বিশাল | tiny, small |
| Commence (vt.) | begin, initiate, originate | শুরু হওয়া | end, terminate |
| Commend (v) | praise, acclaim, extol | দায়িত্ব অর্পন, প্রশংসা | denigrate |
| Commodious (adj) | spacious, capacious, roomy | প্রশস্ত, সুবিধাজনক, বিস্তৃত | cramped |
| Communicate (vt) | converse, speak, commune | ভাগ দেয়া, প্রকাশ করা, আবেগ মনোভাব আদান প্রাদান | |
| Compact (adj) | packed, dense, compressed | ঘন সন্নিবিস্ট, চুক্তি, সন্ধি | loose |
| Compassion (n) | sympathy, concern | সহানুভূতি,করুনা | coldness |
| Compatible (adj) | harmonious, congruous | সুসঙ্গত, সুরেলা | mismatch |
| Compel (vt) | coerce, force, induce | জোর করা, বাধ্য করা | |
| Compensation (n) | return, reimbursement | ক্ষতিপূরন, খেসারত | |
| Compete (vi) | vie, fight , struggle | প্রতিদ্বন্দ্বিতা করা, প্রতিযোগীতা করা | let go |
| Competent (adj) | capable, qualified, adept | উপযুক্ত, যোগ্য, সক্ষম | Inept, incompetent |
| Compile (vt) | collect, put together, amass | সংগ্রহ, সংকলন, রচনা | distribute |
| Complaint (n. Vt) | grievance, protest | নালিশ, অভিযোগ, অসন্তোষ | |

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| Complement (n. Vt) | balance, set off | অসম্পুর্নতা পূর্ন করা | clash |
| Complementary(adj) | supplementary, paired | পূর্নতাদায়ক, পূরক | |
| Complicate (vt) | make difficult, obscure | জটিল, দুর্বোধ্য | simplify |
| Compliment (n. Vt) | praise, commendation | প্রশংসা, সৌজন্য | |
| Complimentary (adj) | free, gratis, admiring | শ্রদ্ধা জ্ঞাপক, সৌজন্য প্রদক | |
| Comply (vi) | obey, fulfill | মেনে নেয়া, মত দেয়া | disobey |
| Component (n) | constituent, ingredient | গঠনকারী, উপাদান স্বরূপ | |
| Composed (adj) | calm, collected | স্থির, শান্ত, আবেগ রোধ করা | agitated |
| Composure (n) | calmness, equanimity | স্থিরতা | agitation |
| Comprehend (vt) | understand, realize | অনুধাবন, উপলব্ধি | |
| Comprehensive (adj) | complete, all-Inclusive | উপলব্ধির ক্ষমতাসম্পন্ন ব্যাপক | sketchy |
| Comprise (vt) | contain, include, encompass | অন্তর্ভূক্ত করা, ধারন করা | exclude |
| Compulsive (adj) | irresistible, obsessive obsessed; irrational | বাধ্য করে এমন, পীড়নকরা, দুর্নিবার, বিচারশক্তিহীন | unusual |
| Compulsory (adj) | obligatory, mandatory, required | বাধ্যতামূলক, অবশ্যকরনীয় | optional |
| Conceal (vt) | disguise, hide | লুকানো, ছদ্মবেশ পরা, অব্যক্ত | reveal |
| Concede (vi) | admit, accept, give in | গ্রহন করা, স্বীকার করা, মেনে নেয়া | maintain, disagree |
| Conceit (n) | vanity, arrogance, pride | অতিশয় আত্মগর্ব, উদ্ধৃতি | modesty |
| Conceive (vt. Vi) | imagine, visualize, envisage | কল্পনা করা | |
| Concerned (adj) | worried, anxious, related | সম্পর্কিত, সংশ্লিস্ট | carefree |
| Concert (n) | performane, show | অনুষ্ঠান | |
| Concerted (adj) | combined, matched | পরস্পরের সহযোগিতায়, উদ্ভাবিত, ঐকতানের সমন্বয় | solitary |
| Concession (n) | compromise, discount | ছাড় | |
| Conciliatory (adj) | reconciling, appeasing | সৌহার্দ্য অর্জনকারী | provocative |
| Concise (adj) | succinct, terse, brief | সংক্ষেপীকৃত, বাহুল্যবর্জিত | lengthy |
| Conclusive (adj) | decisive, definitive, final | উপসংহারমূলক, চূড়ান্ত, নিশ্চিত, নির্ধারক | unconvincing |
| Concoct (vt) | devise, invent, create | উদ্ভাবন, আবিষ্কার, পরিপাক | |
| Concrete (adj. n) | real, tangible | মূর্ত, বাস্তব | insubstantial |
| Concur (vi) | consent, agree, harmonize | একত্রে ঘটা, একমত হওয়া, একস্থানে মিলিত হওয়া | conflict |
| Concurrence (n) | agrrement, accord, harmony | ঐকমত্য, একত্রে সংঘটন, একস্থানে মিলন | conflict |
| Concurrent (adj) | simultaneous, synchronized | একমত, অনুষঙ্গী, সহবর্তমান | seperate |
| Condemn (vt) | censure, denounce, criticize | দোষ দেয়া, নিন্দা করা | commend |
| Condone | forgive, pardon, overlook | ক্ষমা করা | chastise, acknowledge |
| Conduct (vt) | lead, perform | পরিচালনা | |
| Conduct (n. /v) | behavior; demeanor | আচরন, ব্যবহার | |
| Confederate (n) | partner, company, ally | মিত্র, সহযোগী, মৈত্রীবদ্ধ | rival |

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| Confer (vi. /vt) | discuss, bestow, grant | প্রদান করা, পরামর্শ করা, মন্ত্রনা করা | retrieve |
| Confess (vt) | confide, disclose, admit | স্বীকার করা, উন্মোচন করা | deny |
| Confidential (adj) | secret, classified | গুপ্ত, গোপন | unrestricted |
| Confirm (vt) | substantiate, verify | দৃঢ়ভাবে প্রতিপন্ন, বাস্তবায়ন করা | refute |
| Confiscate (vt) | seize, take away | বাজেয়াপ্ত করা | restore |
| Confound (vt) | confuse, puzzle, amaze | পরাভূত করা, বিভ্রান্ত করা | |
| Congenial (adj) | compatible, agreeable, pleasant, pleasing | সদৃশ, উপযোগী, সুসঙ্গত, মানানসই, সমমনোভাব সম্পন্ন | hostile |
| Congested (adj) | overcrowded, heaving | গাদাগাদি করা | empty, roomy |
| Congregate (vt) | assemble, gather | জড়ো করা | break up |
| Connoisseur (n) | expert, authority, specialist | পন্ডিত বিচারক, রস পন্ডিত | |
| Conscience (n) | ethics, scruples, principles | চেতনা, নীতিবোধ | |
| Conscientious (adj) | ethical, careful | বিবেক বুদ্ধিপূর্ন | careless |
| Conscious (adj) | aware, mindful, cognizant | সচেতন | unaware |
| Consecrate (vt) | dedicate, devote, santify | উৎসর্গ করা, পবিএ কাজে ব্যবহারের উদ্দেশ্যে নিযুক্ত | desecrate |
| Consecutive (adj) | successive, repeated | ধারাবাহিক, পরপর | interrupted |
| Consensus (n) | unanimity, accord | একমত | disagreement |
| Conservative (adj. N) | modest, cautious | সংরক্ষনশীল | avant-garde, modern |
| Conservatory (n) | greenhouse, hothouse | গ্রীন হাউজ, ভান্ডার | |
| Conserve (vt) | preserve, save, keep | অবিকৃত রাখা, সংরক্ষিত করা | Destroy |
| Considerable (adj) | substantial, large | বাস্তবিক, গন্য হওয়ার যোগ্য | insignificant |
| Considerate (adj) | thoughtful, kind | বিবেচিত | inconsiderate |
| Console (v) | conciliate, comfort, soothe | সান্তনা দেয়া, প্রবোধ দেয়া | depress |
| Consolidate (vt) | merge, combine | সুদৃঢ় করা, মিলিত করা | split up |
| Consort (vt) | associate, companion, spouse | সঙ্গী, সহযোগী, স্ত্রী / স্বামী | |
| Conspicuous (adj) | noticeable, striking, obvious | দৃষ্টি আকর্ষক, বিশিষ্ট, নজর কাড়ে | inconspicuous |
| Conspiracy (n) | plot, scheme (negative sense) | চক্রান্ত, ষড়যন্ত্র | |
| Constitute (vt) | form, compose, comprise | গঠন করা, স্থাপন করা | |
| Constrict (vt. /vt) | reduce, compress, tighten | চেপে সঙ্কুচিত করা | loosen |
| Construct (vt) | expound, build, make | নির্মান করা, গঠন করা | knock down |
| Construe (vt) | interpret, explain | অনুবাদ করা, ব্যাখ্যা করা, অর্থপ্রকাশ করা | |
| Consume (vt) | spend, devour, eat, drink | শেষ করে ফেলা, ব্যয় করা | |
| Consumer (n) | customer, user, buyer | ভোক্তা, ব্যবহারকারী | |
| Contagious (adj) | catching, infectious | সংক্রামক | |
| Contaminate (vt) | defile, pollute, taint | দূষিত, নোংরা করা | purify |
| Contemn (vt) | disdain, scorn | অবজ্ঞা করা, ঘৃনা করা | |
| Contemplate (vt) | consider, think, reflect | মনোযোগের সাথে বিবেচনা করা, চিন্তা করা | |

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| Contemptible (adj) | mean, despicable, disgraceful | ঘৃন্য, অবজ্ঞেয় | noble |
| Contemptuous (adj) | arrogant, haughty, disdainful | উদ্ধত, ঘৃন্য, ধৃষ্ট | admiring |
| Contend (vt. /vi) | compete, rival, vie | প্রতিযোগীতা করা | |
| Content (adj) | satisfied, complacent | পরিতৃপ্ত পরম, সন্তোষ | unhappy |
| Content (n) | matter, substance | সারমর্ম, অভ্যন্তরস্থ বস্তু | |
| Contingent (adj) | accidental, unforeseen | আকস্মিক, অচিন্তপূর্ব | |
| Contour (n) | outline, profile, curve | নকশা, দেহরেখা | |
| Contract (n) | agreement | চুক্তি | |
| Contract (v) | shrink, reduce, infect | সঙ্কীর্ন বা সঙ্কুচিত হওয়া | |
| Contradict (vt) | counteract, oppose | অস্বীকার করা, প্রতিবাদ করা | correspond |
| Contrast (n. / vt) | Opposite, dissimilarity | বৈসাদৃশ্য, বৈষম্য, প্রদর্শন | similarity |
| Contravene (vt) | contradict, oppose, breach | বিরোধীতা করা, অস্বীকার করা | comply |
| Contrite (adj) | repentant, remorseful | অনুতপ্ত | unrepentant |
| Contrive (vt) | invent, plan | পরিকল্পনা করা, উদ্ভাবন | |
| Controversy (n) | argument, debate | বির্তক, বিরোধ | agreement |
| Controvert (vt) | deny, contradict | বিরোধিতা করা, তর্ক করা | prove |
| Convene (vt) | assemble, gather | সমবেত হওয়া | disband |
| Convenient (adj) | suitable, expedient | উপযোগী, সুবিধাজনক | inconvenient |
| Convention (n) | conference, meeting | সম্মেলন, সভা | |
| Conventional (adj) | traditional, customary | রীতিগত, প্রচলিত | innovative |
| Convert (vt) | change, transform | পরিবর্তন, বদল করা | |
| Convey (vt) | transport, deliver, express | বহন করা, দেয়া | |
| Convict (n) | criminal, proven guilty | দন্ডিত অপরাধী | |
| Convoy (vt) | accompany, escort, group | সঙ্গী | |
| Cordial (adj) | friendly, warm, friendly, sincerely, pleasant | আন্তরিক, বন্ধুত্বপূর্ন সহৃদয় | frosty |
| Corpse (n) | deadbody, cadaver | লাশ, শবদেহ | |
| Corpulent (adj) | fat, fleshy | স্থুলতা, অতিশয় মোটা | slim |
| Correlate (v) | associate, relate | পরস্পর সম্পর্কযুক্ত হওয়া | |
| Corroborate (vt) | confirm, substantiate, agree | সত্য বলে দৃঢ়ভাবে সমর্থন করা | contradict |
| Corrode (vi ./ vt) | erode, eat away, decay | ক্রমশ ক্ষয় হওয়া, অবক্ষয় ঘটা | |
| Counsel (n. v) | advise, guidance | পরামর্শ, মন্ত্রনা | |
| Counterfeit (adj) | feign, forge, fake | নকল করা, জাল করা | genuine |
| Counterpart (n) | equivalent, correspondent | প্রতিরূপ, অনুরূপ | |
| Courteous (adj) | polite, gracious | ভদ্র, উদার | rude |
| Covetous (adj) | desirous, avaricious, envious | লোলুপ, লোভী | |
| Cower (vt) | recoil, shrink | গুটিশুটি মারা, কুঁকড়ে খাওয়া | expand |
| Cozy (adj) | comfortable, snug | আরামদায়ক | uncomfortable |
| Craft (n) | skill, dexterity | দক্ষতা, চাতুর্য | ineptness |
| Crafty (adj) | cunning,sneaky | কৌশলী, দক্ষ, নিপুন | naive |

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| cram (vt) | stuff, pack, fill up | গাদাগাদি করে ভরা, বোঝাই করা | unpack |
| crash (vt) | erumble, shatter, collide | চুর্ন হওয়ার শব্দ, সংঘর্ষের শব্দ | |
| crave (vt) | desire, yearn | মিনতি করা, প্রার্থনা করা | dislike |
| credential (n) | reference, certificate | প্রশংসাপত্র, পরিচয়পত্র | |
| credit (n) | trust, credence | ধার, আস্থা, বিশ্বাস | blame |
| credulous (adj) | gullible, naive, trusting | সহজ বিশ্বাসী | shrewd |
| creed (n) | belief, faith | বিশ্বাস, ধর্মবিশ্বাস | |
| crooked (adj) | bent, twisted | কোকড়ানো, বাঁকা, | straight |
| crucial (adj) | decisive, critical, vital | কঠোর, সঙ্কটপূর্ন | trivial |
| crude (adj) | raw, unpolished | নিষ্ঠুর, নির্দয়, রুক্ষ | polished |
| crumble (v) | collapse, crash, fall apart | চুর্ন বিচুর্ন করা, টুকরো করা | |
| cryptic (adj) | mysterious, enigmatic | গুপ্ত, রহস্যজনক | clear, straightforward |
| cuisine (n) | cooking, gastronomy | রন্ধনবিভাগ, রন্ধন প্রনালী | |
| culmination (n) | climax, summit, finale | সর্বোচ্চ সীমা | |
| culpable (adj) | guilty, blameworthy, liable | অপরাধী, দোষী, নিন্দনীয় | innocent |
| Cunning (adj) | sly, tricky , clever | কৌশলী, দক্ষ, চতুর | guileless |
| Curb (v) | check, control | নিয়ন্ত্রন, দমন | promote |
| Curiosity (n) | inquisitiveness, interest | উদগ্রীব, উৎসুক | apathy |
| Curious (adj) | inquisitive, inquiring | কৌতুহলী, উৎসুক | apathetic, indifferent |
| Curt (Adj) | abrupt, blunt, brisk | সংক্ষিপ্ত, নীরস | gradual, interesting |
| Curtail (vt) | cut back, reduce | সংক্ষিপ্ত করা, কেটে বাদ দেয়া | extend |
| Custom (n) | tradition, convrntion, norms | রীতি, প্রথা, অভ্যাস | |
| Cynical (adj) | contemptuous, sarcastic | ঘৃন্য, নিন্দনীয় | praiseworthy |
| Dampen (vt) | make wet, moisten | ভেজা, সিক্ত | dry out |
| Dangle (vt) | suspend, hang | ঝোলান, দোলান | |
| Dart (vt) | hurl, throw | তীব্র বেগে ছোড়া, সজোরে নিক্ষেপ | |
| Dated (adj) | old-fashioned, out-of-date | সেকেলে, চলতি নয় | fresh, modern |
| Dauntless (adj) | resolute, intrepid, fearless | অকুতোভয়, অদম্য | timid |
| Daze ( n. vi) | dazzle, confusion, stunn | হতবুদ্ধি হওয়া, স্তম্ভিত হওয়া | |
| Dazzling (adj) | stunning, amazing, astounding | বিস্ময়কর | unremarkable |
| Deadly (adj) | fatal, lethal | মারাত্নক, সাংঘাতিক, প্রানান্তক | harmless |
| Debatable (adj) | controversial, unsettled | তর্কসাপেক্ষ, বিচার সাপেক্ষ | certain |
| Debt (n) | liability, arrears | ঋন, কৃতজ্ঞতা, ধার | credit |
| Debtor (n) | defaulter, nonpayer | ঋনী, দেনাদার | |
| Decay (vt) | rot, decompose | ক্ষয়প্রাপ্ত, খারাপ হওয়া | |
| Deceit (n) | cheat, fraud, treachery | প্রবঞ্চনা, প্রতারনা | honesty |
| Deceitful (adj) | sly, dishonest | প্রতারনাপূর্ন, কপটতাপূর্ন | honest |
| Deceive (vt) | mislead, cheat, swindle | ধোকা দেয়া, প্রতারিত করা | |
| Decent (adj) | reasonable, proper | যথোচিত, যথোপযুক্ত | inadequate |
| Deceptive (adj) | deceitful, misleading | প্রতারনা মূলক, ভ্রান্তিজনক | honest, transparent |

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| Declaim (v) | speak, hold forth, orate | উদ্দীপ্ত ভাবে কথা বলা, কথায় আক্রমন করা বক্তৃতা দেয়া | |
| Decorum (n) | good manners, modesty | শিষ্টতা, ভব্যতা | arrogance |
| Decree (n. v) | regulation, order, verdict | অধ্যাদেশ, হুকুম | |
| Decry (vt) | condemn, denounce, criticize | নিন্দাকরা, বিরুদ্ধমত প্রকাশ | praise |
| Dedicate (vt) | devote, consecrate | উৎসর্গ করা, মহৎকাজে নিয়োজিত করা | |
| Deem (vt) | think, consider | মনে করা, বিবেচনা করা, বিশ্বাস করা | |
| Defame (vt) | slander, malign | মানহানি করা, কুৎসা রটান | extol |
| Default (n. v) | nonfulfilment, nonpayment | অভাব, অপূর্ন | payment |
| Defend (vt) | protect, guard, preserve | রক্ষা বা আত্মরক্ষা করা | attack |
| Defer (vt) | delay, postpone | বিলম্বিত করা, স্থগিত করা, মুলতবি রাখা | bring forward |
| Deference (n) | respect, esteem, awe | মেনে নেয়া, বশ্যতা স্বীকার | disrespect |
| Deferential (adj) | respectful, dutiful, polite | শ্রদ্ধাপূর্ন, শ্রদ্ধাবান | discourteous |
| Defiant (adj) | hostile, rebellious, insolent | অবাধ্য, স্পর্ধিত | compliant |
| Deficit (n) | shortfall, shortage, arrears | অভাব, ঘাটতি | surplus |
| Defile (vt) | contaminate, taint, besmirch | নিন্দাকরা, দূষিত করা | respect, enhance |
| Deflect (vt) | divert, deviate | বিপথগামী বা ভিন্নপথগামী হওয়া | |
| Deform (vt) | disfigure, distort | বিকলাঙ্গ করা, বিকৃত করা | |
| Defraud (vt) | deceive, beguile, swindle | প্রবঞ্চিত করা, ঠকিয়ে নেয়া | |
| Defy (vt) | challenge, confront, disobey | যুদ্ধে আহবান করা, প্রকাশ্যে বিরোধীতা করা | obey, comply |
| Degenerate (adj. vt) | degrade, deteriorate | অধঃপতিত হওয়া | improve |
| Degrade (vt) | degenerate, lower, humiliate | মর্যাদাহানি করা, সম্মান হানি করা | respect |
| Deity (n) | God, divinity | দেবত্ব, দেবতা, ঈশ্বর | |
| Dejected (adj) | depressed, dispirited, gloomy | মনমরা, বিমর্ষ, বিষাদগ্রস্থ | cheerful |
| Delegate (n) | deputy, representative, envoy | প্রতিনিধি | |
| Deleterious (adj) | harmful, detrimental, toxic | ক্ষতিকর, ধ্বংসাত্মক, অপকারক | harmless |
| Delicate (adj) | dainty, elegant, fragile | সুস্বাদু, মুখরোচক, কোমল | robust |
| Delineate (v) | depict, portray, outline | চিএ বা বর্ননার সাহায্যে দেখান | |
| Delude (vt) | beguile, deceive, hoax | প্রতারিত করা, বিভ্রান্ত করা | |
| Demise (n) | death, end, termination | মৃত্যু, সম্পত্তি, হস্তান্তর | creation |
| Demolish (vt) | destroy, raze, knock down | ভেঙে ফেলা, ধ্বংস করা | build |
| Demur (vt) | protest, object | আপত্তি উত্থাপন, ইতস্তত করা | agree |
| Denote (vt) | indicate, show | নির্দেশ করা, চিহ্নিত করা | |
| Denounce (vt) | censure, condemn | অভিযুক্ত করা | support |
| Deny (vt) | refute, reject | অস্বীকার করা, অগ্রাহ্য করা | agree |
| Depart (vi) | leave, set off | প্রস্থান করা, বহির্গত হওয়া | arrive |
| Dependent (adj) | reliant | আশ্রিত, পোষ্য | |
| Depict (vt) | delineate, | চিত্রিত করা, বর্ননা করা | |

| | describe,portray | | |
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| Deplore (vt) | grieve, mourn | গভীর দুঃখবোধ করা, পরিতাপ করা | |
| Depot (n) | storehouse, contain | ভান্ডার, আগার | |
| Depreciate (v) | deflate, devalue | মূল্য হ্রাস করা বা হওয়া | |
| Depression (n) | despair, sadness | বিষাদ, মনমরা ভাব | happiness |
| Derange (vt) | unbalance, unhinge | বিকল, বিক্ষিপ্ত, অব্যবস্থিত | |
| Deride (vt) | ridicule, mock, gibe | উপহাস করা, অবজ্ঞা করা | approve |
| Designate (vt) | assign, nominate, specify | মনোনীত চিহ্নিত | |
| Designing (adj) | cunning, deceitful | ধূর্ত, চক্রান্তপরায়ন | ingenuous |
| Desirous (adj) | eager, keen | অভিলাষী, অভিকাঙ্খী | indifferent |
| Desolate (adj) | deserted, bleak, barren | জনমানবশূন্য, বিধবস্ত | populous |
| Dispatch (vt) | dispose, send off | দ্রুত প্রেরন | |
| Desperate (adj) | frantic, anxious | বেপরোয়া, মরিয়া | calm |
| Despicable (adj) | detestable, contemptible | অবজ্ঞেয়, ঘৃন্য | admirable |
| Despise (vt) | belittle, disdain, loathe | অবজ্ঞা, ঘৃনা, তাছিল্য করা | admire |
| Despoil (vt) | rob, damage, spoil | সর্বস্বান্ত করা, লুন্ঠন করা | conserve |
| Destine (vt) | predestine, fate, doom | নির্ধারিত করা বা হওয়া, নিয়তি নির্ধারিত | |
| Destiny (n) | fate | নিয়তি, আদৃষ্ট, ভাগ্য | |
| Detach (vt) | remove, separate | বিযুক্ত বা বিচ্ছিন্ন করা | attach |
| Detain (vt) | delay, retard, hinder | আটকে বা ঠেকিয়ে রাখা, বিলম্ব করা | make free |
| Detect (vt) | explore, discover | খুঁজে বের করা, সনাক্ত করা | |
| Determination (n) | strength of mind, resolve | দৃঢ় সংকল্প, স্থিরীকর | |
| Deterrent (n) | prevention, restriction | | incitement |
| Detest (vt) | abhor, hate, loathe | তীব্র ঘৃনা করা, ঘৃনার্হ | love |
| Detriment (n) | loss, harm | ক্ষতি, অনিষ্ট | benefit |
| Detrimental (adj) | harmful, damaging | ক্ষতিকর | beneficial |
| Devastate (vt) | destroy, demolish | ধ্বংস করা, বিধ্বস্ত করা | |
| Deviate (vt) | deflect, diverge | পথভ্রষ্ট হওয়া, | |
| Device (n) | equipment; scheme, ploy | পরিকল্পনা, ফন্দি, কৌশল | |
| Devious (adj) | circuitous, oblique | ঘোরান, সর্পিল | direct |
| Devise (vt) | create, invent | কল্পনা করা, উদ্ভাবন করা | |
| Devoted (adj) | enthusiastic, loyal, commited | একান্ত ভাবে নিয়োজিত, অনুরক্ত | uncommited |
| Devotion (n) | loyalty, dedication | গভীর অনুরক্তি, আরাধনা | |
| Devour (vt) | eat up, consume | গ্রোগ্রাসে গেলা, লোভীর মত খাওয়া | |
| Devout (adj) | pious, religious | ধর্মপ্রান, ধার্মিক | irreverent |
| Dexterous (adj) | adroit, skillful | দক্ষ, কুশলী, পারদর্শী | clumsy |
| Dialect (n) | vernacular, jargon | উপভাষা, ভাষার আঞ্চলিক রূপ | |
| Dictatorial (adj) | tyrannical, despotic, autocratic | একনায়কসুলভ | democratic |
| Diffuse (vt) | scatter, spread, disperse | বিস্তৃত, বিকীর্ন, ছড়ানো ছিটানো | concentrate |
| Dignified (adj) | noble, distinguished | সম্মানিত, মর্যাদাবান | undignified |
| Dignity (n) | self-respect, nobility | সম্মানিত বা মর্যাদাপূর্ন অবস্থা | |
| Digress (vt) | deviate, turn away | প্রসঙ্গচ্যুত হওয়া, অপ্রাসঙ্গিক হওয়া | |
| Dilate (vt) | expand, widen | প্রসারিত হওয়া, বৃহওর হওয়া | contract |
| Dilemma (n) | Quandary, impasse | উভয় সঙ্কট, সঙ্কটা বস্থা | |
| Diligent (adj) | industrious, assiduous | পরিশ্রমী, অধ্যবসায়ী | lazy |

| Dilute (vt) | thin, weaken, adulterate | তরলী করন, তরলীভবন | concentrate |
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| Dim (adj) | faint, vague | অনুজ্জল, অস্পষ্ট, মৃদু | clear, vivid |
| Dimension (n) | size, proportion | আয়তন, ব্যাপ্তি, মাপ | |
| Diminish (vt) | decrease, dwindle | হ্রাসকরা,হ্রাসপ্রাপ্ত হওয়া | intensify |
| Diminutive (adj) | small, tiny | অতি ক্ষুদ্র,হ্রাসকৃত আকার সম্পন্ন | large, gigantic |
| Dingy (adj) | dirty, shabby | নোংরা,মলিন | clean |
| Diplomacy (n) | (tact) | কূটনীতি, কূটকৌশল | |
| Diplomatic (adj) | courteous, tactful, political | কূটনেতিক, কুশলী | |
| Disarm (vt) | deactivate, defuse | নিরস্ত্র করা, অস্ত্রব্যবহার হ্রাস করা | |
| Disarray (n./ vt) | mess, disorder | বিশৃংখলা, বিশৃংখল করা | order |
| Disastrous (adj) | catastrophic | দুর্ভাগ্যমূলক, বিপর্যয় কারী | |
| Disband (vt) | dismiss, split up | সৈন্যদল ভেঙ্গে দেয়া | unite |
| Disburse (vt) | distribute, pay out | প্রাপ্য অর্থ প্রদান করা | |
| Discard (vt) | reject | বাতিলকরা, ফেলে দেয়া | accept |
| Discern (vt) | detect, distinguish | দেখা বা উপলব্ধি করা | |
| Discernible (adj) | detectable | নির্নয়সাধ্য, বোধগম্য | |
| Disciple (n) | apprentice | অনুসারী, ভক্ত | |
| Disclaim (vt) | refuse, repudiate | অস্বীকার করা, দাবী পরিত্যাগ | accept |
| Discord (n) | disharmony, disagreement | মতানৈক্য, ঝগড়া | accord |
| Discourse (n) | lecture, disquisition | বক্তৃতা, ধর্মোপদেশ, ভাষন | |
| Discreet (adj) | prudent, cautious | সর্তক, কৌশলী, বিচক্ষন | careless |
| Discrete (adj) | separate, distinct | পৃথক, বিযুক্ত, অসংলগ্ন | |
| Discretion (n) | caution, prudence | বিচক্ষনতা, সর্তকতা | carelessness |
| Discrimination (n) | prejudice, favoritism, bias | বৈষম্য, পার্থক্যকরন | impartiality |
| Disdain (vt. n) | despise, scorn, contempt | ঘৃনা করা, অবজ্ঞা করা | respect |
| Disgust (vt) | revulsion, repugnance | বিরাগ, নিদারুন বিরক্তি | attraction |
| Dismal (adj) | gloomy, somber | নীরস, বিষন্ন, নিরানন্দ | bright |
| Dismay (vt) | disconcert, disappointment | আতঙ্ক, হতাশার অনুভূতি | comfort |
| Disparage (vt) | denigrate, depreciate, belittle | অবমূল্যায়ন করা,অবজ্ঞা করা | praise |
| Dispatch (vt) | allocate, send off, send out | দ্রুত প্রেরন | |
| Dispensable (adj) | unnecessary, unimportant | অপ্রয়োজনীয় | indispensable |
| Displace (vt) | replace, substitute | স্থানচ্যুত করা | restore |
| Disposition (n) | temperament, nature | বিন্যাস, বিন্যস্তকরন | |
| Disprove (vt) | refute, invalidate | ভুল বা মিথ্যা প্রমান করা | prove |
| Disreputable (adj) | notorious, infamous | কুখ্যাত, কলঙ্কজনক | reputable |
| Disrupt (vt) | disturb, disorder | ব্যঙ্গ, চুর্ন করা,ব্যাহত করা | order |
| Dissect (vt) | analyze, divide | ব্যবচ্ছেদ করা, বিশেষন | |
| Dissemble (vt) | disguise, dissimulate | ছদ্মবেশ ধারন করা | |
| Disseminate (vt) | distribute, impart | বিতরন করা, ধারনা বা তত্বপ্রচার | |
| Dissimulate (vt) | disguise, dissemble | প্রকৃত মনোভাব গোপন | |
| Dissipate (adj) | dispel, disperse | অর্থহীন বা ক্ষতিকর আমোদে লিপ্ত | |

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| Distillation (n) | cleansing, sanitanization | পাতন | |
| Distort (vt) | misrepresent, twist | বিকৃত করা, মিথ্যা বিবরন দেয়া | straighten |
| Distract (vt) | sidetrack, divert | মনোযোগ ভিন্নমুখি করা | |
| Disunite (vt) | cut, split, seperate | বিচ্ছিন্ন করা | |
| Diverge (vt) | differ, deviate | কেন্দ্রচ্যুতি, বিচ্যুতি, অপসরন ঘটা | converge |
| Diverse (adj) | different, various | বিভিন্ন, নানারকম, একাধিক | |
| Diversify (vt) | vary, branch out | বিভিন্ন, রকম করা, বিচিএ করা | specialize |
| Divulge (vt) | disclose, reveal | গোপন তথ্য ফাঁস করা | conceal |
| Doctrine (n) | dogma, principle, theory | মতবাদ, মতধারা | |
| Dodge (vt) | avoid, evade | এড়িয়ে যাওয়া, কৌশল,ছল | |
| Dogma (n) | belief, view | অন্ধবিশ্বাস, গোঁড়া মতবাদ, ধমর্মত | |
| Dogmatic (adj) | opinionated, arbitrary | যে যুক্তিহীন গোড়া মতবাদ প্রকাশ করে | flexible |
| Doleful (adj) | mournful, sorrowful | বেদনাময়, শোকপূর্ন | cheerful |
| Dominant (adj) | authoritarian, prevalent | প্রবল, প্রধান, কর্তৃত্বময় | meek |
| Dominion (n) | power, authority, control | কর্তৃত্ব, প্রভূত্ব, আধিপত্য | |
| Doomed (adj) | fated, destined | দন্ডপ্রাপ্ত, ভাগ্যনির্দিষ্ট | |
| Dormant (adj) | inactive, latent | সুপ্ত, নিদ্রিত, ঘুমন্ত, নিষ্ক্রিয় | active |
| Downcast (adj | depressed, dejected | অবসাদগ্রস্থ, ক্লান্ত, দুঃখিত, হতোদ্যম | cheerful |
| Doze (vi) | nap, drowse | তন্দ্রাচ্ছন্ন হওয়া, ঝিমানো | wake up |
| Drastic (adj) | violent, severe | জোরালো, আকস্মিক, তীব্র | modest |
| Drawback (n) | disadvantage, defect, demerit | অসুবিধা, বাধা | advantage |
| Dread (n. v) | fear, trepidation | ভয়, আতঙ্ক | |
| Drizzle (vt) | rain, sprinkle | গুড়ি গুড়ি বৃষ্টি, হালকা বৃষ্টি | |
| Drought (n) | aridity, lack, dearth | অনাবৃষ্টি, শুস্কতা | abundance |
| Drowsy (adj) | sleepy, tired, dozy | তন্দ্রালু, অলস, নিষ্ক্রিয় | awake |
| Dual (adj) | double, twofold | দ্বৈত, দ্বিগুন | |
| Dubious (adj) | doubtful, unsure | সন্দেহ পূর্ন, সন্দিগ্ধ | certain |
| Dungeon (n) | prison, cell | ভুগর্ভস্থ, অন্ধকার কারাকক্ষ | |
| Durable (adj) | lasting, enduring | টেকসই মজবুত | flimsy |
| Dusky (adj) | dim, dark | অন্ধকারাচ্ছন্ন, ঝাপসা | bright |
| Dwell (v) | reside, inhabit | বাস করা | |
| Dwelling (n) | abode, shelter, accommodation | বাসস্থান, বাড়ি | |
| Dwindle (vt) | diminish, decrease | হ্রাস পাওয়া, ক্ষয় প্রাপ্ত হওয়া | increase |
| Dye (n. v) | pigment, coloring | রং করা, রঞ্জিত করা | |
| Eager (adj) | keen, excited, enthusiastic | উৎসুক, আগ্রহান্বিত, আকুল, অধীর | indifferent |
| Ebb (vt) | decay, fade, diminish | ভাটা পড়া, কমে যাওয়া,হ্রাস পাওয়া | surge |
| Eccentric (adj) | odd,erratic, bizarre, weird | অদ্ভুত, অস্বাভাবিক, খামখোয়ালী | conventional |
| Ecstasy (n) | joy, happiness, delight | পরমানন্দ, আধ্যামিক সিদ্ধিলাভের অনুভুতি | agony, depression |
| Edge (n) | rim, margin | প্রান্ত | center |
| Edible (adj) | eatable, comestible | ভোজ্য, বিষমুক্ত | poisonous |
| Edify (vt) | enlighten, teach | নৈতিক বা মানসিক উন্নতি সাধন করা | |
| Efface (vt) | erase, obliterate | মুছে ফেলা, নিশ্চিহ্ন করা, বিলোপ করা | engrave |
| Effusive (adj) | demonstrative, fulsome | | shy |
| Eject (vt) | emit, ejaculate | স্থানত্যাগে বাধ্য করা, বহিস্কার করা | |

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| | | নির্গত হওয়া | |
| Elaborate (vt. Adj) | explain, embellish, careful | বিস্তারিত, বিশদ ভাবে সম্পন্ন করা | |
| Elapse (vt) | go by, pass | অতিক্রান্ত হওয়া | |
| Elasticity (n) | suppleness, flexibility | স্থিতিস্থাপকতা, নমনীয়তা | |
| Elation (n) | ecstasy, joy, delight | অনুপ্রেরনা | desolation |
| Elegant (adj) | refined, exquisite, elaborate | রুচিশীল, অভিজাত | uncouth |
| Elementary (adj) | basic, simple | প্রাথমিক | |
| Elevate (vt) | raise, lift up | উত্তোলন করা, উন্নীত করা | |
| Elite (n) | best, privileged | অভিজাত | |
| Eloquence (n) | expressiveness, articulacy | বাক পটুতা, বাগ্মীতা | |
| Eloquent (adj) | persuasive, fluent | বাকপটু, বাগ্মী | impassive |
| Elucidate (vt) | clarify, explain | ব্যাখ্যা করা, বিচার বিশেষন করা | |
| Elude (vt) | escape, evade | সুকৌশলে পলায়ন করা<br>এড়িয়ে চলা | |
| Elusive (adj) | elusory, intangible | পলায়নপর, বিস্মৃতিপ্রবন | definite, tangible |
| Emaciated (adj) | skinny, haggard, thin | শীর্ন | |
| Embalm (vt) | preserve, mummify | মমি করা, সুবাসিত করা | |
| Embarrass (vt) | humiliate, mortify | অস্বস্তি বা লজ্জায় ফেলা | |
| Embellish (vt) | decorate, adorn | সুন্দর করা, অলংকৃত করা | |
| Embezzle (vt) | misappropriate, steal | আত্নসাৎ করা | |
| Embody (vt) | include, incorporate, represent | বাস্তব রূপ দান করা, অন্তর্ভূক্ত করা | |
| Embrace (vt) | hug, cuddle, contain | আলিঙ্গন করা, অন্তর্ভূক্ত করা | |
| Embroider (vt) | sew, stich | নকশি করা, সূচিকর্ম করা | |
| Emend (vt) | amend, improve, alter | ভুল সংশোধন করা | |
| Emerge (vt) | appear, come out | প্রকাশিত হওয়া, আবির্ভূত হওয়া | |
| Eminent (adj) | outstanding, distinguished | প্রখ্যাত, বিশিষ্ট | |
| Emphasize (vt) | underscore, underline, highlight, stress, accentuate | জোর দেয়া, গুরুত্ব প্রদান | |
| Emphatic (adj) | powerful, vigorous | জোরালো | weak |
| Empower (vt) | authorize, allow | ক্ষমতা প্রদান করা | |
| Emulate (vt) | imitate, copy | সমকক্ষ হতে বা ছাড়িয়ে যেতে চেষ্টা করা | |
| Enable (vt) | make possible | সক্ষম করা, ক্ষমতা প্রদান করা | Disable |
| Enact (vt) | legislate, impersonate | আইনে পরিনত করা<br>আইন পাশ করা | |
| Enchant (vt) | enthrall, fascinate | মন্ত্রমুগ্ধ করা, মোহিত করা | |
| Encompass (vt) | encircle, cover | চর্তুদিক ঘিরে ফেলা | |
| Encroach (vt) | intrude, trespass | সীমালঙ্ঘন করা | |
| Encumber (vt) | burden, hamper, hinder | পথরোধ করা, ব্যাহত করা | let go |
| Endanger (vt) | harm, imperil | বিপদে ফেলা, বিপন্ন করা | |
| Endeavor (vt) | strive, struggle, attempt | প্রচেষ্টা, প্রচেষ্টা নেয়া | |
| Endorse (vt) | support, ratify, certify | অনুমোদন করা, সত্যায়িত করা | |
| Endure (vt) | bear, tolerate | সহ্যকরা, ভোগ করা | forbid |
| Energetic (adj) | lively, active, vigorous | কর্মশক্তি সম্পন্ন, উদ্যমী | lethargic |

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| Enervate (vt) | enfeeble, weaken | স্নায়ুহীন করা, শারীরিক ও মানসিক ভাবে দুর্বল করা | |
| Engender (vt) | generate, produce | কারন স্বরূপ হওয়া | |
| Engross (vt) | absorb, preoccupy | সব সময়ে কাজে লেগে থাকা | |
| Engulf (vt) | devour, swallow, overwhelm | গ্রাস করা | |
| Enhance (vt) | raise, improve, augment | বাড়ানো, বৃদ্ধি করা | lessen |
| Enigma (n) | mystery, riddle | বিভ্রান্তিকর, হেয়ালী পূর্ন ব্যাপার | |
| Enlighten (vt) | edify, illuminate | জ্ঞান দান করা, সংস্কার করা | |
| Enlist (vt) | enroll, join | তালিকাভূক্ত করা | |
| Enormous (adj) | huge, vast, massive | প্রচুর | tiny |
| Enrage (vt) | infuriate, aggravate, anger | রাগানো, ক্রুদ্ধ করা | |
| Enrapture (vt) | delight, exult, captivate | পরমানন্দিত করা | |
| Enrich (vt) | make rich, enhance, augment | ধনী করা, সমৃদ্ধ করা | diminish |
| Enslave (vt) | enchain, bind | ক্রীতদাসে পরিনত করা | |
| Entail (vt) | require, involve | চাপিয়ে দেয়া | |
| Entangle (vt) | cmvroil, involve, snare | জড়িয়ে পড়া, জট পাকানো | |
| Enthrall (vt) | captivate, rivet, charm | বিমুগ্ধ করা | |
| Enthusiasm (n) | passion, eagerness | প্রবল উৎসাহ | apathy |
| Entice (vt) | lure, tempt | প্ররোচিত করা, রাজি করানো | |
| Entity (n) | body, unit | অস্তিত্ব, স্বতন্ত্র সত্তা | |
| Entrap (vt) | trick, entice, deceive | ফাঁদে ফেলা | |
| Entrepreneur (n) | industrialist, starting new business | উদ্যোক্তা, শিল্প, বানিজ্য সংগঠক | |
| Enumerate (vt) | count, numerate, itemize | গননা করা, এক এক করে নামোলেখ করা | |
| Enunciate (v) | articulate, pronounce | উচ্চারন করা | |
| Envoy (n) | representative, emissary | বিশেষ বার্তাবহ | |
| Episode (n) | Interlude, event | কোন সুদীর্ঘ কাহিনীর অন্তর্গত উপাখ্যান | |
| Epoch (n) | age, era | ইতিহাসের ঘটনাবহুল বা বৈশিষ্ট্য সূচক সময় | |
| Equate (vt) | associate, compare | সমান বিবেচনা করা | |
| Equitable (adj) | fair, just, reasonable | ন্যায়সঙ্গত | unfair |
| Equivalent (adj) | counterpart, match | সমমূল্যের, সমার্থক | different |
| Equivocate (vi) | prevaricate, fudge | সমূলে উৎপাটন করা | |
| Equivocal (adj) | ambiguous, vague | দ্ব্যর্থবোধক, সন্দেহজনক | clear |
| Erect (v) | build, set up, establish | নির্মান করা, স্থাপন করা, প্রতিষ্ঠা করা | |
| Erode (vt) | corrode, wear away | ধীরে ধীরে ক্ষয় করা, খেয়ে ফেলা | |
| Erratic (adj) | odd, eccentric, unpredictable | স্থুল, কথাবার্তায় অসাবধানী | consistent |
| Erroneous (adj) | incorrect, mistaken | অশুদ্ধ, ভ্রান্ত | correct |
| Erupt (vt) | explode, burst out | লাভা নির্গত হওয়া, অগ্নুৎপাত | |
| Eschew (vt) | avoid, shun | এড়িয়ে চলা, বিরত থাকা | participate |
| Escort (vt) | accompany, guide, usher | রক্ষাবাহিনী, প্রতিরক্ষা সহচর | |
| Esteem (n. vt) | respect, regard, admiration | উচ্চ ধারনা পোষন করা, অন্যন্ত শ্রদ্ধা করা | |
| Estimable (adj) | admirable, deserving | শ্রদ্ধেয় | unimpressive |
| Estimate (vt) | gauge, compute | মূল্যবিচার, আনুমানিক হিসাব | |

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| Eternal (adj) | everlasting, perpetual | চিরন্তন, আদি অন্তহীন | temporary |
| Ethics (n) | principles, morals, beliefs | নৈতিক নীতিমালার পদ্ধতি, জীবন বিধান | |
| Ethnic (adj) | racial, national | নৃতাত্বিক | |
| Etiquette (n) | manners, protocol | নম্র-আচরন, প্রচলিত আদব কায়দা | |
| Euphonious (adj) | sweet, audible | মধুর ধ্বনিযুক্ত | |
| Evacuate (vt) | Remove, abandon | সৈন্য অপসারন করা | |
| Evade (vt) | dodge, avoid | কৌশলে এড়ানো, কৌশলে পরিহার করা | |
| Evaluate (vt) | estimate, assess | মূল্যায়ন করা | |
| Evaporate (vt) | vaporize, disappear | বাস্পীভূত হওয়া, বাস্পে পরিনত করা | |
| Evasive (adj) | elusive, equivocating | এড়িয়ে যেতে সচেষ্ট | straight |
| Eventual (adj) | final, ultimate | পরিনামস্বরূপ | |
| Evident (adj) | obvious, manifest | সহজবোধ্য | unclear |
| Evoke (vt) | arouse, produce | ডেকে আনা, স্মৃতিতে জাগিয়ে তোলা | |
| Evolution(adj) | Development, fruition | বিবর্তন | |
| Evolve (vt) | develop, grow | স্বাভাবিকভাবে বিকশিত হওয়া | |
| Exacting (adj) | demanding, rigorous | অধিক চাহিদাসম্পন্ন, কঠোর কড়া | easy |
| Exaggerate (v) | overstate, overemphasize | অতিরঞ্জিত করা, অত্যুক্তিকরা বাড়িয়ে বলা | understate |
| Exalt (vt) | extol, laud, promote | পদোন্নতি দেয়া, উচ্চপ্রশংসা করা | disparage |
| Exasperate (vt) | annoy, irritate, infuriate | উত্তেজিত করা, জাগানো | |
| Excavate (vt) | dig, delve, exhume | খনন করা | |
| Excerpt (n. vt) | selection, extract | কোন গ্রন্থের ভিন্নভাবে ছাপানো অংশ বিশেষ | |
| Excessive (adj) | overabundant, inordinate | অতিরিক্ত, অপরিমিত | moderate |
| Excitement (n) | enthusiasm, thrill | উত্তেজনা, উত্তেজক বস্তু ঘটনা বিষয় ইত্যাদি | boredom |
| Exclaim (n) | shout, ejaculate | বেদনা, ক্রোধ বা বিস্ময়ে অকস্মাৎ চিতকার করা | |
| Exclude (vt) | rule out | বাধা দেয়া, বাদ দেয়া | |
| Exclusion (n) | rejection, omission | বর্জন, বাধাদান, বাদ, ব্যতিক্রম | inclusion |
| Exclusive (adj) | prohibitive, restrictive, select | বিশিষ্ট, অনন্য, বর্জনকর | |
| Exemplary (adj) | excellent, ideal | আদর্শস্বরূপ, দৃষ্টান্তমূলক | |
| Exempt (v. adj) | prevent, immune, excused | রেহাই বা অব্যাহতি দেয়া, রেহাই প্রাপ্ত | |
| Exert (v) | apply, put forth | প্রয়োগ করা, প্রদর্শন করা | |
| Exhale (vt) | breathe out, respire | নিঃশ্বাসের সাথে বাতাস ত্যাগ করা | |
| Exhaust (vt) | use up, drain, tire out | সম্পুর্নরূপে ব্যয় করা, খালি করা, নির্গমন হওয়া, নির্গমনল | refresh |
| Exhaustive (adj) | comprehensive, thorough | সম্পুর্ন, পুঙ্খানুপুঙ্খ | restricted |
| Exhume (vt) | excavate, dig | কবর থেকে তুলে আনা, খনন করা | bury |
| Exile (vt) | banish, deport | নির্বাসন, নির্বাসিত করা | |
| Exodus (n) | migration, mass departure | বহু লোকের একত্রে বহির্গমন | |
| Exorbitant (adj) | excessive, unreasonable | অত্যাধিক, মাত্রাতিরিক্ত | reasonable |
| Exotic (adj) | unusual, foreign | বিদেশী, বহিরাগত, বিচিত্র | familiar |
| Expansive (adj) | extensive, large, spacious | প্রসারনশীল, বিস্তারন সাধ্য | reserved |
| Expedient (adj) | suitable, convenient | উদ্দেশ্য সাধনের পক্ষে উপযোগী | |
| Expedite (vt) | speed up, hasten | অগ্রগতিতে সহায়তা করা, তরান্বিত করা | impede |

| Expedition (n) | exploration | তৎপরতা, দ্রুতি, নির্দিষ্ট উদ্দেশ্যে অভিযান | |
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| Expeditious (adj) | prompt, speedy | দ্রুত কার্যকর | slow |
| Expertise (n) | know- how, special skill | বিশেষজ্ঞ মূল্যায়ন | |
| Expire (vt) | terminate, perish | অবসান হওয়া, নিঃশ্বাস ফেলা | |
| Explicit (adj) | straightforward, overt | পরিস্কার ভাবে এবং পরিপূর্নভাবে প্রকাশিত, সুনির্দিষ্ট | implicit |
| Exploit (v) | explore, make use of | গৌরবময় কীর্তি, চমকপ্রদ কাজ, কাজে লাগানো | waste |
| Explore (n) | search, travel around | জ্ঞান লাভের উদ্দেশ্যে ভ্রমন, পুঙ্খানুপুঙ্খরূপে পরীক্ষাকরা | |
| Exponent (n) | interpreter, expositor; index, indicator | প্রতিনিধিত্বকারী, প্রকাশক বা ব্যাখ্যাকারী সূচক | |
| Exposure (n) | disclosure, uncovering | অনাবৃতকরন, প্রদর্শন, প্রকাশিত করন | |
| Expound (v) | explain, interpret | ব্যাখ্যা করা, বিস্তারিত বর্ননা করা | |
| Exquisite (adj) | delicate, fine, elaborate | নিখুত চমৎকারিত্ব পূর্ন, অপরূপ সুন্দর | ugly |
| Extant (adj) | existing, present | এখনও বিদ্যমান | lost |
| Extensive (adj) | comprehensive, thorough | বিস্তৃত, ব্যাপক, বিশাল | narrow |
| Exterminate (vt) | eradicate, eliminate | শেষ করা, সর্ম্পুন ধ্বংস করা | |
| Extinct (adj) | died out, destroyed | নির্বাপিত,অধুনানিষ্ক্রিয় | living |
| Extinguish (vt) | put out, quench | শেষ করা, নেভানো | light |
| Extol (vt) | exalt, praise | উচ্চ প্রশংসা করা | deprecate |
| Extort (vt) | extract, squeeze | বলপ্রয়োগ, হুমকি প্রদান বা ভীতি প্রদশনের মাধ্যমে আদায় করা | |
| Extraneous (adj) | irrelevant, unrelated | অসংশ্লিষ্ট, বহিরাগত | pertinent |
| Extravagant (adj) | wasteful, profligate | অপব্যয়ী, অপচয়কর | thrifty |
| Extricate (vt) | release, liberate | মুক্ত করা | |
| Exude (vt) | discharge | ঝরা বা ঝরানো, চোঁয়ানো | absorb |
| Exultant (adj) | happy, jubilant | মহোল্লসিত, জয়োল্লসিত | miserable |
| Fable (n) | allegory | পৌরানিক কাহিনী, উপকথা,কল্পকাহিনী | |
| Fabricate (vt) | make, forge, coin | নির্মান করা, জোড়ালাগানো | destroy |
| Facet (n) | aspect, feature | কাটাপাথর বা রত্নের যে কোন একটি পার্শ্ব, সমস্যাদির বিশেষ দিক | |
| Facetious (adj) | amusing, jesting, teasing | ঠাট্টাবিদ্রুপ পূর্ন | |
| Facile (adj) | easy, effortless | সহজবোধ্য, সহজলব্ধ | tough |
| Fallible (adj) | Imperfect, frail | ভ্রমপ্রবণ, পতন প্রবণ | perfect |
| Fanatic (n. adj) | frantic, fervent | অতিশয় গোড়া ব্যক্তি | |
| Fantasy (n) | dream, fancy | অলীক কল্পনা, বাঁধনহারা কল্পনা | |
| Farce (n) | comedy, drama | প্রহসন, হাস্যকর ঘটনাবলী | |
| Fascinate (vt) | enchant, enthrall, intrigue | মুগ্ধ করা, প্রবলভাবে আকর্ষন করা | repel |
| Fatuous (adj) | foolish, stupid, indolent | বোকা, জড়বুদ্ধি | sensible |
| Feasible (adj) | practical, viable | সম্ভব, বিশ্বাসযোগ্য | impossible |
| Feat (n) | achievement, accomplishment | কৃতিত্বপূর্ন কাজ, কৃতিত্ব | |
| Feeble (adj) | weak, infirm | দুর্বল, নিস্তেজ, ক্ষীন | strong |
| Ferocious (adj) | savage, bestial, fierce | হিংস্র, নিষ্ঠুর, বর্বর | gentle |
| Fertile (adj) | fruitful, rich | উর্বর, ফলনশীল | infertile |
| Fervent (adj) | ardent, keen | | indifferent |
| Fester (vt) | decay, rankle | পঁচানো, পুঁজপূর্ন | |

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| Feud (n. Vt) | dispute, argument | দ্বন্দ্ব বা কলহ | |
| Fickle (adj) | changeable, capricious | প্রায়শ পরিবর্তনশীল, দৃঢ়ভাবে অনুগত নয় এমন | consistent |
| Fictitious (adj) | invented, imaginary | বাস্তবনয়, কল্পিত | factual |
| Fidelity (n) | loyalty, faithfulness | আনুগত্য, বিশ্বস্ততা | disloyalty |
| Figment (n) | imaginated thing | কল্পিত বা অবাস্তব কিছু | |
| Filthy (adj) | dirty, squalid | নোংরা, অশ্লীল | clean |
| Fishy (adj) | suspicious, dubious | সন্দেহজনক, আঁশটে | aboveboard |
| Fitful (adj) | disturbed, broken | ক্ষনস্থায়ী, অনিয়মিত | unbroken |
| Flatter (vt) | compliment, praise | চাটূক্তি,তোষামোদ করা | |
| Flaw (n) | fault, defect | খুঁত, ত্রুটি, দোষ | |
| Flee (v) | escape, run away | পালানো, পলায়ন করা | |
| Flexible (adj) | agile, supple | নমনীয় | stiff, rigid |
| Flighty (adj) | fickle, capricious | খেয়ালী, অস্থির, চঞ্চল | |
| Flimsy (adj) | thin, fragile | হালকা ও পাতলা, ফিনফিনে | sturdy |
| Flounder (vi) | splash, struggle | নাকানি চোবানি খাওয়া, ভুল করা | |
| Fluster (vt) | confuse, disconcert | হতভম্ব, কিংকর্তব্যবিমুঢ়, হতবুদ্ধি | soothe |
| Foe (n) | enemy, adversary | শত্রু | friend |
| Foil (vt) | defeat, frustrate | ব্যর্থ, পর্যুদস্ত | |
| Foment (vt) | incite, stir up | সেঁকদেয়া, উদ্দীপিতকরা, ইন্ধন যোগানো | defuse |
| Forbid (vt) | prohibit, prevent | বারন করা, নিষিদ্ধ করা | allow |
| Foremost (adj) | original, prime, leading | প্রথম, প্রধান, বিশিষ্টতম | |
| Forerunner (n) | ancestor, predecessor | পূর্বলক্ষন, অগ্রদূত | descendant |
| Foresee (vt) | foreshadow, predict | আগাম জানা, আগেই বোঝা | |
| Foresight (n) | forethought, prudence | দুরদর্শিতা, ভবিষৎদর্শিতা | hindsight |
| Forestall (n) | prevent, preempt | আগাম নিরস্ত বা পথরোধ করা | let go |
| Forge (vt) | make, feign, fabricate | গড়া, জাল করা, কামারশালা | |
| Formidable (adj) | dreadful, frightening | ভয়ঙ্কর, ভীতিকর, দুর্ধর্ষ | |
| Forsake (vt.) | abandon, desert | ছেড়ে দেয়া, পরিত্যাগ করা | keep |
| Forte (n) | strong point, specialty | বিশেষ পারঙ্গমতা, বিশেষ ক্ষমতা, গুন | vulnerability |
| Forth (adv) | ahead, onward | বাহিরে, সামনের দিকে | |
| Forthright (adj) | frank, direct | স্পষ্টবাদী, স্পস্টভাষী | devious |
| Fortify (vt) | strengthen, reinforce | সুরক্ষিত করা, দুর্ভেদ্য করা | weaken |
| Fortitude (n) | endurance, courage | আত্মসংযম, বীরোচিত ধৈর্য্য, তিতিক্ষা | impatience |
| Fortuitous (adj) | accidental, coincidental | আকস্মিক, দৈবিক | expected |
| Fortunate (adj) | lucky, providential | ভাগ্যবান, সৌভাগ্যপূর্ন, শুভ | unfortunate |
| Foul (adj) | filthy, rotten | নোংরা, জঘন্য, পূতিগন্ধ | clean |
| Fragile (adj) | breakable, brittle | ভঙ্গুর, ঠুনকো, নাজুক | sturdy |
| Frail (adj) | fragile, flimsy | দুর্বল, পলকা, নাজুক | sturdy, strong |
| Fraternal (adj) | brotherly, cordial | ভ্রাতৃসুলভ, ভ্রাতৃসম | |
| Fraud (n) | fault, deception | দন্ডনীয় প্রতারনা, প্রবঞ্চনা, ছলনা | |
| Fraudulent (adj) | deceitful, dishonest | প্রতারনাপূর্ন, ছলনাপূর্ন | genuine |
| Frenzy (n) | anger, rage, passion | প্রবল উত্তেজনা, ক্ষিপ্ততা | |
| Fret (vt) | annoy, worry, fuss | অস্থির হওয়া বা করা, ছটফট করা | |
| Friction (n) | wear and tear, resistance | ঘর্ষন, বিরোধ, ঘষা | smoothness |
| Fright (n) | fear, anxiety | ত্রাস, শংকা, সন্ত্রাস | bravery |
| Frugal (adj) | thrifty, economical | সাবধান, মিতব্যয়ী, হিসাব | spendthrift |
| Frustrate (vt) | baffle, thwart | বিকল, ব্যাহত, ব্যর্থ করা | |
| Furious (adj) | frenzied, enraged | উন্মত্ত, ক্ষিপ্ত, অসংগত | |

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| Fury (n) | rage, wrath | প্রচন্ড উত্তেজনা, রোষ, ক্ষিপ্ততা | |
| Fusion (n) | association, synthesis | একী ভবন, গলন, সংমিশ্রন | seperation |
| Fussy (adj) | finicky, fastidious | অস্থির | |
| Futile (adj) | useless, vain | নিস্ফল, বৃথা, অপদার্থ | useful |
| Fuzzy (adj) | frizzy, downy | ঝাপসা, অস্পষ্ট | |
| Gainful (adj) | profitable, lucrative | অর্থপ্রদ, লাভজনক | unprofitable |
| Gainsay (vt) | deny, oppose | প্রধানতঃ অপলাপ করা | agree |
| Gale (n) | storm, tempest | প্রবল বায়ু, ঝড়, বাত্যা | breeze |
| Gallant (adj) | courageous, heroic | দুঃসাহসী, অকুতোভয় | cowardly |
| Garb (n) | uniform, outfit | লেবাস, পোষাক | |
| Garner (vt) | store, gather | মজুত করা, সঞ্চয় করা | scatter |
| Gash (n) | wound, slash, cut | দীর্ঘ ও গভীর জখম | |
| Gasp (v) | breathe, gulp | অতিকষ্টে শ্বাস টানা, হাঁপানো | |
| Gauche (adj) | awkward, clumsy | আড়ষ্ট, অপ্রভিত | polite, smart |
| Gauge (vt) | calculate, measure | মানদন্ড, মাপ, বিস্তার | |
| Gaze (v) | stare, look | স্থির দৃষ্টি | |
| Gem (n) | jewel, precious stone | মূলবানরত্ন | |
| Generalize (v) | summarize, outline | সাধারন সিদ্ধান্ত টানা | specify |
| Generate (vt) | produce, give rise to | ঘটানো, উৎপাদন করা | |
| Generous (adj) | lavish, handsome | উদার, সহৃদয় | tightfisted |
| Genial (adj) | kindly, good-natured | সদয়, সহানুভূতিশীল, মিশুক | hostile |
| Genre (n) | style, manner | প্রকার, রকম, ধরন | |
| Genteel (adj) | well bred, courteous | কেতাদুরস্ত, ভদ্র ও পরিশীলিত | vulgar |
| Gentility (n) | refinement | ভদ্রতা, পরিশীলতা | vulgarity |
| Germinate (vt) | sprout, grow | অংকুরিত করা বা হওয়া | |
| Gibe (vt) | deride, ridicule, mock, make fun of | উপহাস করা, ঠাট্টা করা | |
| Gild (vi) | embellish | সোনালী রং করা | |
| Gist (n) | theme, substance | মূলকথা, সারমম | |
| Glamor (n) | attraction, charm | জাদু, মোহিনী শক্তি | |
| Glamorous (adj) | fascination, charming | জাদুময়, মোহিনী রূপময় | dull |
| Glaring (adj) | dazzling | চোখ ধাঁধানো, জাজ্বল্যমান | inconspicuous |
| Gleam (vt) | glimmer, flash | মৃদু দীপ্তি, দীপ্তি বিচ্ছুরিত করা | |
| Glean (vt) | collect, gather | ফসল কুড়ানো, শষ্য দানা খুঁটে তোলা | |
| Gleeful (adj) | delightful, exultant | উল্লাসিত | sad |
| Gloom (n) | sadness, depression | অস্পষ্টতা, আধো অন্ধকার | brightness |
| Gloomy (adj) | dark, dim | অন্ধকার, বিষন্ন | bright |
| Glorious (adj) | magnificent, wonderful | দ্যুতিময়, চমৎকার মহিমন্বিত | shameful |
| Glossy (adj) | smooth, lustrous | মসৃন ও উজ্জল | uneven |
| Gnaw (vt) | bite | একনাগারে কামড়ানো | |
| Gorge (n. vt) | ravine, overeat | গিরিসংকট, রাক্ষসের মত খাওয়া | nibble |
| Gorgeous (adj) | beautiful, admirable | জমকালো, চমৎকার | ugly |
| Govern (vt) | control, determine | শাসন করা, পরিচালনা করা | |
| Grab (vt) | snatch, rob | খপ করে ধরা, আঁকড়ে ধরা | |
| Gracious (adj) | affable, cordial | উদার, ভদ্র,সদয় | reserved |
| Grasp (vt) | apprehend, comprehend | আঁকড়ে ধরা, উপলব্ধি করা | let go |
| Grateful (adj) | thankful, obliged | কৃতজ্ঞ | ungrateful |
| Gratify (vt) | satisfy, indulge | খুশি করা, সন্তোষ্ঠ করা | displease |
| Gratitude (n) | thankfulness | কৃতজ্ঞতা | |
| Gratuitous (adj) | unwarranted | বিনামূল্যে প্রদও বা প্রাপ্ত | |

| Gravity (n) | magnitude, seriousness | মাধ্যাকর্ষন শক্তি, গম্ভীর ভাব | insignificance |
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| Greasy (Adj) | oily | চর্বিযুক্ত, পিচ্ছিল | |
| Greedy (adj) | voracious, insatiable | লোভী, লোভাতুর | |
| Gregarious (adj) | social, outgoing | দলবদ্ধ ভাবে বাস করে এমন | shy |
| Grievance (n) | dissatisfaction, complaint | দুঃখ, দুর্দশা | |
| Grieve (vi) | sorrow, mourn | দুঃখ দেয়া, দুঃখ করা | rejoice |
| Grim (adj) | cruel, merciless | কঠোর, নির্মম, ভয়ানক | kind |
| Grind (vt) | crush, mill | ঘসে চুর্ন বা গুঁড়া করা, নিস্পিষ্ট করা | |
| Grip (n) | grasp, clasp | আঁকড়ে ধরা, শক্ত হাতে ধরা | |
| Grope (vt) | fumble, search | অন্ধের মত হাতড়ে ফেরা | |
| Grouchy (adj) | bed – tempered, petulant | গোমড়ামুখো মানুষ, নাখোশ | good-natured |
| Grumble (vt) | complain, grunt | ক্ষুব্ধ অসন্তুষ্ট বিড়বিড়া করা | |
| Grumpy (adj) | ill –tempered, cranky | বদমেজাজী, রুষ্ট | cheerful |
| Guileless (adj) | frank, honest | প্রতারনাহীন, অকপট | evasive |
| Guise (n) | appearance | পোষাকের ধরন, বেশ | |
| Hackneyed (adj) | mouldy, stale, trite | অতি প্রচলিত, অতিব্যবহৃত | innovative |
| Haggle (vt) | argue, bargain | দরকষাকষি করা | |
| Hail (n. vt) | acclaim, applaud | সম্ভাষন জানানো, অভিনন্দিত করা | vilify |
| Hamper (vt) | hinder, impede, handicap | বাধা দেয়া, ব্যাহত করা | facilitate |
| Handy (adj) | convenient, skilful | কুশলী, হাতের কাজে পটু | useless |
| Hardy (adj) | tough, rugged | শক্ত, কষ্ট সহিষ্ণু | tender |
| Harness (vt) | utilize | শক্তি উৎপাদনের জন্য ব্যবহার করা | |
| Harsh (adj) | hoarse, unpleasant | রূঢ়, কর্কশ | gentle |
| Harvest (n. / v) | crop, yield | ফসল তোলা, ফসল কাটা | |
| Hasten (vt. Vi) | hurry, quicken | দ্রুত চলা বা করা, ত্বরান্বিত করা | |
| Hasty (adj) | rushed, speedy | ত্বরিত, চটজলদি | slow |
| Hatch (v) | incubate, breed | ডিমে তা দেয়া, ডিম ফুটে বাচ্চা বের হওয়া | |
| Hatred (n) | abomination, hate | ঘৃনা, তীব্র বিরাগ | love |
| Haughty (adj) | disdainful, arrogant | উদ্ধত, অহঙ্কারী | modest, polite |
| Haul, (vt) | drag, transport | সবলে টানা | |
| Haunt (vt) | frequent | অভ্যাসগত ভাব বা হরহামেশা কোথাও যাতায়ত করা | |
| Haven (n) | shelter, refuge | পোতাশ্রয়, বিশ্রামস্থল | |
| Hazard (n) | risk, danger | ঝুঁকি, বিপদ | security |
| Hazardous (adj) | dangerous, perilous | ঝুঁকিপূর্ন | safe |
| Headstrong (adj) | obstinate, stubborn | একগুঁয়ে, স্বেচ্ছাচারী | docile |
| Heal (vt, n) | cure, recover | নিরাময় করা, উপশম করা | worsen |
| Hearsay (n) | rumor, gossip | জনশ্রুতি, জনরব | |
| Heave (vt) | lift, fling | তোলা, উত্তোলন করা | push back |
| Hectic (adj) | busy, feverish | জ্বরতপ্ত, কর্মব্যস্ত | |
| Heedless (adj) | neglectful, oblivious | অমনোযোগী, অসাবধান | careful |
| Helpless (adj) | powerless, weak | অসহায়, নিরুপায় | self-reliant |
| Heredity (n) | genetics, inheritance | বংশগতি | |
| Heresy (n) | dissent, deviation | প্রচলিত মতের বিরুদ্ধে বিশ্বাস | belief |
| Heritage (n) | legacy, bequest | উত্তরাধিকার | |

| Hermit (n) | recluse, loner | তপস্বী, নির্জনবাসী ব্যক্তি | |
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| Hesitate (vi) | falter, vacillate | দ্বিধা, ইতস্তত করা | |
| Hideous (adj) | ugly, illlooking | অতিকুৎসিত, কদাকার | |
| Hilarious (adj) | delightful, amusing | আনন্দউল্লাসপূর্ন, আনোন্দচ্ছল | |
| Hinder (vt) | hamper, impede | ব্যাহত | |
| Hoarse (adj) | husky, rough | কর্কশ, ভাঙ্গা ভাঙ্গা | smooth |
| Hoax (n. / v) | trick, prank | ধোঁকা, তামাশা, চাতুরী | |
| Hoist (v. N) | lift, raise | তোলা, উত্তোলন করা | |
| Holocaust (n) | slaughter | ব্যাপক ধ্বংস, ধ্বংসযজ্ঞ | |
| Homage (n) | respect, reverence | শ্রদ্ধা, অভ্যর্থনা | |
| Homogeneous (adj) | uniform, same | সমজাতীয়, সমজাতিক | heterogeneous |
| Horror (n) | dismay, revulsion | বিভীষিকা, আতঙ্ক | |
| Hospitable (adj) | sociable, companionable | অতিথি পরায়ন, অতিথিবৎসল | unwelcoming |
| Hostile (adj) | antagonistic | বৈরী, শত্রুপক্ষীয় | friendly |
| Howl (vt) | wail, bawl | একটানা হুঙ্কার, গর্জন, আর্তনাদ | |
| Hubbub (n) | uproar, noise | কোলাহল, হৈ চৈ | quiet |
| Humane (adj) | sympathetic, kind | সহৃদয়, দয়ালু | inhumane |
| Humid (adj) | damp, moist | আর্দ্র , স্যাঁতস্যাতে | dry |
| Humidity (n) | moisture, dampness | আর্দ্রতা | dryness |
| Humiliate (vt) | shame, humble, insult | লজ্জিত করা, অপমানিত করা | |
| Humorous (adj) | funny, amusing | রসাত্মক, রসিকতাপূর্ন | |
| Hurdle (n) | obstacle, problem | অস্থায়ী বেড়া, অবরোধ | |
| Husbandry (n) | farming, management | কৃষি, ব্যবস্থাপনা | |
| Hustle (vt) | hurry, hasten | ধাক্কা মারা, ঠেলা মারা | |
| Hybrid (n) | cross, mixture | সংকর, দো-আঁশলা | |
| Hygiene (n) | sanitation, cleanliness | স্বাস্থ্যবিধি, পরিস্কার পরিচ্ছন্নতা | |
| Hypothesis (n) | assumption, theory | উপপ্রমেয়, প্রকল্প | |
| Iceberg (n) | | হিমশৈল | |
| Identical (adj) | tantamount, same | অভিন্ন, হুবহ, অনুরূপ | different |
| Identify (vt) | recognize | সনাক্ত করা, চিহ্নিত করা | |
| Ideology (n) | philosophy, beliefs | ভাবধারা, ভাবাদর্শ | |
| Idiocy (n) | stupidity, silliness | চরম বুদ্ধিহীনতা, অজ্ঞান | logic |
| Idiosyncrasy (n) | pecularity, eccentricity | | |
| Idol (n) | icon, satute | বিগ্রহ, প্রতিমা | |
| Idyllic (adj) | peaceful, tranquil | শান্তসমাহিত, স্বপ্নালস | |
| Ignite (vt) | inflame, kindle | জ্বালানো, প্রজ্জলিত করা | |
| Ignoble (adj) | despicable, dishonorable | নীচ, জঘন্য, হীন | noble |
| Ignominious (adj) | disgraceful, humiliating | লজ্জাকর, অপমানকর | honorable |
| Ignorance (n) | lack of knowledge | অজ্ঞতা, অজ্ঞানতা | knowledge |
| Ignore (v.) | disregard, neglect | উপেক্ষা করা, গ্রাহ্য না করা | notice |
| Illegible (adj) | unreadable, scrawled | দুস্পাঠ্য, অস্পষ্টাক্ষর | legible |
| Illegitimate (adj) | illegal, unlawful | অবৈধ | legitimate |
| Illicit (adj) | unlawful, illegal | নিষিদ্ধ, অবৈধ | legal |
| Illiterate (n) | uneducated, ignorant | নিরক্ষর, মূর্খ | literate |
| Illuminate (vt) | clarify, light up | উদ্ভাসিত করা, আলোকিত করা | darken |
| Illusion (n) | hallucination, delusion | মায়া, মোহ | |
| Illustrate (vt) | exemplify, explain | ব্যাখ্যা করা, বর্ননা করা | |
| Illustrious (adj) | famous, distinguished | কীর্তিমান, প্রথিতযশা | |

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| Imaginary (adj) | fantasy, unreal | কাল্পনিক, অবাস্তব | real |
| Imaginative (adj) | creative, inventive | কল্পনাপ্রবন, কল্পনাশ্রয়ী | |
| Imbibe (vt) | absorb, assimilate | পান বা হজম করা, শুষে নেয়া | |
| Imbue (vt) | permeate, instill | অনুপ্রানিত করা, পরিপূরিত করা | |
| Imitate (vt) | copy, reproduce | অনুকরন করা, অনুবর্তন করা | |
| Immediate (adj) | instant, direct | অব্যবহিত, আসন্ন | gradual |
| Immense (adj) | huge, vast | বিশাল, অতিকায় | tiny |
| Immerse (vt) | indulge, submerge | ডোবানো, নিমজ্জিত করা | |
| Imminent (adj) | impending, approaching | আসন্ন, সমুপস্থিত | distant |
| Immobile (adj) | fixed, stationary | নিশ্চল, গতিহীন, স্থাবর | mobile |
| Immortal (adj) | undyuing, everlasting | অক্ষয়, অবিনশ্বর | mortal |
| Immune (adj) | unaffected, protected | মুক্ত, নিরাপদ | susceptible |
| Impact (n. v) | collision, force; affect,influence | সংঘর্ষ, সংঘাত | |
| Impair (vt) | harm, damage | ক্ষতি করা, বিকল করা | enhance |
| Impale (vt) | pierce, prnetrate | বর্শাবিদ্ধ বা শূলবিদ্ধ করা | |
| Impart (vt) | inform, disseminate | আলাদা করা | |
| Impartial (adj) | fair, unbiased | নিরপেক্ষ, পক্ষপাতহীন | biased |
| Impassioned (adj) | emotional, ardent | আবেগ,তাড়িত করা | impassive |
| Impassive (adj) | apathetic, indifferent | নির্বিকার, নিরাবেগ | ardent |
| Impatient (adj) | intolerant | অসহিষ্ণু, অধৈর্য্য | patient |
| Impeach (vt) | accuse, indict | সন্দেহ উত্থাপন করা, প্রশ্ন তোলা | |
| Impeccable (adj) | faultless, stainless | নিখুত, নিস্কলঙ্ক | faulty |
| Impel (vt) | compel, urge | বাধ্য, প্রনোদিত, প্ররোচিত করা | |
| Impertinent (adj) | insolent, impudent | অবিনয়ী, প্রগল্‌ভ | respectful |
| Impervious (adj) | impenetrable, impermeable | অভেদ্য, অপ্রবেশ্য | penetrable |
| Impetuous (adj) | impulsive | অতিরিক্ত আবেগী | considered |
| Impetus (n) | urge, momentum | গতিশক্তি, সংবেগ, গতি | inertia |
| Implement (vt) | carry out, fulfil, execute | বাস্তবায়িত করা, কার্যে পরিনত করা | |
| Implicate (vt) | Involve, associate | জড়িত বলে দেখানো, বিজড়িত | release |
| Implicit (adj) | inferred, implied | নিহিত, ইশারা ইঙ্গিতে প্রকাশিত | explicit |
| Imposing (adj) | impressive, striking | জমকালো, বিস্ময়কর | unimpressive |
| Impotence (n) | powerlessness | অক্ষমতা, ক্লীবতা | power |
| Imprisonment (n) | custody, confinement | কয়েদ, কারাবন্ধন | |
| Impromptu (adj) | extempore, improvised | প্রত্যুৎপন্ন, অচিন্ত্যপূর্ন | prepared |
| Improvise (vt) | extemporize | উপস্থিত মত রচনা করা | |
| Imprudent (adj) | rash, hasty, reckless | অবিমৃষ্যকারী, হঠকারী | prudent |
| Impudent (adj) | rude, brash, insolent | ধৃষ্ট, নির্লজ্জ | respectful |
| Impulse (n) | urge, momentum | প্রেরনা, প্রনোদনা | aversion |
| Impulsive (adj) | propelling, driving | আবেগ প্রবৃত্ত, আবেগতাড়িত | cautious |
| Impure (adj) | adulterated, unrefined | অশুচি, অশদ্ধ, দূষিত | pure |
| Impute (vt) | ascribe, attribute | দোষারোপ করা, আরোপ করা | |
| Inaugurate (vt) | commence, initiate | অভিষিক্ত করা, উদ্বোধন করা | |
| Incapacitate (vt) | disable, handicap | অসমর্থ করা | enable |
| Incentive (n) | motivation | উদ্দীপক, যা উৎসাহিত করে | |
| Incessant (adj) | ceaseless, continual | নিরন্তর, অবিরত, বিরামহীন | sporadic |
| Incipient (adj) | initial, embryonic | আদ্য, প্রাথমিক স্তরবর্তী | |
| Incisive (adj) | profound, keen | তীক্ষ্ণ, সূক্ষ্মবুদ্ধি | dull |

| Incite (vt) | arouse, provoke, stir | প্ররোচিত করা, উদ্দীপ্ত করা | inhibit |
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| Inclined (adj) | liable | অবনত, ঝোকানো | disinclined |
| Incoherent (adj) | disconnected | অসংলগ্ন | coherent |
| Incompatible (adj) | inconsistent, incongruous | সঙ্গতিহীন, সামঞ্জস্যহীন | consistent |
| Incompetent (adj) | useless, inept | অযোগ্য, যোগ্যতাহীন | adept, competent |
| Inconceivable (adj) | unimaginable, unthinkable | অভাবনীয়, অচিন্তনীয় | practical |
| Incongruity (n) | strangeness, absurdity | অসামঞ্জস্য, অসঙ্গতি | consistency |
| Incongruous (adj) | inconsistent, absurd | অসামঞ্জস্যপূর্ণ, সঙ্গতিবিহীন | consistent |
| Incredible (adj) | unbelievable, improbable | অবিশ্বাস্য, প্রত্যয়াতীত | credible |
| Incredulity (n) | suspicion, disbelief | অবিশ্বাস, অপ্রতীতি | trust, belief |
| Incriminate (vt) | accuse, implicate | অভিযুক্ত করা, দোষারোপ করা | |
| Incur (vt) | arouse, provoke | গ্রস্থ হওয়া, ডেকে আনা | |
| Indecent (adj) | improper, unacceptable | গর্হিত, শিষ্টাচার বিরুদ্ধ | decent |
| Indefatigable (adj) | tireless, dogged | অক্লান্ত, অশ্রান্ত | tired, fatigued |
| Indefinte (adj) | infinite, unlimited | অনিশ্চিত, অনির্দিষ্ট | certain |
| Indemnity (n) | insurance, protection | ক্ষতিপূরন, নিরাপত্তা, প্রতিবিধান | |
| Indictment (n) | charge, accusation | অভিযোগ, অভিযোগপত্র | |
| Indifferent (adj) | uninterested, nonchalant | নিঃস্থ, উদাসীন | concerned |
| Indigenous (adj) | aboriginal, native | দেশী, স্বদেশজাত | foreign |
| Indigent (adj) | needy, poor | দরিদ্র, অকিঞ্চন | wealthy |
| Indolent (adj) | lazy, slothful | অলস, নিশেষ্ট, নিরুদ্যম | industrious |
| Indomitable (adj) | invincible, relentless | অদম্য, দুর্দম | feeble |
| Induce (vt) | cause, persuade | উৎসাহিত করা, সম্মত করা | dissuade |
| Industrious (adj) | assiduous, diligent, sedulous | পরিশ্রমী, অধ্যবসায়ী | indolent |
| Ineligible (adj) | disqualified, unsuitable | অনধিকারী, অযোগ্য | eligible |
| Inept (adj) | incompetent, inefficient | অপটু, অযোগ্য | adept |
| Inert (adj) | immobile, inactive | অচেতন, জড়, নিষ্ক্রীয় | moving |
| Inertia (n) | laziness, indolence | জড়তা | mobility |
| Infallible (adj) | perfect, fullproof | অভ্রান্ত, অমোঘ, অব্যর্থ | fallible |
| Infamous (adj) | notorious, disgraceful | কুখ্যাত, জঘন্য | famous |
| Infer (vt) | deduce, imply | অনুমান করা, সিদ্ধান্তে আসা | |
| Inferior (n. Adj) | lesser, substandard | অধস্তন, নিকৃষ্ট | superior |
| Inflation (n) | rise, increase | স্ফীতি, বৃদ্ধি পাওয়া | deflation |
| Inflict (vt) | incur, impose | প্রদান করা, বিধান করা, চাপানো | |
| Influx (n) | arrival, invasion | অভ্যন্তর মুখী প্রবাহ, আগম | |
| Infringe (vt) | break, breach, violate | লঙ্ঘন করা, ভঙ্গ করা | obey |
| Infuse (vt) | imbue, instill | পরিপূর্ন করা, সঞ্চার করা | |
| Ingenious (adj) | clever, intelligent | উদ্ভবনকুশল, বিচক্ষন | thick |
| Inhabitant (n) | resident, occupant | অধিবাসী, নিবাসী, স্থায়ী | |
| Inherent (adj) | innate, intrinsic | স্বাভাবিক, আনুষঙ্গিক, অন্তঃস্থায়ী | |
| Initiate (vt) | begin, commence | চালু করা, প্রবর্তিত করা, সূত্রপাত করা | |
| Injurious (adj) | harmful, deleterious | ক্ষতিকর, অনিষ্টকর | harmless |
| Innate (adj) | inborn, inherent | সহজাত, স্বভাবজ, অন্তর্জাত | |
| Innovation (n) | novelty, modernization | নবপ্রবর্তন, নবরীতি | tradition |
| Inordinate (adj) | excessive, immoderate | অসংযত, অপরিমিত | moderate |

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| Inquisitive (adj) | nosy, curious | কৌতুহলী, কৌতুহলম্বিত | apathetic |
| Insane (adj) | crazy, mad | পাগল, উম্মাদ | sane |
| Insinuate (vt) | allude, hint, imply | সুকৌশলে প্রবেশ করা, বক্রোক্তি করা | |
| Insist (vt) | claim, adhere | জোর দিয়ে বলা, দৃঢ় কণ্ঠে ঘোষনা করা | |
| Insolent (adj) | impudent, haughty, arrogant | উদ্ধত, ধৃষ্ট | polite |
| Instantaneous (adj) | ephemeral, immediate | তাৎক্ষনিক | |
| Instigate (vt) | prompt, initiate | প্ররোচিত করা, উৎসাহিত করা | |
| Instill (vt) | infuse, inpart | ধীরে ধীরে নিবেশিত বা সঞ্চারিত করা | |
| Instinctive (adj) | inpulsive, spontaneous | সহজাত, সাহজিক | conscious |
| Insubordinate (adj) | disobedient, rebellious | অবাধ্য, অবিনীত | obedient |
| Insufferable (adj) | unbearable, intolerable | অসহ্য, দুঃসহ | |
| Insular (adj) | isolated, narrowminded | দ্বীপসংক্রান্ত, সঙ্কীর্নচিত্ত | open-minded |
| Integrate (vt) | combine, join | সমগ্রতাসাধন করা, সংহত করা | |
| Integrity (n) | honesty, congruity | সাধুতা, সত্যশীলতা | dishonesty |
| Intelligible (adj) | apprehensible, clear | সুবোধ্য, সুগ্রাহ্য | unintelligible |
| Intense (adj) | acute, severe | তীব্র,উদগ্র, প্রগাঢ় | moderate |
| Intensify (vt) | enhance, strengthen | | weaken |
| Intensive (adj) | concentrated | গভীর, প্রগাঢ়, নিবিড় | sketchy |
| Intercept (vt) | hold back, stop | মাঝপথে পাকড়াও করা, অভিগ্রহন করা | |
| Interfere (vi) | intervene, meddle | অনধিকারচর্চ্চা, পরাধিকারচর্চ্চা | |
| Interlude (n) | interval, episode | অবকাশ, মধ্যবর্তী বিরতি | |
| Intermediary (n) | mediator | যোগাযোগের মাধ্যম | |
| Interrogate (vt) | interview, cross-examine | জেরা করা, জিজ্ঞাসাবাদ করা | |
| Intervene (vi) | interfere, influence | ইতোমধ্যে, হস্তক্ষেপ করা | |
| Intimacy (n) | proximity, familiarity | ঘনিষ্ঠতা, অন্তরঙ্গতা | distant |
| Intimate (adj.v) | close, cherished | অন্তরঙ্গ, ঘনিষ্ঠ | |
| Intimidate (vt) | frighten, threaten | ভীতি প্রদর্শন করা | |
| Intoxicate (vt) | make crazy | উম্মাদিত বা মাতাল করা | |
| Intrepid (adj) | fearless, dauntless | অকুতোভয়, নিঃশঙ্ক | cowardly |
| Intricate (adj) | complicated, entangled | জটিল, দুর্বোধ্য, কুটিল | simple |
| Intrinsic (adj) | substantive, inherent | স্বকীয়, অন্তর্নিহিত | extrinsic |
| Intrude (vt) | encroach, infringe | অনাহুত, অবাহিতভাবে প্রবেশ করা | |
| Intuition (n) | instinct, perception | স্বজ্ঞ, অন্তর্জান | |
| Inure (vt) | accustom | অভ্যস্ত করা | |
| Invade (vt) | intrude, aggress | হানা দেয়া, উপদ্রব করা | |
| Invalid (adj) | void, null | অক্ষম, অশক্ত, অকেজো | valid |
| Invaluable (adj) | valuable, precious | অমূল্য, অনর্ঘ্য | worthless |
| Inventory (n) | list, record, account | বিস্তারিত তালিকা, পরিসংখ্যাপত্র | |
| Inverse (adj) | contrary, opposite | উল্টো, বিপরীত | parallel |
| Invert (vt) | overturn, reverse | উল্টানো, বিপর্যস্ত করা | straighten |
| Invocation (n) | plea, prayer | আবাহন, নামোচ্চারন | |
| Invoke (vt) | beg, pray | আবাহন করা, প্রার্থনা করা | |
| Irreconcilable (adj) | unconformable, incomparile | মেলানো যায় না এমন, অসদৃশ | compatible |
| Irrelevant (adj) | unrelated | অপ্রাসঙ্গিক, অবান্তর | relevant |
| Irrepressible (adj) | insuppressible, uncontrolled | অদম্য, দুর্দমনীয় | orderly |

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| Irreproachable (adj) | inculpable, impeccable | অনবদ্য, অনিন্দ্য | faulty |
| Irresistible (adj) | tempting, overwhelming | অপ্রতিরোধ্য, দুর্নিবার | unappealing |
| Irresolute (adj) | hesitating, indecisive | অস্থিরমতি, অস্থিরমনস্ক | determined |
| Irreverent (adj) | disrespectful, impudent | শ্রদ্ধাহীন, অশ্রদ্ধ | respectful |
| Irrevocable (adj) | irreversible, unalterable | চূড়ান্ত ও অপরিবর্তনীয় | flexible |
| Irrigate (vt) | water, hose down | জলসরবরাহ করা, জলসেচ করা | |
| Irritable (adj) | peevish, irascible, petulant, grouchy | সহজে রেগে যায় এমন, খিটখিটে | easygoing |
| Isolate (vt) | insulate, separate | বিচ্ছিন্ন করা, পৃথক করা | unite |
| Jar (vt) | grate, annoy | পীড়িত করা, বিচলিত করা | |
| Jealous (adj) | envious, resentful | ঈর্ষাকাতর, ঈর্ষাপরায়ন | |
| Jeer (vr) | deride, gibe | উপহাস করা, বিদ্রুপ করা | applaud |
| Jeopardy (n) | danger, risk | বিপদ, ঝুঁকি, ক্ষতি | |
| Jolt (vt) | shake, jar | ঝাঁকি দেয়া, আকস্মিক ধাক্কা দেয়া | |
| Joyous (adj) | happy, merry, blissful | আনন্দপূর্ন, হর্ষপূর্ন | sad |
| Juncture (n) | junction, joining | সংযোগ, সন্ধিক্ষন | |
| Jurisdiction (n) | authority, legislation | বিচার ব্যবস্থা, আইনগত অধিকার | |
| Juvenile (adj) | adolescent, young | তরুন, স্বল্পবয়স্ক ব্যক্তি | |
| Ken (n) | knowledge, ingelligence | অজানা, জ্ঞানের সীমার বাইরে | |
| Kindle (vt) | ignite, inflame | আগুন ধরানো, উদ্দীপ্ত করা | douse |
| Kingdom (n) | realm | রাজ্য, রাজত্ব | |
| Laborious (adj) | arduous, painstaking | শ্রমসাধ্য | easy |
| Labyrinth (n) | maze, tangle | গোলকধাঁধা | |
| Lament (n. vt) | mourn, grieveover | শোক করা, বিলাপ করা | |
| Languish (vt) | wither, fade | নিস্তেজ হওয়া, অবসন্ন হওয়া | flourish |
| Lasting (adj) | enduring, long- term | স্থায়ীহওয়া, টেকসই হওয়া | temporary |
| Laud (vt) | compliment, praise | প্রশংসা করা, গুনকীর্তন করা | vilify |
| Laudable (adj) | praiseworthy, commendable | প্রসংশার যোগ্য, প্রশংসাজনক | despicable |
| Launch (vt) | send off , start | | |
| Lavish (adj) | plenty, wasteful | অমিতব্যয়ী, অপব্যয়ী | scanty |
| Lawsuit (n) | court case, proceedings | মামলা, মোকদ্দমা | |
| Leash (n. v) | bridle, strap | চর্মনির্মিত রজ্জু, নিয়ন্ত্রন করা, সংযত করা | |
| Legacy (n) | bequest, heritage | উত্তরাধিকার, উত্তরাধিকার সূত্রে প্রাপ্ত | |
| Legalize (adj) | make legal, authorize | আইনসম্মত করা, বৈধ করা | criminalize |
| Legislate (vt) | lawmaking | আইন প্রনয়ন করা | |
| Lethal (adj) | fatal, deadly | প্রানঘাতী, মারাত্নক | life-giving |
| Levy (n) | tax, charge | কর | |
| Liaison (n) | contact, connection | দুই পক্ষের সংযোগ বা যোগাযোগ | |
| Liberal (adj) | lenient, broad- minded | বদান্য, উদার, মুক্তহস্ত | conservative |
| Liberate (vt) | discharge, release | মুক্ত করা, উদ্ধার করা | |
| Limpid (adj) | transparent, clear | নির্মল, স্বচ্ছ | shallow |
| Listless (adj) | sluggish, lifeless | হতোদ্যম, নিরুৎসাহ | enthusiastic |

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| Lithe (adj) | flexible, supple | নমনীয়, সহজে নাড়াচাড়া করা যায় না এমন | rigid |
| Loath (adj) | reluctant, unwilling | অনিচ্ছুক | eager |
| Loathe (vt) | hate, dislike | বিরাগ পোষন করা, অপছন্দ করা | adore |
| Lofty (adj) | high, towering | সুউচ্চ, বৈশিষ্টপূর্ন, চমৎকার | short |
| Lull (n. v) | calm down, soothe | শান্ত করা, ঘুম পাড়ানো | flare-up |
| Luminous (adj) | glowing, shining | আলোকজ্জ্বল, উজ্জ্বল | dull |
| Lure (vt) | entice, tempt | প্রলোভন, মায়া, প্রলব্ধ করা | repel |
| Lurk (vt) | prowl, slink | ওঁত পেতে থাকা | |
| Luster (n) | brightness, shine | দীপ্তি, ঔজজ্বল্য | |
| Lusty (adj) | vigorous, energetic | স্বাস্থ্যবান, স্থুল, বলবান | feeble |
| Luxuriant (adj) | lush, abundant | ফলবান, ফলন্ত, প্রচুর | meager |
| Magnificent (n) | gallant, splendid | চমকপ্রদ, জাকজমক পূর্ন | abysmal |
| Malady (n) | problem, disease | রোগ, অসুস্থতা | |
| Malevolent (adj) | malicious, spiteful | পরশ্রীকাতর, পরের অমঙ্গল কামরা কারী | |
| Malice (n) | ill will, spite | বিদ্বেষ, অশুভ কামনা | kindness |
| Malicious (adj) | vicious, spiteful | বিদ্বেষপূর্ন, বিদ্বেষ পরায়ন | kind |
| Malign (vt) | defame, slander | | praise |
| Malleable (adj) | supple, flexible | নতুন আকায় দেয়া যায় এমন | rigid |
| Mandate (n) | command, authorization | নির্দেশ, হুকুম | |
| Mandatory (adj) | obligatory, compulsory | আদেশব্যঞ্জক, কর্তৃত্বব্যঞ্জক | optional |
| Maneuver (vt. N) | move, step, tactic | কৌশল, কৌশলী পরিচালনা | |
| Mangle (vt.) | mutilate, smash | বাজেভাবে নষ্ট করা | |
| Manifold (adj) | various, many | বহুবিধ, বিবিধ | few |
| Manipulate (vt) | handle, operate | | |
| Manure (vt) | fertilize, dung | সার দেয়া | |
| Marital (adj) | wedded, conjugal | বিবাহ সংক্রান্ত | |
| Marvelous (adj) | wonderful, amazing | বিস্মড় করা, চমকপ্রদ** | dire |
| Massive (adj) | hevy, huge | বিশাল, ভারীদর্শন | infinitesimal |
| Maxim (n) | proverb, adage | সাধারন নীতি বা নিয়ম বানী, প্রবচন | |
| Maze (n) | complexity, labyrinth | গোলক ধাঁ ধাঁ, বিহবলতা | |
| Mean (adj) | inferior, unkind | নীচ, হীন মর্যাদাসম্পন্ন, বিশ্রী | compassionate |
| Meander (vt) | wind, zigzag, wander | একেঁ বেঁকে বয়ে চলা, এদিকে ওদিকে ঘুরে বেড়ানো | |
| Meddle (vi) | interfere, intervene | অনধিকার চর্চা করা, হস্তক্ষে করা | |
| Mediate (vt) | intercede, intervene | মধ্যস্থতা করা | |
| Mediocre (adj) | ordinary, average | মাঝারি মানের, সাধারন | above-average |
| Meditative (adj) | thoughtful, pensive | ধ্যান, গভীর চিন্তা | |
| Meek (adj) | docile,submissive | নম্র ও ধৈর্য্যশীল, অপ্রতিবাদী | assertive |
| Mend (vt.) | revise, correct | মেরামত করা, ত্রুটিমুক্ত করা | break |
| Menial (adj) | unskilled, tedious | | skillful |

| Merchandise (n) | commodities, goods | পন্যদ্রব্য | |
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| Merciful (adj) | compassionate | দয়ালু, করুনাময় | hard-hearted |
| Merge (vt) | combine, amalgamate | অঙ্গীভুত করা, একীভুত করা | seperate |
| Merit (n) | advantage, value | প্রশংসনীয় গুন, যোগ্যতা, উৎকর্ষ | disadvantage |
| Messy (adj) | untidy, dirly | নোংরা, বিশৃংখল | neat |
| Metabolism (n) | chemical transformation of human body | বিপাক, জীবদেহের রাসায়নিক রূপান্তর | |
| Methodical (adj) | systematic | পদ্ধতিগত, সুশৃংখল | haphazard |
| Meticulously (adv) | carefully, scrupulously | অতিসতর্কভাবে, যথাযথ ভাবে | carelessly |
| Mighty (adj) | powerful, strong | পরাক্রমশালী, প্রকান্ড | weak |
| Mimicry (n) | camouflage, imitation | অনুকরন, নকল | |
| Mine (v) | excavate, dig | খনি থেকে উত্তোলন করা, খনন করা | |
| Minority (n) | underground, marginal | নাবালকত্ব, সংখ্যালঘু | majority |
| Minute (adj) | tiny, minuscule | আনুঙ্খিক, অতিসূক্ষ | detailed |
| Miser (n) | collector, saver | কৃপন,কঞ্জুস | generous |
| Miserable (adj) | unhappy, depressed | দুর্গত, দুঃস্থ, দুর্বিষহ | happy |
| Miserly (adj) | stingy, tightfisted | ব্যয়কুণ্ঠ, কৃপন | generous |
| Misery (n) | depression, melancholy | দুর্গতি, দুর্দশা মর্মপীড়া | happiness |
| Misgiving (n) | scruple, doubt | সন্দেহ, সংশয়, আশঙ্কা | certainty |
| Mishap (n) | mischance, accident | অঘটন, বিপত্তি, দুবিপাক | |
| Mitigate (vt) | alleviate, relieve | তীব্রতা হ্রাসকরা, উপশমিত করা | aggravate |
| Mock (n. vt) | mimic, ridicule | তামাশা করা, উপহাস করা | |
| Moderate (adj) | average, reasonable | পরিমিত, সীমিত, মাঝারি | extreme |
| Modest (adj) | humble, unassuming | বিনয়ী, নিরহঙ্কার | arrogant |
| Modify (vt) | change, adapt | বদলে দেয়া, পরিবর্তন সাধন | |
| Modulate (vt) | change, modify | নিয়ন্ত্রিত করা, সমন্বিত করা | |
| Moist (adj) | damp, humid | ভেজা ভেজা, ঈষৎ আর্দ্র | dry |
| Moisten (vt) | dampen | আর্দ্র করা বা হওয়া, ভেজানো | dry out |
| Mold (v) | shape, cast | ছাঁচ | |
| Molecule (n) | particle | অনু | |
| Mollify (vt) | appease, assuage | শান্ত বা প্রশমিত করা, নরম করা | enrage |
| Momentous (adj) | important, critical | অতিগুরুত্ববহ | trivial |
| Monarch (n) | kingdom | অধিরাজ, সার্বভৌম | |
| Monitor (n) | inspector, leader | কর্তৃত্বপ্রাপ্ত ছাএ, পৃষ্ঠাচার্য | |
| Monotonous (adj) | boring, dull | একঘেয়ে, বৈচিত্র্যহীন | exciting |
| Monster (n) | demon | ভয়ঙ্কর দর্শন জীব, পিশাচ | |
| Morale (n) | ethics | মনোবল, নীতি | |
| Morbid (adj) | sick, diseased | রুগ্ন, পীড়িত | |
| Moron (n) | idiot | অল্পবুদ্ধি ব্যক্তি, হীনধী, মূঢ় | intelligent |
| Mostly (adv ) | typically, frequently | প্রধানত, সাধারনত | rarely |
| Motif (n) | theme, subject | শিল্পাকর্মের প্রধান বৈশিষ্ট্য স্থায়ীসুর | |
| Motion (n) | movement, action | গতি, চলন, গতিশীলতা | inertia |
| Motivation (n) | motive,incentive | প্রনোদনা, প্রেরনা | |
| Muddle (vt) | confuse, make into a | তালগোল পাকানো, বিশৃংখল করা | |

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| | mess, upheaval | | |
| Multitude (n) | host, mass | বিপুল সংখ্যা, জনতা,সমুচ্চয় | |
| Munificent (adj) | generous, liberal | দানবীর, মহাপ্রান | miserly |
| Mutation (n) | transformation, change | পরিব্যক্তি, রূপান্তর | |
| Mysterious (adj) | strange, weird | রহস্যময়, দুবোধ্য | |
| Naval (adj) | marine, nautical | নৌবাহিনী সংক্রান্ত | |
| Navigation (n) | steering, routing | নৌচালনা, নৌচালন বিদ্যা | |
| Nearly (adv) | almost, virtually | প্রায় | |
| Needy (adj) | poor, deprived | অভাবী, দ্ররিদ্র | well-off |
| Negligence (n) | carelessness | অমনোযোগ, উপেক্ষা | attention |
| Negligent (adj) | neglectful, careless | অমনোযোগী, যত্নহনি, অবহেলাকারী | attentive |
| Negotiate (v) | discuss, bargain | আলোচনা বা পরামর্শ করা, দরদস্তর করা | |
| Neutral (afj) | nonaligned, impartial | নিরপেক্ষ, প্রশমিত | biased |
| Neutralize (v) | counteract, defuse | নিরপেক্ষ করা, নিষ্ক্রিয় করা | |
| Nibble (vt) | bite, eat | ঠোকরানো, খুঁটে খাওয়া | |
| Nimble (adj) | agile, brisk | ক্ষিপ্রগামী, তীক্ষ্ম, তুখোড় | awkward |
| Nocturnal (adj) | night-time | নিশাচর, নৈশ | |
| Nod (n. / vi) | consent, approve | মাথা নোয়ানো বা হেলানো, সম্মতি জানাতে মাথা নাড়ানো | disprove |
| Nominate (vt) | appoint, name, suggest | মনোনয়ন দেয়া, নিযুক্ত করা | |
| Nonsense (n) | garbage, baloney | অর্থহীন শব্দ, নির্বোধ কথাবার্তা | sense |
| Nostalgia (n) | reminiscence, homesickness | অতীতবিধুরতা, গৃহকাতরতা | |
| Notable (adj) | distinguished, celebrated | লক্ষনীয়, স্বরনীয়, উলেখযোগ্য | insignificant |
| Noted (adj) | distinguished, celebrated | প্রসিদ্ধ, বিখ্যাত, বিশিষ্ট | unnoticed |
| Notorious (adj) | infamous, disreputable | কুখ্যাত, কুপ্রসিদ্ধ | famous |
| Novelty (n) | newness, unusualness | নতুনত্ব, অভিনবত্ব | tradition |
| Novice (n) | beginner, tyro, layman | নিক্ষানবিশ, নবব্রতী | experienced |
| Noxious (adj) | poisonous, toxic | অনিষ্টকর, ক্ষতিকর, অপকারী | harmless |
| Nuclear (adj) | | কেন্দ্র সম্বন্ধী, পারমানবিক | |
| Null (adj) | invalid, void | অকার্যকর, বাতিল | valid |
| Numb (adj) | senseless, dead | নিঃসাড়, অসাড়, অনুভূতিশূন্য | sensitive |
| Numerous (adj) | many, plentiful | অসংখ্য, বহু, বিপুল সংখ্যক | few |
| Nurture (vt) | feed, nourish | প্রতিপালন, প্রশিক্ষন দেয়া | |
| Nutrition (n) | nourishment, diet | পুষ্টিকর খাদ্য | |
| Oasis (n) | sanctuary | মরুদ্যন, উষর প্রান্তরে মনোরম স্থান | |
| Oath (n) | oath, pledge, promise | শপথ, শপথ বাক্য, অঙ্গিকার | |
| Obedience (n) | deference, submission | বাধ্যতা, আজ্ঞানুবর্তিতা | disobedience |
| Objective (n. adj) | aim, goal | লক্ষ্যবস্তু, উদ্দেশ্য | |
| Obligatory (adj) | compulsory, necessary | অবশ্য করনীয়, বাধ্যতামূলক | voluntary |
| Obliging (adj) | helpful, kind | পরোপকারী, সাহায্য করে এমন | inconsiderate |
| Oblivion (n) | forgetfulness, stupor | বিস্মরন, বিস্মৃতি | awareness |
| Obscene (adj) | indecent, filhty | অশ্লীল, অশোভন | decent |
| Obscure | unclear; unknown, | অন্ধকারময়, অখ্যাত, অস্পষ্ট | obvious |

| (adj) | inconspicuous | | |
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| Obscure (v) | hide, cloud, disguise | বিভ্রান্ত | clarify |
| Observance (n) | ceremony, rite | উদ্‌যাপন | |
| Obsolete (adj) | disused, outmoded | অপ্রচলিত, সেকেলে | up-to-date |
| Obstacle (n) | barricr, impediment | বাধা, প্রতিবন্ধক | |
| Obstruct (vt) | himder, impede | বাধা দেয়া, পথরোধ করা | facilitate |
| Obtain (vt) | get, find, gain | পাওয়া, অর্জন বা সংগ্রহ করা | lose |
| Obvious (adj) | distinct, evident | স্পষ্টত প্রতীয়মান, পরিস্কার | obscure |
| Odor (n) | smell, scent, fame | গন্ধ, খ্যাতি | |
| Offensive (adj) | aggressive, combative | যুদ্ধংদেহী | peaceful |
| Offer (n. vt) | oroposal, suggest, propose | প্রস্তাব করা | |
| Offhand (adj) | unprepared, impromptu | তাৎক্ষনিক, পূর্বচিন্ত ছাড়া | prepared |
| Offspring (n) | descendant, children | সন্তান সন্ততি, উওরসুরী | |
| Omit (vt) | exclude, leave out | বাদদেয়া, সম্পাদন করতেনা পারা | include |
| Onset (n) | attack, beginning | প্রারম্ভ, সূএপাত, আক্রমন | conclusion |
| Opera (n) | special program of songs | গীতি নাটক, গীতিনির্ভর নাট্যকর্ম | |
| Operate (vt) | manipulate, steer | চালানো, চালুথাকা, পরিচালনা করা | |
| Opposed (adj) | opposite, different | বিরোধী, বিরোধীতা | similar |
| Optimum (adj) | best, most favorable | সবচেয়ে অনুকুল | worst |
| Opulence (n) | wealth, affluence | বিত্ত, প্রাচুর্য, ধনী, বিওবান | poverty |
| Oracle (n) | prophesy, vision | দৈববানী, ভবিষ্যৎ দ্রষ্টা ব্যক্তি | |
| Oration (n) | speech, address | আনুষ্ঠানিক বক্তৃতা, ভাষন | |
| Orator (n) | speaker | বক্তা, ভাষ্যকার | |
| Orbit (n) | track, path | কক্ষপথ, গ্রহনক্ষএের পরিক্রমনপথ | |
| Orchestra (n) | band, ensemble | ঐকতান বাদকদল, অর্কেষ্ট্রা | |
| Ordeal (n) | difficult expericnce, trial | অগ্নিপরীক্ষা, সহিষ্ণুতার কঠিন পরীক্ষা | |
| Ore (n) | | আকরিক, বৈঠা | |
| Organism (n) | life form, creature | পরস্পর সম্পর্কযুক্ত ও সমন্বিতভাবে ক্রীয়াশীল অংশ নিয়ে গঠিত | |
| Original (adj) | earliest, initial, unique | প্রথম, আদি, সর্বপ্রথম | unoriginal |
| Originally (adv) | at first, initially | মৌলিকভাবে, নতুনভাবে | |
| Originate (vt) | initiate, start | কোন কিছু থেকে শুরু হওয়া, উদ্ভাবক হওয়া | |
| Ornament (n. vt) | decoration, embellishment | অলঙ্করন, অলংকার, গহনা | |
| Oust (vt) | dismiss, throw out | বিতাড়িত করা, উচ্ছেদ করা | appoint |
| Outcome (n) | result, consequence | পরিনতি, ফলাফল | |
| Outfit (n) | costume, suit, equipment | কোন বিশেষ্ট উদ্দেশ্যে প্রয়োজনীয় উপকরন, সজ্জিত করা | |
| Outing (n) | trip, excursion | প্রমোদ ভ্রমন, ঘরের বাইরে কাটানো ছুটি | |
| Output (n) | turnout, yield | উৎপাদিত পন্যের পরিমান, শক্তি | |
| Outrage (v) | anger, offend | চরম সন্ত্রাস, নিষ্ঠুরতা | calm |
| Outrageous (adj) | offensive, disgraceful | জঘন্য, নীতিবিগর্হিত | calm |

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| Outspoken (adj) | forghright, straight-forward | স্পষ্টবাদী, খোলাখুলি | tactful |
| Outstanding (adj) | notable, remarkable | বিশিষ্ট | abysmal |
| Outwit (vt) | outsmart | চালাকিতে পরাস্ত করা | |
| Overbearing (adj) | arrogant, haughty | কর্তৃত্বপূর্ন, স্বেচ্ছাচারী | humble |
| Overdue (vt) | tardy, late | নির্ধারিত সময়োত্তীর্ন | timely |
| Overlook (vt) | ignore, neglect | উপর থেকে দেখতে পাওয়া, উপেক্ষা করা | deal with |
| Pacify (vt) | appease, placate | শান্ত করা, প্রশমিত করা | aggravate, antagonize |
| Painstaking (n. adj) | careful, scrupulous | যত্নশীল, কষ্টসহিষ্ণু, পরিশ্রমী | careless |
| Palatable (adj) | savory, edible | রুচিকর, স্বাদু | Inedible, disgusting |
| Panacea (n) | cure-all, solution | সর্বরোগ নিরাময়ী ওষুধ, সর্ববিধ সংকটমোচনের উপায় | |
| Panic (n) | fear, scare | নিয়ন্ত্রনহীন আতঙ্ক | calm |
| Parade (vt) | procession. mearch | কুচকাওয়াজ করা | |
| Parallel (vt) | match, similar, equivalent | সমান্তরাল, তুলনা, সমান্তরাল সম্পর্কযুক্ত | dissimilar |
| Paraphrase (vt) | rewrite | শব্দান্তরিত প্রকাশ | |
| Parasite (n) | scrounger, freeloader | পরজীবী, পরগাছা | |
| Partial (adj) | fractional, part | আংশিক, অসম্পুর্ন | complete |
| Particle (n) | atom, element | কনা, কনিকা, নূন্যতম পরিমান | |
| Partisan (adj) | follower, supporter | গোঁড়া, অন্ধভাবে অনুগত | opponent |
| Passionate (adj) | impassioned, fervent | আবেগপ্রবন, প্রবল আবেগপূর্ন | indifferent |
| Patronage (n) | support, benefaction | সমর্থন, পৃষ্ঠপোষকত,উৎসাহদান | |
| Peak (n) | summit, zenith | শিখর, চূড়া | nadir, dip |
| Peck (n) | bite, nibble | ঠোকরানো, শুকনা বস্তুর পরিমাপবিশেষ, খুঁটে বের করা | |
| Peerless (adj) | matchless, unparalleled | অতুলনীয়, সমকক্ষতাহীন | ordinary |
| Penal (adj) | punitive, punishing | দন্ডনীয়, শাস্তি সংক্রান্ত | |
| Penchant (n) | preference, inclination | রুচি, পছন্দ, ঝোঁক | |
| Pending (adj) | suspending, awaiting | মুলতবি, অমীমাংসিত | |
| Penetrate (vt) | pierce, see through | বিদ্ধ করা, ভেদ করা, অন্তর্দৃষ্টি দিয়ে দেখা | |
| Peninsula (n) | neck of land, cape | সামুদ্রিক জলবেষ্টিত উপদ্বীপ | |
| Pensive (adj) | thoughtful, contemplative | চিন্তামগ্ন, বিষন্ন, বিষাদক্লিষ্ট | thoughtless |
| Penury (n) | destitution, poverty | দারিদ্র | wealth |
| Perceive (vt) | discern, see, recognize | অবহিত হওয়া, হৃদয়ঙ্গম করা, উপলব্ধি করা, প্রত্যক্ষ করা | ignore |
| Perceptive (adj) | discerning, penetrating | উপলব্ধিজাত, উপলব্ধির ক্ষমতাসম্পন্ন | insensitive |
| Perennial (adj) | permanent, long-lasting, year-round | বর্ষব্যাপী, দীর্ঘস্থায়ী | occassional |
| Peril (n) | danger, threat | ভয়ানক বিপদ, সমুহ বিপন্নতা | safety |
| Perilous (adj) | dangerous, hazardous | বিপজ্জনক | safe |
| Permeate (vt) | penetrate, pervade | প্রবেশ করানো, প্রবাহিত করা | |
| Permissible (adj) | permitted, allowed | অনুমতিযোগ্য, নৈতিকতার আওতাধীন | unacceptable |
| Permissive (adj) | lenient, tolerant | সহজে অনুমতি দেয় এমন | strict |
| Perpetuate (v ) | carry on, make perpetual | চিরস্থায়ী করা | put an end to |

| Perplex (vt) | puzzle, confuse | হতবুদ্ধি করে দেয়া, ধাঁধাঁয় ফেলা | explain |
|---|---|---|---|
| Persevere (vi) | stick with, continue | অধ্যবসায়ী হওয়া, নিরবচ্ছিন্ন মনোযোগে কাজ করে যাওয়া | give up |
| Persistent (adj) | determined, unrelenting | অনড় অবস্থান গ্রহন কারী, পূনঃ পূনঃ ঘটনশীল | feeble |
| Personnel (n) | employees | কর্মচারী, কর্মীবৃন্দ, সরকারী দপ্তর বা সামরিক বাহিনীর সদস্য | |
| Perspective (n) | view, outlook | দৃষ্টরূপ বা আকৃতি | |
| Persuasive (adj) | incfluencing, convincing | প্ররোচনায় সমর্থ | unconvincing |
| Pertinent (adj) | relevant, related | প্রাসঙ্গিক, প্রত্যক্ষ সম্পর্ক যুক্ত | irrelevant |
| Pervade (vt) | permeate, saturate | ব্যাপকভাবে ছড়িয়ে দেয়া, পরিব্যাপ্ত করা | |
| Pervert (v) | deviate, distort | বিকৃতি সাধন করা, ভুলপথে চালিত করা | straighten |
| Petition (n vt) | appeal, lobby | আবেদন, প্রার্থনা, আকুল অনুরোধ | |
| Petrify (vt) | stupefy, terrify | প্রস্তরীভূত বা শিলীভূত হওয়া, শক্তি হরন করা | soothe |
| Phase (n) | stage, period | পর্যায়, অবস্থার পারম্পর্য, গ্রহের কলা বা দশা | |
| Phonetics (n) | | বাচনের ধ্বনিবিদ্যা | |
| Picturesque (adj) | vivid, charming | ছবির মতো, চিত্রবৎ, দৃশ্যমান | dull |
| Pierce (vt) | penetrate, puncture | বিদ্ধ করা, ভেদ করা | |
| Pilferage (n) | stealing | চুরি | |
| Pious (adj) | loyal, faithful, devout | ধার্মিক, সাধু, সৎ | irreverent |
| Pivot (n) | axis, axle | আবর্তন কীলক, কেন্দ্রবিন্দু | |
| Pivotal (adj) | critical, essential | আবর্তন কীলক সংক্রান্ত বা সদৃশ, কেন্দ্রিয়, নিরতিশয় গুরুত্বপূর্ন | irrelevant |
| Placate (vt) | appease, pacify | শান্ত, আশ্বস্ত, শমিত করা | enrage |
| Placid (adj) | tranquil, serene | শান্ত, সুসমাহিত, প্রসন্ন, সৌম্য | noisy, bustling |
| Plague (vt,n) | annoy, irritate, disease | বিরক্ত করা, মহামারী, মরক | |
| Plaintiff (n) | applicant, claimant | বাদী, ফরিয়াদি | |
| Plateau (n) | flat terrain | মালভুমি | |
| Plausible (adj) | reasonable, believable | যুক্তিসঙ্গত, আপাতদৃষ্টিতে যথার্থ, সত্যপ্রতিম | implausible |
| Playwright (n) | dramatist, writer | নাট্যকার | |
| Plea (vt) | appeal, entreaty | কৈফিয়ত, জবাব | |
| Plead (v) | argue, protest, beg | কারো পক্ষে ওকালতি করা | |
| Pleasing (adj) | blithe, amused | প্রীতিকর, সুখদায়ক, রমনীয় | unpleasant |
| Pleasure (n) | enjoyment, happiness | সুখ, সৌখ্য, প্রীতি, তুষ্টি, আনন্দ | dissatisfactio n |
| Pledge (n. vt) | promise, vow | জামানত, বন্ধক, পণ | |
| Plight (n) | predicament, dilemma | দুর্দশা, দুরবস্থা, গুরুতর ও কঠিন অবস্থা | |
| Plot (vt) | plan, map out, outline | গোপন পরিকল্পনা, ষড়যন্ত্র, পরিকল্পনা, ভূমিখন্ড | |
| Plumb (adj) | straight, vertical | ওলন, ওলনদড়ি, যথাযথ | |
| Plunge (vt) | dive, sink | ঝাঁপ দেয়া, ডুবিয়ে দেয়া, নিমজ্জিত করা | |
| Pollute (vt) | contaminate, defile | দুষিত/কলুষিত/নোংরা করা | clean |
| Ponder (vt) | consider, think about | বিবেচনা করা, ভেবে দেখা | |
| Ponderous (adj) | heavy, weighty | ভারী, পৃথুল, স্থুলকায় | light |
| Portable (adj) | movable, transportable | সুবহনীয়, সহজে বহনযোগ্য | fixed |
| Portion (n) | part, fraction | অংশ | full |

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| Portrait (n) | representation | অংশ, ভাগ, হিস্যা | |
| Portray (vt) | delineate, depict | প্রতিকৃতি আঁকা, চরিত্রচিত্রন করা, বর্ননা দান করা | |
| Pose (vt) | frame, constitute | কাঙ্খিত ভঙ্গিতে স্থাপন করা, উত্থাপন করা | |
| Posterity (n) | offspring, descendant | বংশধর, অপত্য, সন্তান সন্ততি | |
| Postpone (vt) | delay, put off | স্থগিত, মুলতবি রাখা, স্থগিতকরন | continue |
| Posture (n) | pose, bearing | অঙ্গস্থিতি, অঙ্গসংস্থিতি | |
| Potent (adj) | cogent, powerful | জোরালো, অকাট্য, শক্তিশালী | weak |
| Potential (adj) | possible,conceivable | সম্ভাব্য, সম্ভাবনীয় | unlikely |
| Precede (vt. vi) | come before | অগ্রগামী, পূর্বগামী, পূর্ববতঅগ্রবর্তী | follow |
| Precious (adj) | valuable, costly | বহুমূল্য ও অত্যন্ত সুন্দর | worthless |
| Precise (adj) | accurate, exact | যথাযথ, সম্যক, নির্ভুল | vague |
| Preclude (vt) | prevent, prohibit | নিবারিত বা নিরুদ্ধ করা, অসম্ভব করে তোলা | permit |
| Precursor (n) | sign, forerunner, pioneer, ancestor | অগ্রদূত, পূর্বলক্ষন | successor |
| Predominate (vt) | prevail, dominate | প্রবল/প্রধান হওয়া, প্রাধান্য বিস্তার করা | |
| Preeminent (adj) | prominent, outstanding | সর্বশ্রেষ্ট, সর্বপ্রধান, সর্বোত্তম | |
| Preferable (adj) | advisable | অধিক বরনীয়, অধিক শ্রেয় | |
| Preference (n) | inclination, privilege | বিশেষ অনুরাগ, অভিরুচি | |
| Prelude (n) | preface | প্রস্তাবনা, উপক্রম, পূর্বসূচক | |
| Premise (vt) | assumption, hypothesis | প্রতিজ্ঞা, তর্কের ভিত্তিস্বরূপউক্তি বাবাক্য | |
| Preserve (vt) | keep, save | রক্ষা করা, সংরক্ষন করা | |
| Prestige (n) | fame, reputation | মর্যাদা, সুখ্যাতিজনিত সম্মান | |
| Presume (vt) | suppose, imagine, assume | অনুমান করা, ধরে নেয়া | |
| Presumption (n) | assumption, presupposition | অনুমান, অনুমিতি, সম্ভাব্যতা | |
| Presumptuous (adj) | self-conceited, audacious | অহঙ্কারী, প্রধৃষ্ট | |
| Pretend (vt) | camouflage, disguise | ভান করা, ছল করা | |
| Prevail (vi) | dominate | জয়লাভ করা, সাফল্যের সাথে লড়াই করা | |
| Prevalent (adj) | common, widespread | সাধারন, ব্যাপক, প্রচলিত | rare |
| Prevent (vt) | block, cumber, hinder, obstruct | নিবৃত্ত করা, নিষেধ করা, প্রতিরোধ করা | allow |
| Primitive (adj) | crude, original, primordial | আদিম, সেকেলে, সাদামাটা | modern |
| Privilege (n.) | prerogative, favor | বিশেষাধিকার, বিশেষ অনুগ্রহ বা লাভ | |
| Probe (v) | investigation, inspection | সরু অস্ত্রবিশেষ, এষনী, তদন্ত | |
| Probity (n) | integrity, honesty | চারিত্রিক সরলতা, সততা, সাধুতা | wickedness |
| Proceed (vt) | carry on, go on | অগ্রসর হওয়া, এগিয়ে যাওয়া, শুরু করা | recede |
| Proclaim (vt) | announce, declare | ঘোষনা, প্রচার | |
| Prod (v) | poke, spur | খোঁচানো, উৎসাহ দেয়া | |
| Prodigal (adj) | extravagant, wasteful | অতিব্যয়ী, অকৃপন, অপব্যয়ী | cautious |
| Prodigious (adj) | colossal, enormous | বিশাল, অতিবৃহৎ | small |
| Profile (n) | outline, contour, sketch | পার্শ্বচিএ, মস্তকের পার্শ্বদৃশ্য | |
| Profoundly (adv) | deeply, greatly | গভীরভাবে,প্রগাঢ় ভাবে | superficially |
| Profuse (adj) | abundant, exuberant | সুপ্রচুর, উচ্ছ্বসিত, অপরিমিত | scanty |
| Proliferate (n ) | multiply, increase | বংশবিস্তার করা, দ্রুত বিস্তৃত করা, দ্রুত | |

| | | বেড়ে ওঠা | |
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| Prolific (adj) | creative, fertile | প্রচুর পরিমানে উৎপাদনশীল | unproductive |
| Prolong (vt ) | extend, lengthen | প্রলম্বিত, দীর্ঘয়িত, বিস্তৃত করা | curtail |
| Prominent (adj) | conspicuous, famous | উন্নত, প্রকট, সুপ্রত্যক্ষ | insignificant |
| Promote (v) | uphold, encourage | পদোন্নতি দান করা, সংবর্ধিত করা | demote |
| Prompt (adj) | quick, hasty | সত্বর, ত্বরিত, ক্ষিপ্র | slow |
| Pronounced (adj) | notable, prominent | উল্লেখযোগ্য | |
| Prop (n. v) | support, mainstay | ঠেস, খুঁটি, অবলম্বন, ঠেস দেয়া, ঠেকা দেয়া | |
| Propagate (n) | multiply, proliferate, spread | সংখ্যাবৃদ্ধি করা, বংশবিস্তার করা, ব্যাপকভাবে প্রচার করা | |
| Propel (v) | drive, push forward | সুম্মুখে চালানো, প্রচলিত করা | |
| Propensity (n) | inclination, tendency | স্বাভাবিক প্রবনতা, উন্মুখতা, প্রবৃত্তি | |
| Proportion (n) | percentage, ration | অনুপাত, সমানুপাত | |
| Propriety (n) | politeness, decorum | ঔচিত্য, আচরন ও নীতি নিয়মের শুদ্ধতা | |
| Proscribe (v) | ban, forbid, forestall | নির্বাসিত করা, সমাজচ্যুত করা | |
| Prosecute (v) | accuse, charge | চালিয়ে যাওয়া, অব্যাহত রাখা, দায়ের করা | |
| Prospect (n) | Outlook, likelihood, possibility | অনুসন্ধান করা, পরিপ্রেক্ষিত দৃষ্টিপথ, অবারিত দৃশ্য | |
| Prospective (adj) | expectation, hope, forthcoming | প্রত্যাশিত, আকাঙ্খিত, সম্ভাব্য | |
| Prosperous (adj) | thriving, flourishing | সফল, সমৃদ্ধ, বর্ধিষু | poor |
| Prosperity (n) | well- being, affluence | সমৃদ্ধি, উন্নতি, সৌভাগ্য, সাফল্য | poverty, distress |
| Protract (v) | lengthen, prolong | বিলম্বিত করা, দীর্ঘায়িত করা | |
| Protrude (v) | project, stick out | বাইরে প্রসারিত হওয়া বা করা, বহিঃসৃত করা | cut short |
| Provide (v) | supply, give | প্রদান করা | |
| Provident (adj) | visionary, farseeing | দূরদশী, ভবিষ্যৎচিন্তা, অগ্রদর্শী | short-sighted |
| Provoke (v) | incite, stir up | রাগানো, ক্ষুদ্ধ করা, চটানো | |
| Proximity (n) | nearness | সমাপ্য, নৈকট্য, সান্নিধ্য | distant |
| Proxy (n) | deputy, substitute | প্রতিনিধিত্ব, প্রতিনিধিত্ব করার অধিকার | |
| Prudent (adj) | cautious, careful | সতর্ক, দূরদর্শী বিচক্ষন সুবিবেচক | reckless |
| Prune (v) | shear, trim | ছেঁটে দেয়া, ছাঁটাই করা | |
| Puddle (n) | pond, lake | জলভর্তি ডোবা, কাদা ও বালি মিশ্রিত মাটির লেই | |
| Punch (vt) | blow, hit | ছিদ্র করা, ঘুসি মারা | |
| Pungent (adj) | acrid, penetrating | বিদ্রুপপূর্ন, তীব্র, কড়া | mild |
| Purchase (n. vt) | buy, acquire | ক্রয় করা, কেনা | sell |
| Purge (vt) | clear, purify | শোধন করা, বিশোধিত করা | |
| Quaint (adj) | queer, odd but attractive | খেয়ালী, অদ্ভুত কিন্ত আকর্ষক | modern |
| Quarter (n) | section, one fourth | এক চতুর্থাংশ | |
| Quartz (n) | | শক্ত খনিজ দ্রব্যবিশেষ, সিলিকা | |
| Queer (adj) | strange, fishy, surprising | অদ্ভুত, অস্বাভাবিক | ordinary, normal |
| Queel (vt) | quash, suppress | দমন করা | |
| Query (n. V) | inquiry, question | প্রশ্ন, জিজ্ঞাসা | |
| Quiver (vt) | shiver, tremble | কম্পিত হওয়া, শিহরিত হওয়া, কাঁপা | |

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| Quota (n) | portion, share | নিধারিত অংশ, নির্দিষ্ট | |
| Radiant (adj) | joyous, beaming | দীপ্তিমান, উজ্জ্বল, আনন্দিত, প্রীতিপুর্ন | unhappy |
| Radiate (vt) | emit, give off | তাপ বা আলো বিকিরন করা, আনন্দ উৎসাহের বহিঃপ্রকাশ ঘটানো | |
| Rage (n) | fury, anger | ক্রোধ, উন্মত্ততা | |
| Ragged (adj) | tattered, scruffy, foray | বন্ধুর, অসমতল, অসঙ্গতিপূর্ন | pristined |
| Raid (n. v) | attack, foray | আকস্মিক আক্রমন | |
| Raise (vt.) | breed, lift, hoist | উত্তোলন করা, উঠানো | drop |
| Rally (n. v) | gathering, assemblage | একত্র হওয়া, নতুনভাবে উজ্জীবিত করা | |
| Ransom (n) | payment, redemption | মুক্তিপনের টাকা, মুক্তিপনের মাধ্যমে বন্দিমুক্তি | |
| Rap (vt.) | tap, knock | দ্রুত হালকা আঘাতের শব্দ, আঘাত করা | |
| Rapacious (adj) | avaricious, covetous, greedy | লোভী, লোলুপ, হিংস্র | |
| Rapture (n) | ecstasy, delight | মগ্নতা, উত্তেজনাপূর্ন আনন্দ | |
| Ratify (vt) | approve, endorse | দৃঢ়ভাবে অনুমোদন করা, সমর্থন করা | disprove |
| Ration (n) | share, allowance | রেশন, নির্ধারিত ভাতা | |
| Rational (adj) | Reasonable, balanced | যৌক্তিক, বিচার বুদ্ধি সম্পন্ন | irrartional |
| Ravage (vt) | devastate, ruin | বিধ্বস্ত বা ধ্বংস করা, নষ্ট করা | |
| Ravenous (adj) | famished, starving | বুভুক্ষু, ক্ষুধার্ত | |
| Raze (vt) | damage, bulldoze | সম্পুর্ন বিনষ্ট বা ধ্বংস করা | build |
| Readily (adv) | eagerly; easily | নির্দ্বিধায়, সানন্দে | grudgingly |
| Realm (n) | field, domain, kingdom | রাজ্য | |
| Rebate (n.) | refund, repayment | ছাড়, রেয়াত | |
| Rebel (vt) | Insurgent, revolutionary | বিদ্রোহ করা, তীব্র প্রতিবাদ করা | |
| Rebuke (vt. N) | censure, reprove | তিরস্কার, ভর্ৎসনা | praise, appreciate |
| Recall (vt) | recollect, remember | ডেকে পাঠানো, স্মরন করা, মনে করা | forget |
| Reciprocal (adj) | mutual, exchanged | পরস্পর, পারস্পরিক | one-sided |
| Reckless (adj) | rash, irresponsible | বেপরোয়া, অসংযত, অপরিনামদর্শী | responsible |
| Recluse (n) | hermit, loner | সন্ন্যাসী, একান্তবাসী | |
| Recognition (n) | realization, gratitude | স্বীকৃতি, সনাক্তকরন | |
| Recognize (vt) | acknowledge, distinguish | সনাক্ত করা, চেনা | |
| Recoil (vi, n) | retreat, withdraw | পিছু হটা, পিছিয়ে আসা | stand |
| Recommend (vt) | suggest, counsel | সুপারিশ করা, পরামর্শ দেয়া | |
| Reconcile (vt) | conform, harmonize | বিরোধ মিটিয়ে ফেলা, মিটমাট করা | |
| Reconciliation (n) | compromise, pacification | মীমাংসা, মিটমাট | |
| Recreation (n) | pastime, amusement | বিনোদন, আমোদপ্রমোদ | |
| Redeem (vt) | rescue, save, redress | পুনরুদ্ধার করা, রক্ষাকরা, ত্রান করা | |
| Redundant (adj) | unnecessary, superfluous | প্রয়োজনাতিরিক্ত, অনাবশ্যক, বাড়তি | adequate |
| Refined (adj) | elegant, well-mannered | শোধন করা, বিশুদ্ধ করা | coarse |
| Reflection (n) | indication, revelation | প্রতিফলন, পরাবর্তন, প্রতিবিম্ব | |
| Reform (vt) | regenerate, restructure | সংশোধন করা, সংশোধন করা | |
| Refuge (n) | shelter, protection | আশ্রয়, সমাশ্রয় | |
| Refute (vt) | disprove, rebut | খন্ডন, নিবারন করা, অমূলক বলে প্রতিপন্ন করা | agree |
| Regimen (n) | treatment | স্বাস্থ্যবিধান | |

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| Rehabilitate (vt) | restore, mend | সংস্কার করা, পূর্বাবস্থায় ফিরিয়ে আনা | |
| Rehearse (vt) | prepare, try out | মহড়া দেয়া, পূনরাবৃত্তি করা, অনুশীলন করা | |
| Reign (vt) | govern, rule | রাজত্ব করা, রাজ্য শাসন করা | |
| Reimburse (vt) | pay back, refund | ব্যয় পরিশোধ করা | |
| Reinforce (vt) | increase, strengthen | দৃঢ় বা জোরদার করা, অধিকতর শক্তিশালী করা | weaken |
| Reiterate (vt) | restate, repeat | পূনরাবৃত্তি করা, পূর্নব্যক্ত করা | |
| Reject (vt) | refuse, turn down | বাতিল করা, ফেলে দেয়া, প্রত্যাখ্যান করা | accept |
| Relapse (vt) | revert, go back to | পুনরায় পতিত হওয়া বা লিপ্ত হওয়া, পূর্বাবস্থাপন্ন হওয়া | improve |
| Relentless (adj) | merciless, ruthless, persistent | নির্মম, নির্দয়, অবিশ্রান্ত | gentle |
| Relevant (adj) | related, pertinent | প্রাসঙ্গিক, সম্পৃক্ত, সম্পর্কিত | irrelevant, impertinent |
| Reliable (adj) | dependable, consistent | নির্ভরযোগ্য, বিশ্বসযোগ্য | undependable |
| Relieved (adj) | exempted, comforted | লাঘব করা, মোচন করা, স্বস্তি দেয়া | |
| Relinquish (vt) | give up, quit | ত্যাগ করা, ছেড়ে দেয়া | retain |
| Reluctant (adj) | Unwilling, unenthusiastic | অনিচ্ছুক, বিমুখ | Keen |
| Remedy (n) | cure, rectify | প্রতিকার, প্রতিবিধান, প্রতিষেধক | |
| Remit (vt) | dispatch, forgive, send | ক্ষমা করা, মওকুফ করা, ছেড়ে দেয়া | |
| Remote (adj) | distant, inaccessible | দূরবর্তী, দুরস্থ | nearby |
| Renaissance (n) | reincarnation, regeneration | পুনর্জন্ম, পুনরুজ্জীবন, রেনেসাঁ | |
| Rend (vt) | apart, separate, tear | বিদীর্ন করা, চেরা | |
| Render (vt) | provide, deliver , express | প্রতিদানে বা বিনিময়ে দেওয়া, পাওনা পরিশোধ করা | |
| Renounce (vt) | abandon, reject, give up | আনুষ্ঠনিকভাবে পদত্যাগ করা, ত্যাগ করা, স্বীকার না করা | accept |
| Renovate (vt) | renew, restore, modernize | সংস্কার করা, নবায়ন করা | |
| Renowned (adj) | distinguished, famous | প্রখ্যাত, বিখ্যাত, লব্ধপ্রতিষ্ঠ | unknown |
| Repel (vt) | resist, reject, fend off | তাড়িয়ে দেয়া, গ্রহনে অস্বীকৃতি | attract |
| Replenish (vt) | fill up, refill | শূন্যস্থান পূরন করা, নতুন সরবরাহ লাভ করা | deplete |
| Reproach (v) | criticize, reprimand | নিন্দা করা, র্ভৎসনা করা, গালাগাল করা | praise |
| Repudiate (v) | reject, renounce | অস্বীকার করা, ত্যাজ্য করা, অস্বীকৃতি জানানো | acknowledge |
| Repulse (v) | repel | প্রতিরোধ করা, গ্রহনে অস্বীকৃতি জানানো | accept |
| Repulsive (adj) | revolting, disgusting | বিরক্তিকর, ঘৃন্য, বীভৎস | attractive |
| Rescue (v) | save, free | উদ্ধার করা, মুক্ত করা, পুনরুদ্ধার করা | abandon |
| Resemble (v) | look like, similar | সদৃশ হওয়া, মিল হওয়া | differ |
| Resent (v) | loathe,hate, detest | তিক্ততা অনুভব করা, অসন্তষ্ট হওয়া | like |
| Reside (vt) | dwell, live | বসবাস করা | |
| Residue (n) | remains, leftover, remnant | অবশিষ্টাংশ, বাকী অংশ | |
| Resist (v) | oppose, withstand | বিরোধীতা করা, প্রতিরোধ করা, ঠেকিয়ে রাখা | accept |
| Resolute (adj) | determinde, steadfast | দৃঢ় সঙ্কল্প | irresolute |
| Resolve (vt) | determine | সিদ্ধান্ত গ্রহন করা, স্থির করা | |
| Respective (adj) | Individual, own | যার যার, নিজ নিজ | |
| Responsible (adj) | accountable, in charge | নীতিগতভাবে দায়ী, | |

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| | | বিশ্বাসী, নির্ভরযোগ্য | |
| Restore (v) | recover, bring back | ফিরিয়ে দেয়া, ফিরিয়ে আনা | |
| Restrain (v) | restrict, limit | ধরে রাখা, নিয়ন্ত্রনে রাখা | |
| Restrict (v) | restrain, limit | সীমিত করা, সীমাবদ্ধ রাখা | |
| Resume (v) | cintinue, take up | পুনরায় শুরু করা, পুনরায় গ্রহন করা | |
| Retain (v) | hold, reserve, withhold | অব্যহত রাখা, বজায় রাখা | free, release |
| Retard (vt) | detain, hold back | দমন করা, প্রতিহত করা | speed up |
| Retort (v) | refute, reply | জবাব দেয়া, প্রতিবাদ করা | |
| Retract (v) | take back, withdraw | তুলে নেয়া, প্রত্যাহার করা | |
| Retrieve (v) | recover, save | ফিরে পাওয়া, ক্ষতিপূরন করা | lose |
| Reveal (v) | exhibit, expose, disclose | দৃষ্টিগোচর করানো | conceal |
| Revelation (n) | disclosure | প্রকাশ, গুপ্ততথ্য ফাঁস | conceal |
| Revere (v) | respect, worship | গভীরভারে শ্রদ্ধা করা, পবিত্র হিসেবে শ্রদ্ধা করা | despise |
| Reverence (n) | respect, veneration | গভীর শ্রদ্ধা, বিস্ময় ও ভয়ের অনুভুতি | contempt |
| Revive (v) | revitalize, renew | জ্ঞান ফিরিয়ে আনা, স্বাস্থ্যশক্তি পুনুরুদ্ধার করা | lose |
| Revoke (vt) | cancel, repeal | বাতিল করা, প্রত্যাহার করা | maintain |
| Riddle (n) | puzzle, mystery | প্রহেলিকা, ধাঁধা | |
| Ridiculous (adj) | ludicrous, absurd | হাস্যকর, উপহাস্য, উদ্ভট | sensible |
| Rigid (adj) | strict, fixed | অনমনীয়, দৃঢ়, অপরিবর্তনীয় | flexible, floppy |
| Rigor (n) | rigidity, hardship, rigidity | দৃঢ়তা, কঠোরতা, প্রচন্ডতা | flexibility |
| Rigorous (adj) | strict, rigid | কঠোর, প্রচন্ড, তীব্র | easy |
| Rim (n) | edge, border | চাকার কাঠামো, বৃত্তাকার কোন কিছুর প্রান্ত | |
| Riot (n) | disturbance, disorder, chaos | দাঙ্গা | peace |
| Rite (n) | ritual, procedure, ceremony | কৃত্য, কৃত্যানুষ্ঠান | |
| Rival (N) | competitor, foe | প্রতিদ্বন্দ্বী | friend |
| Robust (adj) | strong, sturdy | স্বাস্থ্যবান, মোটাসোটা, প্রবল | weak |
| Rotten (adj) | decaying, decomposed | পচা, ক্ষয়প্রাপ্ত, বাজে | fresh |
| Rudimentary (adj) | undeveloped, elementary, primitive | প্রাথমিক, প্রারম্ভিক, অনুন্নতি | |
| Rugged (adj) | coarse, rough | বন্ধুর, অমসৃন, কর্কশ | smooth |
| Rumble (v) | grumble, roar | গুড়ুম, গুড়ুম করা | |
| Ruminate (v) | meditate, ponder, think over | রোমন্থন করা, জাবর কাটা | |
| Rupture (n. vt) | burst, breach | বিদারন, ছেদন | |
| Rustic (adj) | rural, unsophisticated | গ্রামীন, সাদাসিধা, অকপট | urban |
| Ruthless (adj) | merciless, pitiless | নির্মম, ক্রুর, নিস্করুন, নির্দয় | merciless |
| Sacred (adj) | holy, heavenly | ঐশ্বরিক, ধর্মীয়, পবিত্র | secular |
| Saddle (vt) | burden, load | ভার, দায়িত্ব | relieve |
| Salvage (vt) | recover, rescue | উদ্ধার কার্য, সম্পত্তি রক্ষা | |
| Sane (adj) | sensible, reasonable | প্রকৃতিস্থ, সুস্থমস্তিষ্ক | insane |
| Sanity (n) | good sense, rationality | মানসিক স্বাস্থ্য, সুস্থতা | |
| Sarcasm (n) | irony, scorn, mockery | শেষ, শোষোক্তি | |

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| Satiate (vt) | satisfy, fill, sate | পরিতৃপ্ত করা, সম্পূর্ন রূপে তৃপ্ত করা | |
| Satirical (adj) | ironic, sardonic | বিদ্রুপাত্মক, ব্যাঙ্গাত্মক | |
| Saturate (vt) | soak, imbue | উত্তমরূপে ভেজানো, অভিসিঞ্চিত করা | dry out |
| Savor (n) | taste, relish | স্বাদ বা গন্ধ, আমেজ, আভাস | |
| Scandal (n) | disgrace, defamation | কেলেঙ্কারী, লজ্জাকর কাজ, ক্ষতিকর গুজব | |
| Scanty (adj) | sparse, meager | অপ্রতুল, অপর্যাপ্ত, সঙ্কীর্ন | abundant |
| Scarce (adj) | sparse, limited | দুস্প্রাপ্য, দুর্লভ, অপ্রতুল | available |
| Scatter (vt) | disperse, spread | ইতস্তত ছড়ানো, ছড়িয়ে দেয়া | organized |
| Scorch (v) | burn, singe, discolor | ঝলসানো, তাপে বির্বন করা | |
| Scornful (adj) | disdainful, contemptuous | তাচ্ছিল্যপূর্ন, অবজ্ঞাপূর্ন | respectful |
| Scruple (vt. N) | hesitation, scrupulousness | বিবেক জনিত সঙ্কোচ বা দ্বিধা | |
| Scrupulous (adj) | conscientious, meticulous | বিবেকবান, বিবেকদর্শী, খুঁতখুঁতে | sloppy |
| Scrutinize (vt) | examine, inspect | তন্ন তন্ন করে পরীক্ষা করা | |
| Sear (vt) | burn, scorch | ঝলসে দেয়া, সেকা দেয়া | |
| Seasoning (n) | flavoring, spice | মশলা, স্বাদন দ্রব্য | |
| Seclusion (n) | solitude, isolation | নির্জনতা, নিঃসঙ্গতা | crowd |
| Secrete (vt) | discharge, release | ক্ষরন, নিঃসরন | |
| Sedate (adj) | calm, composed | অচঞ্চল, শান্ত, প্রসন্ন | boisterous |
| Seemingly (adv) | apparently, outwardly | আপাতদৃষ্টিতে | |
| Segregate (vt) | alienate, separate | বিচ্ছিন্ন করা, বিযুক্ত করা | integrate, |
| Seize (vt) | capture, grab | দখল করা, গ্রেপ্তার করা | |
| Serene (adj) | calm, tranquil | স্থির, শান্তিপূর্ন, প্রশান্ত | bustling |
| Serenity (n) | calmness, tranquility | প্রশান্তি | bustles |
| Sermon (n) | speech, lecture, oration | ধর্মোপদেশ, হিতোপদেশ | |
| Sever (vt) | separate, split | কাটা, বিচ্ছিন্ন করা, ছিড়ে যাওয়া | unite |
| Severe (adj) | grave, grievous | কড়া, কঠোর, তীব্র | gentle, easy |
| Shabby (adj) | scruffy, ragged, tattered | জীর্ন, মলিন, ছেঁড়াখোঁড়া | elegant |
| Shallow (adj) | superficial, trivial, unclear | অগভীর, ভাসাভাসা | profound |
| Shatter (n. vt.) | fragment, break | চুর্নবিচুর্ন করা, চুরমার করা | unite |
| Shear (vt) | cut, prune | ছাঁটা, বঞ্চিত বা নিঃস্ব করা | |
| Sheathe (vt) | cover, encase | খাপে ভরা, কোষবদ্ধ করা, যুদ্ধবন্ধ করা | |
| Sheer (adj) | pure, total | সম্পুর্ন, নিছক, নির্ভেজাল | |
| Shield (v) | protect | রক্ষক, ঢাল, রক্ষা, করা নিরাপদ রাখা, | uncover |
| Shove (vt) | push, jostle | ঠেলা বা ধাক্কা দেয়া | |
| Shrewd (adj) | clever, smart | বিচক্ষন, তীক্ষ্নবুদ্ধি, চৌকশ, তুখোর | naive |
| Shrink (vi) | contract, dwindle | সংকুচিত হওয়া, খাটো হওয়া | grow, increse |
| Shun (vt) | avoid, eschew | দূরে থাকা, পরিহার করা | court |
| Siege (vt) | besiege, incircle | অবরোধ করা | |
| Sigh (vi) | moan, groan | দীর্ঘশ্বাস ফেলা | |
| Signify (vt) | indicate, mean | জানানো, গুরুত্বপূর্ন হওয়া | |
| Simulate (vt) | feign, fake, replicate | ভান করা, ছদ্মবেশ ধারন করা | Original |
| Simultaneously (adv) | at the same time | যুগপৎ ভাবে | |
| Sinister (adj) | wicked, evil | অশুভ, অমঙ্গলসূচক, অপকারী | |
| Skeptic (n) | cynic, disbeliever | সংশয়বাদী, সংশয়াত্মা, সংশয়ান | |
| Skeptical (adj) | dubious, incredulous | সন্দেহ প্রবন, সংশয়বাদী | convinced |
| Sketch (n. v) | drawing, chart; compose | নক্শা, নক্সা তৈরী করা, রূপরেখা তৈরী | |

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| | | করা | |
| Skimpy (adj) | scant, inadequate | কৃপনহস্ত, কৃপন | generous |
| Slacken (vt) | loosen, slow down | গতিকমানো, কাজে ঢিলা দেয়া | tighten |
| Slander (vt) | defame, malign | মিথ্যা কলঙ্ক, অপবাদ | compliment |
| Sloppy (adj) | muddled, shaddy | কর্দমাক্ত, নোংরা পানিভরা ছোট গ র্তেভরা | |
| Slovenly (adj) | untidy, sloppy | অগোছালো, নোংরা | tidy |
| Sluggish (adj) | lethargic, listless | নিষ্ক্রীয়, মন্থরগতি | lively |
| Slump (vt) | droop, lapse | ধপ করে বসে পড়া, আকস্মিকভাবে হ্রাস পাওয়া | |
| Smother (v) | stifle, suffocate | শ্বাসরোধ করে হত্যা করা | |
| Snag (n) | disadvantage, obstacle | অজানা বা অপ্রত্যাশিত বাধা বিপত্তি | |
| Sneak (vt) | lurk, skulk, steal | নিঃশব্দে চোরের মত চলা, চুরি করা | |
| Sneer (vt) | scoff, scorn | বিদ্রুপ করা, অবজ্ঞা করা | |
| Snobbish (adj) | snooty, superior | নিম্নতর সামাজিক অবস্থানের ব্যক্তিকে ছোট করে এমন ব্যক্তি | humble |
| Sober (adj) | solemn, grave, abstemious | আত্মনিয়ন্ত্রিত | uncouth |
| Sociable (adj) | gregarious, friendly | মিশুক, সঙ্গপ্রিয়, বন্ধুভাবাপন্ন | hostile |
| Sojourn (vt) | stay, break, halt | কিছুকালের জন্য থাকা | |
| Solemn (adj) | grave, somber | আনুষ্ঠানিক, ভাবগম্ভীর | cheerful, informal |
| Solicit (vt) | request, demand | অনুরোধ করা, সনির্বন্ধ আবেদন করা | |
| Solicitous (adj) | concerned, anxious | উৎকণ্ঠিত, ব্যগ্র, উদগ্রীব | |
| Solitary (adj) | lonesome, isolated | নিঃসঙ্গ, নির্জন | social |
| Solitude (n,) | isolation, loneliness | নিঃসঙ্গতা, একাকীত্ব, নির্জনতা | |
| Soothe (vt.) | appease, relieve, pacify | শান্ত বা প্রশমিত করা, উপশম করা | excite, aggravate |
| Sovereignty (n) | dominion, control | সার্বভৌম ক্ষমতা | |
| Spawn (vt) | generate, produce | ডিম ছাড়া, সৃষ্টিকরা, জন্ম দেয়া | |
| Specimen (n) | sample, instance | নমুনা, নিদর্শন, পরীক্ষনীয় বস্তু | |
| Spectacular (adj) | breathtaking, impressive | জমকালো, সমারোহ পূর্ন | humdrum |
| Spectator (n) | viewer, audience | দর্শক | |
| Speculate (vi) | hypothesize, conjecture | ভাবা, অনুমান করা, ধারনা করা | |
| Spine (n) | backbone | মেরুদন্ড | |
| Splendid (adj) | magnificent, impressive | জমকালো, চমৎকার, অত্যন্ত সন্তোষজনক | unimpressive |
| Splendor (n) | grandeur, magnificence | চমৎকারিত্ব | |
| Spoil (vt) | decay, ruin | ক্ষতিগ্রস্ত করা, অকেজো করা | ruin |
| Spontaneous (adj) | impulsive, involuntary | স্বতঃস্ফুর্ত | prompted |
| Sporadic (adj) | irregular, intermittent | বিক্ষিপ্ত | regular |
| Spouse (n) | partner, mate | স্বামী বা স্ত্রী | |
| Sprawl (n. Vt) | spread, stretch | হাত পা ছড়িয়ে বসা, এলোমেলো ছড়িয়ে পড়া | |
| Sprout (vt) | bud, burgeon, germinate | পল্লবিত হওয়া, পাতা গজানো | |
| Spurt (v.) | burst, explosion | অকস্মাৎ সবেগে নির্গত বা উৎসারিত হওয়া | |
| Squabble (n) | quarrel, argument | অতি সাধারন বিষয়ে তুমুল ঝসড়া | |
| Squander (vt.) | dissipate, waste | অপব্যয় করা, বেহিসাবী খরচকরা | save |

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| Squeeze (n) | cram, press | চাপ সৃষ্টি, ঠেসপ্রদান | |
| Stable (adj) | immobile, steady | দৃঢ়, সুস্থিত | rickety |
| Stale (adj) | smelly, musty, flat | বাসি, শুকনা, নীরস | fresh |
| Stalk (v. n) | trace, stem | ধীর, দৃঢ় ও সদম্ভ পদক্ষেপে হাঁটা | |
| Startle (vt. N) | amaze, surprise | আকস্মিক বিস্ময়ে চমকে ওঠা | |
| Starve (v) | go hungry | ক্ষুধায় মৃত্যুমুখে পতিত হওয়া | |
| Steadfast (adj) | firm, unchanging | দৃঢ়, অপরিবর্তিত, অবিচলিত | irresolute |
| Sterile (adj) | barren, arid, infertile, sanitary | নিষ্ফলা, বন্ধ্যা | productive |
| Stern (adj) | harsh, hard, strict | কঠোর অনমনীয়, এবং আনুগত্য প্রত্যাশী | easygoing |
| Stimulate (vt) | motivate, encourage, incite, actuate | উদ্দীপিত করা, উত্তেজিত করা | dampen |
| Stingy (adj) | miserly, ungenerous | কঞ্জুস, ব্যয়কুণ্ঠ | generous |
| Stipulate (vt) | set, specify | প্রয়োজনীয় শর্ত হিসেবে কোন কিছু উপস্থাপনা করা | |
| Stocky (adj) | sturdy, thickset | মোটা সোটা | slight |
| Stodgy (adj) | dull, boring, heavy | ভারী ও স্নেহপদার্থপূর্ন ভুরিভোজ | light |
| Stout (adj) | strong, sturdy | মজবুত, শক্ত, দৃঢ়হৃদয় | slim |
| Strain (n) | stress, tension, species | প্রসারন, টান টান অবস্থা | |
| Strait (n) | channel, passage | সংযোগ কারী সংকীর্ন জলপ্রবাহ বা ধারা | |
| Strap (n) | fastening, band | চামড়া বা শক্ত কাপড়ের সরু ফিতা | |
| Strenuous (adj) | energetic, laborious | বিপুল প্রচেষ্টা, তেজপূর্ন | easy, light |
| Stride (vt) | step, pace | লম্বা পদক্ষেপে অতিক্রম করা | |
| Strife (n) | squabble, conflict | বিবাদ, দ্বন্দ্ব, ঝগড়া | |
| Stringent (adj) | strict, rigid | কঠোর সুদৃঢ়, কট্টর | flexible |
| Strip (vt. N) | deprive, takeoff | খুলে ফেলা, দূর করা | |
| Strive (vi) | endeavor, struggle | লড়াই করা, সংগ্রাম করা | |
| Stubborn (adj) | obstinate | একগুঁয়ে, জেদি | flexible |
| Stuffy (adj) | airless, stale | শ্বসরুদ্ধকর, হতবুদ্ধি করা | airy |
| Stun (vt) | astonish, daze | সংজ্ঞা লোপ করা, হতবুদ্ধি করা | |
| Sturdy (adj) | strong, stout | বলিষ্ঠ, মজবুত | frail |
| Sublimate (vt) | elevate, refine | উর্ধব পাতন করা | |
| Submerge (vt) | sink, immerse | নিমজ্জিত করা, প্লাবিত করা | |
| Submissive (adj) | obedient, meek | বশ্য, বাধ্য, অনুগত | assertive |
| Subsequent (adj) | following, later | পরবর্তী, উত্তর কালীন | preceding |
| Subsidiary ( v adj) | branch, supplementary | সহায়ক, সম্পুরক, অধীন | main |
| Subsist (v) | live, survive | জীবন নির্বাহ করা, বেঁচে থাকা | |
| Substantial (adj) | plentiful, considerable | সুদৃঢ়, সুসংহত | trivial |
| Substantiate (vt) | corroborate, verify | প্রমান করা, তথ্য উপস্থিত করা | |
| Subvert (vt) | destroy, undermine | মানুষের আস্থা, বিশ্বাস নষ্ট করা | |
| Succinct (adj) | terse, concise | সংক্ষিপ্ত, সংহত | lengthy |
| Succumb (vt) | submit, yield | বশীভূত হওয়া, মারা যাওয়া | |
| Suffuse (v) | fill, saturate | ধীরে ধীরে ছড়িয়ে দেয়া, ব্যপ্ত করা | |
| Sullen (adj) | moody, bad- tempered | চাপা ক্রোধযুক্ত, বিরূপ | cheerful |
| Summit (n) | peak, top | শীর্ষ, চূড়া | nadir |
| Summon (vt) | call, send for | তলব করা, ডেকে পাঠানো | |
| Superb (adj) | excellent, outstanding | চমৎকার, অত্যুৎকৃষ্ট | abysmal |

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| Supersede (vt) | replace, substitute, succeed | স্থান অধিকার করা | |
| Superstition (n) | false notion, fallacy | কুসংস্কার, অন্ধবিশ্বাস | |
| Supplant (vt) | replace, displace | উচ্ছেদ করা, স্থান দখল করা | |
| Supple (adj) | flexible, lithe | নমনীয়, কোমল, সংবেদনশীল | rigid |
| Surmise (vt) | guess, speculate | আন্দাজ, অনুমান করা | |
| Surmount (vt) | conquer, overcome, exceed | কাটিয়ে ওঠা | |
| Surpass (vt) | exceed, surmount | ছাড়িয়ে যাওয়া, অতিক্রম করা | follow |
| Surplus (n. adj) | extra, excess | উদ্বৃত্ত, অবশিষ্ট | essential |
| Susceptible (adj) | vulnerable, exposed | সহজগ্রাহী, গ্রহনশীল | impervious |
| Suspicion (n) | doubt, distrust | সন্দেহ, সংশয় | trust |
| Suspicious (adj) | dubious, fishy | সন্দেহভাজন, সন্দিগ্ধ | trusting |
| Sustain (vt) | stand, keep | ধরে রাখা, তুলে রাখা | quit |
| Swarm (n) | throng, crowd, horde | ঝাঁক, দল | |
| Swell (vt) | expand, inflate | ফুলে ওঠা, স্ফীত হওয়া | decrease |
| Symmetry (n) | balance, harmony | প্রতিসাম্য, ভারসাম্য | asymmetry |
| Symptom (n) | sign, indication | রোগলক্ষন, লক্ষন | |
| Synchronize (vt) | concur, harmonize | সমকালীন | |
| Synopsis (n) | outline, summary | সারাংশ, রূপরেখা | |
| Synthetic (adj) | artificial, manmade | সংশ্লেষী | |
| Taboo (n. vt) | ban, prohibition | নিষিদ্ধ | accepted |
| Tacit (adj) | unspoken, implicit | নীরব, মৌন | explicit |
| Tact (v) | diplomacy, thoughtfulness | কৌশল, সুবুদ্ধি | clumsiness |
| Tactics (n) | plans, strategy | উপায়, কৌশল, চাতুরী | |
| Tag (n) | label, tab | জুতার ফিতা, মুড়ি, চিরকুট | |
| Tally (vt) | compute, count | হিসাব গননা | |
| Tamper (vt) | interfere, intervene | হস্তক্ষেপ করা | |
| Tangible (adj) | touchable, substantial | স্পর্শ দ্বারা বোধগম্য, বাস্তব | intangible |
| Tangle (vt) | knot, snarl | চামড়ার মত দেখতে সামুদ্রিক শৈবাল | |
| Tantalize (vt) | provoke, tease | লোভ দেখানো | |
| Tardy (adj) | late, slow | ধীর, ধীরগতিসম্পন্ন | prompt |
| Tarnish (vt) | darken, discolor | নিস্প্রভ হওয়া, নিস্প্রভ করা | enhance, brighten |
| Taste (n) | flavor, savor | স্বাদ, আস্বাদনের উপলব্ধি | |
| Taunt (n.vt) | tease, insult | বিদ্রুপ, বিদ্রুপ করা | |
| Tedious (adj) | tiresome, boring | ক্লান্তিকর, বিরক্তিকর | interesting |
| Teem (vi) | abound, be full of | অনেক সংখ্যায় বর্তমান থাকা, প্রবল বর্ষন হওয়া | disperse |
| Temperament (n) | disposition, nature | মেজাজ, প্রকৃতি | |
| Temperance (n) | self-control, moderation | মিতাচার, সংযম | excess |
| Temperate (adj) | appropriate,reasonable, self-controlled | সংযত, মিতাচারী | extreme |
| Temporal (adj) | transient, momentary | সময়গত, পার্থিব | parmanent |
| Tempt (vt) | lure, entice | প্রলুব্ধ করা, প্রলোভন দেখানো | put off |
| Tenacious (adj) | stubborn, resolute | নাছোড়বান্দা, ধৈর্যশীল | irresolute |
| Tenant (n) | occupant, inhabitant | ভাড়াটে, প্রজা | |
| Tendency (n ) | inclination, trend | প্রবনতা, ঝোঁক | |

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| Tender (adj) | soft, delicate | কোমল, নাজুক | rough |
| Tense (n. Adj) | nervous, strained | টান টানভাবে প্রসারিত, উত্তেৎনাপূর্ন | relaxed |
| Tentative (adj) | temporary, trial | পরীক্ষামূলক, আপাততঃ স্থিরকৃত | definite |
| Tenuous (adj) | thin, weak | ক্ষীন, সরু | strong |
| Tepid (adj) | lukewarm, halfhearted | নিরুৎসাহী | enthusiastic |
| Terminate (vt) | end, finish, conclude | সমাপ্ত করা, ইতি টানা | start |
| Terrify (vt) | frighten, horrify | আতঙ্কিত করা, ভয় পাইয়ে দেয়া | comfort |
| Terror (n) | fear, horror | অত্যাধিক ভীতি, সন্ত্রাস, আতঙ্ক | security |
| Testify (vt) | give evidence, verify | সাক্ষ্য দেয়া, প্রমানের কাজ করা | |
| Testimony (n) | evidence, affirmation | বিবৃতি | |
| Thaw (vi. / vt) | melt, defrost | গলা | |
| Theft (n.) | stealing | চুরি | |
| Thesis (n) | theory, notion | প্রতিপাদ্য, সমর্থনীয় তত্ত্ব | |
| Threaten (vt) | menace, terrify | হুমকি দেয়া, শাসানো | |
| Thrift (n) | economy, frugality | মিতব্যয়ীতা, ব্যয়সঙ্কোচ | extravagance |
| Thrive (vi) | flourish | সমৃদ্ধিলাভ করা, সাফল্য অর্জন করা | deteriorate |
| Throng (n.) | crowd, swarm | ভিড়, জনতা, লোকারন্য | disperse |
| Thrust (vt) | push, shove | ধাক্কা মারা, ঠেলা দেয়া | |
| Tide (n) | surge, wave | জোয়ার ভাটা | |
| Tilted (adj) | slanted, skewed | হেলানো | straight |
| Timid (adj) | nervous, shy | ভীরু, লাজুক | bold |
| Tint (vt) | tinge, hue | ছোপ, রঙের আভা | |
| Tiny (adj) | microscopic, imnute | অতি ক্ষুদ্র, পুঁচকে | huge, mammoth |
| Titanic (adj) | huge, immense | বিশাল, দানবীয়, প্রকান্ড | infinitesimal |
| Tolerable (adj) | bearable, endurable | সহনীয়, চলনসই | intolerable |
| Tolerate (vt) | bear, put up with | সহ্য করা, বরদাশত করা | forbid |
| Torment (n. vt) | anguish, agony | নিদারুন যন্ত্রনা, বিরক্ত করা | pleasure |
| Torpid (adj) | lethargic, sluggish | অকর্মা, চলাফেরায় অনিচ্ছুক | energetic |
| Touching (adj) | moving, impressive | করুন, করুনভাবে | |
| Touchy (adj) | annoyed, offended | অভিমানী, অভিমান | even-tempered |
| Trace (n. v) | remnant, sign | কেউ আছে, কোন চিহ্ন, ইত্যাদি | |
| Tractable (adj) | obedient, dutiful | সহজে নিয়ন্ত্রনযোগ্য | disobedient |
| Tragedy (n) | disaster, calamity | বিয়োগান্ত নাটক, অভিজ্ঞতা | |
| Trait (n) | characteristic, attribute | চারিত্রিক বৈশিষ্ট্য | |
| Traitor (n) | betrayer, conspirator | বিশ্বাসঘাতক | loyalist |
| Tranquil (adj) | serene, quiet | শান্ত, চুপচাপ | noisy |
| Transact (vt) | deal, manage | পরিচালনা করা, লেনদেন করা | |
| Transaction (n) | business, trade, deal | লেনদেন | |
| Transcend (vt) | surpass, go beyond | অতিক্রম করা | trail |
| Transfix (vt) | pierce, impale | বিদ্ধ করা, অবশ করে দেয়া | |
| Transform (vt) | change, transmute | রূপান্তরিত করা | keep |
| Transition (n) | change, shift | ক্রান্তিকাল, পরিবর্তনমূলক | |
| Transitory (adj) | temporary, momentary | স্বল্পকালস্থায়ী | parmanent |
| Transparent (adj) | clear, limpid | স্বচ্ছ | opaque |
| Transpire (vt) | exhale, sendout | প্রকাশিত হওয়া, জানাজানি হওয়া | unrevealed |
| Trash (n) | rubbish, garbage, | বাজে জিনিস অথবা লেখা | |

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| | refuse, waste | | |
| Traverse (vt) | span, stretch across | মাঝ দিয়ে অতিক্রম করে যাওয়া | |
| Treason (n) | treachery, sedition | রাজনৈতিক প্রতারনা, বিশ্বাস ঘাতকতা | allegiance |
| Tremble (vi) | shake, shiver | কেঁপে ওঠা, শিউরে ওঠা | |
| Tremendous (adj) | wonderful, huge | সুপ্রচুর, শক্তিশালী | awful |
| Tremor (n) | tremble, shake | কাঁপন, দোলা, ভূ-কম্পন | |
| Trend (n) | tendency, propensity | গতিধারা, প্রবনতা | |
| Trepidation (n) | apprehension, alarm | সচকিতভাবে, উত্তেজিত মনোভাব | equanimity |
| Trial (n) | hearing, inquisition | পরীক্ষা-নিরীক্ষা, বিচার বিবেচনা | |
| Trickle (vi, n) | dribble, drip | টিপ টিপ করা, ক্ষীন ধারায় অবহীতি হওয়া | flood |
| Trifling (adj) | petty, trivial | তুচ্ছ | significant |
| Triumph (n) | victory, achievement | বিজয়, সাফল্য, বিজয়োল্লাস | failure |
| Trivial (adj) | unimportant, trifling | সামান্য, তুচ্ছ, অকিঞ্চিতকর | significant |
| Trot (vi, n) | jog | কদম চাল, ছোট ছোট পা ফেলে চলা | |
| Trudge (vt) | plod, trek | অবসন্নভাবে পা টেনে টেনে হাঁটা | |
| Trying (adj) | difficult, grueling | যন্ত্রনাদায়ক, পীড়াদায়ক | soothing |
| Turbulent (adj) | violent, rowdy | অশান্ত, উদ্বেল, উত্তাল | peaceful |
| Turmoil (n) | disorder, chaos | গোলযোগ, হাঙ্গামা | order |
| Twig (n) | small branch | গাছের ছোট ডাল, উপশাখা, শাখিকা | |
| Typical (adj) | ordinary | নমুনা, আদর্শস্বরূপ, বৈশিষ্ট্য সূচক | uncharacteristic |
| Ultimate (adj) | final, eventual | শেষ, চূড়ান্ত, পরম, চরম | first |
| Unanimity (n) | harmony, accord | ঐক্যমত্য, সর্বসম্মত | discord |
| Unbecoming(adj) | improper, inappropriate | বেমানান | fitting |
| Unbiased (adj) | neutral, impartial | নিরপেক্ষ, পক্ষপাতহীন | biased, partisan |
| Unblemished (adj) | flawless, perfect | নিস্কলঙ্ক, নির্মল | flawed |
| Uncanny (adj) | odd, strange, weird | অনৈসর্গিক, উদ্ভট | |
| Unconscious (adj) | comatose, insensible | অচেতন, অজ্ঞান | awake |
| Unconventional (adj) | eccentric, unusual | প্রথাবিরোধী, সাধারন নয়, গতানুগতিকামুক্ত | conventional |
| Undaunted (adj) | intrepid, fearless | অকুতোভয়, নির্বিশঙ্ক | scared |
| Undo (vt) | cancel, annul | খোলা, পূর্বাবস্থায় ফিরিয়ে আনা | fasten |
| Unearth (vt) | uncover, exhume | উদঘাটন করা, মাটি খুঁড়ে বের করা | cover up |
| Unfair (adj) | unjust, partial | অন্যায়, অনুচিত | fair, just |
| Unique (adj) | unrivaled, exclusive | অদ্বিতীয়, একমাত্র, অনন্য | common |
| Unruly (adj) | uncontrollable, disorderly | উশৃঙ্খল, অবাধ্য | well-behaved |
| Unseemly (adj) | unsuited, incongruous | অশোভন, অনুচিত | proper |
| Unveil (v) | disclose, reveal | অবগুণ্ঠন খোলা | conceal |
| Uphold (vt) | support, sustain | সমর্থন করা, অনুমোদন করা, বহাল রাখা | refute |
| Upright (adj) | vertical, upstanding | ঋজু, সিধা | horizontal |
| Uprising (n) | rebellion, revolution | বিদ্রোহ, অভ্যুত্থান | |
| Uproar (n) | disturbance, commotion | হৈ চৈ, হট্টগোল, | order |
| Upset (adj) | disturbed, distressed | বিপর্যস্ত | composed |
| Urban (adj) | municipal, metropolitan | নাগরিক, শহুরে | rural |
| Urge (vt. N) | encourage, impel, press | তাড়া দেয়া | |

| | | | |
|---|---|---|---|
| Utility (n) | function, usefulness | উপযোগীতা | |
| Utilize (vt) | use, make use of | সদ্ব্যবহার করা, কাজে লাগানো | Waste |
| Vacant (adj) | unoccupied, empty | খালি, শূন্য | occupied |
| Vague (adj) | obscure, ambiguous | অস্পষ্ট, আবছা | clear |
| Valiant (adj) | courageous, dauntless, intrepid | বীর, সাহসী, পরাক্রমশালী | cowardly |
| Valid (adj) | soundly-based, acceptable | বৈধ, কার্যকর | invalid |
| Valor (n) | bravery, courage | সাহস, বিক্রম | cowardice |
| Vanish (vt) | disappear, fade | অপসৃত হওয়া, মিলিয়ে যাওয়া | appear |
| Vanity (n) | self-conceit, pride | অহঙ্কার, দম্ভ | humility |
| Vanquish (vt) | conquer, overcome | পরাস্ত করা, পরাভূত করা | surrender |
| Variation (n) | alteration, change | ভেদ, ভিন্নতা | similarity |
| Varnish (n) | gloss, polish | বার্নিশ | |
| Vary (vt) | differ, deviate from | ভিন্নরূপ হওয়া, হেরফের করা | conform |
| Vast (adj) | gigantic, huge, immense | বিশাল, বিস্তৃত, বিস্তীর্ন | tiny |
| Vehemence (n) | passion, ferocity | প্রচন্ডতা, প্রচন্ড | |
| Vehement (adj) | passionate, ardent | প্রবল, ব্যগ্র, প্রবন্ড | |
| Vein (n) | blood vessel | শিরা, রগ | |
| Venerate (vt) | respect, revere | গভীর ভাবে শ্রদ্ধ করা, ভক্তি করা | scorn |
| Ventilation (n) | airing | বায়ুচলন | |
| Venture (n. vi) | risk, project | স্পর্ধা, ঝুঁকিপূর্ন উদ্যোগ | |
| Verdict (v) | decision, judgment | নির্নয়, জুরির সিদ্ধান্ত | |
| Verify (vt) | comfirm, substantiate | সত্যতা যাচাই করা | disprove |
| Versatile (adj) | many sided, talented, all around | নানাবিধ বিষয়ে আগ্রহী ও কুশলী | limited |
| Verse (n) | poetry, rhyme | পদ্য, ছন্দ, চরন | |
| Vestige (n) | remnant, trace | চিহ্ন, নামগন্ধ, লেশমাত্র | |
| Veteran (v) | ex-serviceman, old soldier | যুদ্ধপ্রবীন, বহুদর্শী | novice |
| Veto (n. V) | rejection, negate | প্রবারন, ভোটে দেয়া, নিষিদ্ধ করা | |
| Vex (vt) | annoy, irritate | বিরক্ত বা জ্বালাতন করা | comfort |
| Vigilant (adj) | watchful, alert | সতর্ক, হুশিয়ার | oblivious |
| Vigor (n) | energy, enthusiasm | তেজ, বলিষ্ঠতা | lethargy |
| Vigorous (adj) | energetic | তেজস্বী, তেজীয়ান | lethargic |
| Vindicate (vt) | justify, support | প্রমান বা প্রতিপাদন করা | |
| Violate (vt) | infringe, defy, breach | অমান্য করা | obey |
| Violation (n) | infringement, defiance | লঙ্ঘন, ভঙ্গ, মর্যাদাহানি | |
| Violent (adj) | vehement, radical, aggressive | প্রচন্ড, অত্যুগ্র, প্রবল | peaceful, calm |
| Virtually (adv) | practically, actually | কার্যত, প্রকৃত, প্রস্তাবে | |
| Virtue (n) | morality, goodness | গুন, সদগুন | vice |
| Virtuous (adj) | moral, righteous | পবিত্র, সৎ, পূর্ন | bad |
| Vital (adj) | important, crucial | জীবন সম্পৃক্ত, জৈবনিক | insignificant |
| Vivid (adj) | lively, active | উজ্জল, তীব্র, প্রানবন্ত | dull |
| Vocation (n) | occupation, profession | প্রেরনা, বৃত্তি, পেশা, জীবিকা | |
| Vogue (n) | fashion | হাল ফ্যাশন, কেতাদুরস্ত | |
| Void (n. adj) | space, invalid, null | শূন্য, রিক্ত | valid |
| Volcano (n) | | আগ্নেয়গিরি | |
| Voluntary (adj) | free, unforced | স্বতঃপ্রবৃত্ত, স্বেচ্ছাপ্রনোদিত | forced |

| Volunteer (n) | unpaid worker | স্বেচ্ছাকর্মী, স্বেচ্ছাসেবক | |
|---|---|---|---|
| Vulgar (adj) | coarse, ill mannered | কুরুচিপূর্ন, স্থূল, অমার্জিত | decent |
| Vulgarity (n) | offensiveness | ইতর আচরন, অশিষ্টাচার | decency |
| Vulnerable (adj) | susceptible, defenseless | অরক্ষিত, ক্ষতিগ্রস্থ হতে পারে এমন | invincible, impervious |
| Waddle (vt) | stagger | হেলেদুলে চলা, হংসগমন | |
| Wade (vi.) | paddle, ford | অতি কষ্টে চলা, অতি কষ্টে অতিক্রম করা | |
| Wag (vt) | waggle, wiggle | নড়া, নাড়া | |
| Wand (n) | stick, club | জাদুদন্ড, সঙ্গীত নির্দেশনার জন্য ব্যবহৃত ছোট লাঠি | |
| Wane (vi) | diminish, dwindle, decline | ক্রমশ হ্রাস পাওয়া, ক্ষীনকায় হওয়া | expand |
| Ware (n) | pottery | নির্মিত পন্যসামগ্রী | |
| Warily (adv) | cautiously, carefully | সতর্কভাবে | thoughtlessly |
| Warn (vt) | admonish, alarm | সতর্ক করে দেয়া | |
| Warrant (n) | license, permit | ন্যয্যতা বা কর্তৃত্ব | |
| Warranty (n) | guarantee, permit | কর্তৃত্ব, গ্যারান্টি, নিশ্চয়তা | |
| Wary (adj) | cautious, careful | সতর্ক | careless |
| Waver (vt. Vi) | swing, hesitate | দোদুল্যমান হওয়া, টলতে থাকা | |
| Weird (adj) | bizarre, erratic, eccentric | অস্বাভাবিক, ভূতুরে, রহস্যময় | natural |
| Welfare (n) | boon, wellbeing | কল্যান, মঙ্গল | |
| Wheedle (vt) | cheat, hoodwink | মিষ্টি কথায় ভুলিয়ে কিছু আদায় করা | |
| Whim (n) | fancy, impulse | খেয়াল, বাতিক | |
| Wholesome (adj) | healthful, nutritious | স্বাস্থ্যবান, স্বাস্থ্যকর | unhealthy |
| Wield (vt) | exert, exercise | অধীকারী হওয়া বা ব্যবহার করা | |
| Wistful (adj) | desirous, yearning | বিষন্ন ও ব্যাকুল, অতৃপ্ত | satisfied |
| Wit (n) | humor, cleverness | বোধশক্তি, বুদ্ধি | |
| Wither (vi, vt) | wilt, fade, shrivel | শুকিয়ে যাওয়া, বিবর্ন হওয়া | bloom |
| Witness (vt. N) | see, observe | প্রত্যক্ষদর্শী, সাক্ষী | |
| Witty (adj) | clever, brilliant | রসিক, রসালো | dumb |
| Worldly (adj) | earthly, mundane | পার্থিব, জাগতিক | |
| Worthy (adj) | valuable, praiseworthy | প্রশংসার যোগ্য, প্রশংসনীয় | lamentable |
| Wrath (n) | anger, indignation | তীব্র ক্রোধ, ভয়ানক রোষ | |
| Wring (vt) | squeeze, twist | মোচড়ানো, পাকানো | |
| Wry (adj) | cynical, ironic | বিকৃত, মোচড়ানো | |
| Yearn (vt) | long, crave, aspire | তীব্র আকাঙ্খা রোধ করা | |
| Yell (vt) | shout, yelp | তীব্রস্বরে চিৎকার করা | |
| Yelp (vt) | scream, shout | তীক্ষ্ণ কণ্ঠে চিৎকার করা | |
| Yoke (v) | join together, unite | একত্রিত হওয়া | |
| Zany (adj) | crazy, comic | হাস্যকর | |
| Zeal (n) | zest, enthusiasm | সতেজতা ও উদ্দীপনা | apathy |
| Zealot (n) | fanatic, bigot | অন্ধ সমর্থক, গোঁড়া মৌলবাদী | skeptic |
| Zealous (adj) | enthusiastic, fervent | উদ্দীপনাময়, আগ্রহোদ্দীপক | apathetic |
| Zenith (n) | summit, pinnacle | শীর্ষবিন্দু | nadir |
| Zest (n) | enthusiasm, interest | উচ্ছাস, প্রবল উৎসাহ ও আনন্দ | indifference |
| Zone (n) | region, area | অঞ্চল, এলাকা | |

# Vocabulary Exercise

**From the answer choices, find out the *opposite word* for the words in capital letters:**

1. FALLACY:
   (A) personal philosophy (B) imaginative idea
   (C) unconfirmed theory (D) tentative opinion (E) valid argument
2. DIVULGE:
   (A) keep secret (B) evaluate by oneself
   (C) refine (D) restore (E) copy
3. BOYCOTT:
   (A) extort (B) underwrite
   (C) underbid (D) stipulate (E) patronize
4. ADULTERATION:
   (A) consternation (B) purification
   (C) normalization (D) approximation (E) rejuvenation
5. DEPOSITION:
   (A) process of congealing (B) process of distilling
   (C) process of eroding (D) process of evolving (E) process of condensing
6. ENERVATE:
   (A) recuperate (B) resurrect
   (C) renovate (D) gather (E) strengthen
7. LOQUACIOUS:
   (A) tranquil (B) skeptical
   (C) morose (D) taciturn (E) witty
8. REPINE:
   (A) intensify (B) excuse
   (C) express joy (D) feel sure (E) rush forward
9. VENERATION:
   (A) derision (B) blame
   (C) avoidance (D) ostracism (E) defiance
10. INVETERATE:
    (A) casual (B) public
    (C) satisfactory (D) trustworthy (E) sophisticated
11. ADHERE:
    (A) detach (B) cleanse (C) engulf (D) incise (E) contain
12. UNCONVENTIONALITY:
    (A) perceptibility (B) inscrutability (C) imperturbability
    (D) fidelity to custom (E) formality of discourse
13. PINCH:
    (A) important accomplishment (B) apt translation
    (C) abundant amount (D) opportune acquisition (E) unfamiliar period
14. OUTSER:
    (A) regression (B) series (C) exit (D) interruption (E) termination
15. RAREFY:
    (A) make less humid B) make less opaque
    (C) make more voluminous (D) make more dense (E) make more oily
16. EFFRONTERY:
    (A) charity (B) deference (C) simplicity
    (D) deceitfulness (E) stupidity
17. SCURVY:
    (A) completely centered (B) above reproach (C) imaginative
    (D) valiant (E) carefree
18. OBDURATE:
    (A) complaisant (B) similar (C) commensurate
    (D) uncommunicative (E) transitory

19. AVER:
(A) resign indignantly (B) condemn unjustly C) refuse
(D) deny (E) resent

20. PITH:
(A) untimely action (B) insufficient attention (C) routine treatment
(D) rigid formulation (E) superficial element

21. SUPINE:
(A) vigilant (B) flustered (C) distorted (D) brittle (E) awkward

22. CONSOLIDATION:
(A) instigation (B) fragmentation (C) restriction
(D) opposition (E) provocation

23. SECURE:
(A) infest (B) unearth (C) impart (D) implant (E) unfasten

24. FRACAS:
(A) rapture (B) relic (C) novel predicament
(D) peaceful situation (E) just reward

25. GRATE:
(A) soothe (B) gather (C) acknowledge (D) forgive (E) improve

26. HYPERBOLE:
(A) equivocation (B) criticism (C) understatement
(D) pessimism (E) skepticism

27. INERRANCY:
(A) productivity (B) generosity (C) volubility
(D) fallibility (E) plausibility

28. STEEP:
(A) relax (B) repulse (C) plummet (D) clarify (E) parch

29. RECUMBENT:
(A) well fortified (B) standing up (C) lacking flexibility
(D) constricted (E) alarmed

30. NATTY:
(A) sloppy (B) quiet (C) loose (D) common (E) difficult

31. EXIGENT:
(A) unprepossessing (B) inquisitive
(C) devoted (D) absurd (E) deferrable

32. PLATITUDE:
(A) concise formulation (B) original observation
(C) unsubstantiated claim (D) relevant concern (E) insincere remark

33. ASSET:
(A) duty (B) qualification (C) denial
(D) liability (E) instability

34. CONCUR:
(A) expose (B) incite (C) prolong (D) dissent (E) forgive

35. AMALGAMATE:
(A) congregate (B) insulate (C) isolate (D) layer (E) revive

36. FERROUS:
(A) affected by rust (B) containing on iron (C) chemically inert
(D) combined with water (E) permanently magnetized

37. PHLEGMATIC:
(A) vivacious (B) valiant (C) arid
(D) healthy (E) mature

38. PRODIGIOUS:
(A) implicit (B) slight (C) constant
(D) unnecessary (E) premature

39. CORROBORATION:
(A) weakening (B) lessening of certainty
(C) reduction in generality (D) implausibility (E) inadequacy

40. PALPABILITY:
(A) infertility (B) inflammability (C) intangibility
(D) intractability (E) intolerability

41. ALACRITY:
(A) hesitance and reluctance (B) caution and fear (C) cynicism and skepticism
(D) suspicion and doubt (E) concern and anxiety

42. MANNERED:
(A) plain (B) infantile (C) progressive
(D) ignorant (E) natural

43. DISSEMBLE:
(A) act conventionally (B) put together (C) appear promptly
(D) behave honestly (E) obtain readily

44. DOMINATE:
(A) have no ability to (B) have no control over
(C) be irreconcilable (D) be angry (E) be undisciplined

45. SIDESTEP:
(A) confront directly (B) detain temporarily
(C) comprehend accurately (D) judge hastily (E) treat fairly

46. FACILITATE:
(A) hallow (B) hamper (C) hurdle
(D) hide (E) hold

47. MUNDANE:
(A) sufficient (B) superior (C) exotic
(D) agile (E) perfect

48. ELASTICITY:
(A) lack of spontaneity (B) lack of tension (C) lack of resilience
(D) symmetry (E) permanence

49. APPRISE:
(A) oblige (B) underrate (C) apply pressure
(D) offer encouragement (E) withhold information

50. SQUALID:
(A) florid (B) extraneous (C) fervid
(D) abundant (E) pristine

51. MANIPULATIVE:
(A) impassioned (B) lethargic (C) inept
(D) guileless (E) unaltered

52. ANTIPATHY:
(A) pronounced talent (B) settled fondness (C) concealed passion
(D) cultivated nostalgia (E) sustained interest

53. FLEDGE:
(A) seek (B) call (C) mate
(D) emit (E) molt

54. DIATRIBE:
(A) encomium (B) epitome (C) euphemism
(D) epistle (E) epigram

55. FLUSTERED:
(A) mute (B) calm (C) heavy (D) ingrained (E) courageous

56. ENDORSE:
(A) provoke criticism (B) receive payment (C) submit unwillingly
(D) oppose publicly (E) perform quickly

57. EXPIRE:
(A) evolve (B) stabilize (C) come to life
(D) grow to fruition (E) bring to light

58. METAMORPHOSIS:
(A) relief from strain (B) continuation without change
(C) cyclical motion (D) dogmatic persistence (E) varied activity

59. MOROSE:
(A) overawed (B) agitated (C) cherubic
(D) decisive (E) cheerful

60. INDELIBILITY:
(A) availability (B) comprehensibility (C) decidability
(D) eras ability (E) retract ability

61. SPIRITUAL:
(A) eclectic (B) figurative (C) ephemeral
(D) immoral (E) corporeal

62. DISPATCH:
(A) serenity (B) leisureliness (C) heedlessness
(D) irregularity (E) aversion

63. FERMENT:
(A) solidity (B) purity (C) lucidity
(D) transparency (E) tranquility

64. FACETIOUS:
(A) lugubrious (B) contentious (C) ingenuous
(D) prodigious (E) audacious

65. CRAVEN:
(A) indifferent (B) presumptuous (C) valorous
(D) scrupulous (E) petulant

**Answer Key**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. E | 2. A | 3. E | 4. B | 5. C | 6. E | 7. D | 8. C | 9. A | 10. A |
| 11. A | 12. D | 13. C | 14. E | 15. D | 16. B | 17. B | 18. A | 19. D | 20. E |
| 21. A | 22. B | 23. E | 24. D | 25. A | 26. C | 27. D | 28. E | 29. B | 30. A |
| 31. E | 32. B | 33.D | 34. D | 35. C | 36. B | 37. A | 38. B | 39. B | 40. C |
| 41. A | 42. E | 43. D | 44. B | 45. A | 46. B | 47. C | 48. C | 49. E | 50. E |
| 51. D | 52.B | 53.E | 54. A | 55. B | 56. D | 57. C | 58. B | 59. E | 60. D |
| 61. E | 62. B | 63. E | 64. A | 65. C | | | | | |

# ANALOGY

## What is an Analogy

Every analogy question on the BBA/MBA/SAT/GRE tests begins with a pair of capital lettered words. আপনাদের কাজ হবে এই Pair এর words দুটোর মধ্যে কি সম্পর্ক আছে তা খুঁজে বের করা এবং answer choices থেকে একই সম্পর্কযুক্ত একটি pair of words খুঁজে বের করা।

## The Basic Approach

আপনি কিভাবে দুটো Word এর মধ্যকার পারস্পরিক সম্পর্ক খুঁজে বের করবেন? Best পদ্ধতি হচ্ছে এই দুটো words দিয়ে একটি ছোট sentence তৈরী করা।This sentence must use both the words and it must state their relationship clearly. আপনার তৈরী করা Sentence টি যত ছোট এবং specific হবে ততই সুবিধা। শুধু শুধু কঠিন sentence তৈরী করার চেষ্টা করবেন না।

## Three Step Method

The method for solving analogies has three simple steps:

1. **Build a bridge between the stem words**: প্রদত্ত শব্দ দুটোর মধ্যে সম্পর্ক তৈরী করার চেষ্টা করুন।
2. **Plug in the answer choices** : Answer choice গুলো থেকে আপনার তৈরী করা সম্পর্কের সাথে মিলে যায় এমন একটি pair of words বের করুন।
3. **Adjust your bridge, if you need to** : Answer বের করতে না পারলে আবার question এ ফিরে যান। দেখুন অন্য কোন bridge তৈরী করা যায় কিনা।

নিচের example টি লক্ষ্য করুন।

**LILY: FLOWER:**

1. **Build the bridge**: The best bridge here is, *"A Lily is a type of Flower."*
2. **Plug in the answer choices** : Here is the complete question

**LILY: FLOWER:**

A) Rose : Thorn  B) Brick : Building  C) Cocoon : Butterfly
D) Maple : tree  E) Sky : Airplane

Take the bridge you have built and plug in answer choices (A) through (E). If one of the pair perfectly fits into the bridge, it is surely the answer.

*N. B.: Be sure to try all five choices.*

Answer choices দেখার সময় নিজেকে প্রশ্ন করুন -

(A) Is a Rose a type of Thorn? No.
(B) Is a Brick a type of Building? No.
(C) Is a Cocoon a type of Butterfly? No.
(D) Is a Maple a type o Tree? Yes.
(E) Is a Sky a type of Aeroplane? No.

3. **Adjust your bridge if you need to**: Unlike previous example, if no answer choice seems to fit, your bridge is too specific or narrow. If more than one answer choice fits, your bridge is not specific enough or basically, too broad. In either case, you should go back and adjust your bridge.

## Eliminating unrelated pairs:

নিচের example টি দেখুন এবং solve করার চেষ্টা করুন, এবার আমরা question stem টাই বাদ দিয়ে শুরু করছি।

A) Plentiful : Resource
B) Wealthy : Money
C) Voluntary : Result
D) Neutral : Activity
E) Humorous : Movie

**CRACKING:** ধরে নিচ্ছি, আমরা question stem এ দেওয়া word গুলোর মানে জানি না। সুতরাং, We have to ignore them and study the choices. Let's look at the choices one-at-a-time:

A) Is there a clear and necessary relationship between Plentiful and Resource? No. A resource might be plentiful, but it also might be scarce. The two words don't necessarily go together. Eliminate.

B) Is there a clear and necessary relationship between Wealthy and Money? Yes. Wealthy means something like "Having a lot of Money". This option seems a possible answer.

C) Is there a clear and necessary relationship between Voluntary and Result? No. Eliminate.

D) Is there a clear and necessary relationship between Neutral and Activity? No. Eliminate.

E) Is there a clear and necessary relationship between Movie and Humorous? No. Movies do not necessarily have to be humorous. There are other genres (e.g. tragedies) of movies as well.

We have eliminated everything but (B). সুতরাং (B) ই আমাদের answer. Notice that in all of the problems above, we have talked about whether the word pairs are necessarily related or not. A necessary relationship between two words indicates a strong relationship between them. For example, the words "trumpet" and "instrument" are necessarily related since a trumpet cannot be anything but an instrument. However, such a strong relationship is not necessary between the words "trumpet" and "jazz" (a genre of music). It is not necessary that trumpet has to be played in jazz music. Or it is not necessary that trumpet cannot be used in any other genre of music.

## Watch Out For Answer Choices That Reverse The Original Relationship:

Analogy question এর মাধ্যমে student দের বিভ্রান্ত করার সবচেয়ে common উপায় হচ্ছে original pair এর শব্দগুলোর অর্থ যে sequence এ আছে, সেটাকে reverse (বিপরীত) করে answer set করা। নিচের example টি লক্ষ্য করুন -

**Pilot : Steer**
A) Boss : Obey
B) Chef :Dine
C) Lawyer : Retain
D) Guard : Protect
E) Soldier : Command

প্রথম দেখায় অনেকগুলোকে answer মনে হতে পারে। 'A pilot is someone who steers" or "A soldier is someone who is commanded." এই relationships promising মনে হচ্ছে কি? হচ্ছে। কিন্তু these options are not correct. Ask yourself who is doing what to whom? In the question pair, the pilot is doing something. Choice (E) তে the soldier is not the person doing something, he is the person to whom something is being done. He is being commanded, he himself does not get to command others. In other words, the soldier is the object of the verb command, not the verb's subject. Original grammatical relation টা এক্ষেত্রে উল্টে গিয়েছে। একইভাবে eliminate করে করে আমরা answer পাই (D) A guard is someone who protects.

## WHEN YOU DON'T KNOW WORDS IN THE ANSWER CHOICES:

যখন আপনি Answer choices এ প্রদত্ত word গুলোর একটি বা একাধিক এর অর্থ জানেন না, এখন answer করা একটু কঠিন হয়ে যায়। তারপরেও আপনি answer করতে পারবেন। Suppose, you know the meanings of the words given in the question stem এবং আপনি ঐ শব্দ দুটির মধ্যে একটা definite relationship তৈরী করতে পেরেছেন। তখন আপনি "process of elimination" পদ্ধতি অবলম্বন করবেন। সেটা হচ্ছে ধরুন, আপনি পাঁচটি answer choice এর যে কোন **একটির** word গুলোর বা একটি word এর meaning জানেন না। নিচের example টি লক্ষ্য করুন -

**Innovator : create** :

A) patient : cure  B) -------- : give  C) scientist : describe
D) president : elect  E) prisoner : confess

**CRACKING :** আমরা choice (B) এর প্রথম শব্দটির অর্থ জানি না। আমরা এখানে আমাদের usual procedure follow করব।

'An innovator is someone who creates'

(A) Is a patient someone who cures ? No.. Eliminate

(B) Could ------- mean someone who gives?
হতে পারে। আমরা যেহেতু শব্দটির অর্থ জানি না, সুতরাং we've to hold on to this choice.

(C) Is a scientist someone who describes? Well, a scientist might describe something, but এটাই scientist □□ prefect definition নয়। There is no clear and necessary relationship between the two words. Eliminate.

(D) Is a president someone who elects? No. Eliminate.

(E) Is a prisoner someone who confesses? এক্ষেত্রেও কোন definite relationship পাওয়া যাচ্ছে না। A prisoner might have made a confession, but many prisoners don't confess, and many people who confess aren't prisoners. Eliminate.

আমরা (B) ছাড়া সবগুলো eliminate করে ফেলেছি। সুতরাং (B) must be answer. The missing word is benefactor.

**N.B.** ***Please Consult SAT-1 books (older versions) for more knowledge about analogy.***

Analogies tend fall into certain basic types. If you can discover no apparent relationship between the two capitalized words, try establishing a relationship between them based on those types commonly used on the test.

## ANALOGY TYPES:

***Definition Type***

**REFUGE: SHELTER**

A refuge (place of asylum) by definition shelters.

**TAXONOMIST : CLASSIFY**
A taxonomist, a person who specializes in classification, by definition classifies.
**HAGGLER: BARGAIN**
A haggler, a person who argues over prices, by definition bargains.

***Defining Characteristic Type***

**TIGER: CARNIVOROUS**
A tiger is defined as a carnivorous of meet – eating animal.
**ENTOMOLOGIST: INSECTS**
An entomologist is defined as a person who studies insects.
**APIARY : BEE**
An apiary is defined a home for bees.

***Class and Member Type***

**REPTILE : SALAMANDER**
A salamander is an example of a reptile.
**METAPHYSICS : PHILOSOPHY**
Metaphysics belongs to the field of philosophy.
**SONNET : POEM**
A sonnet is a specific kind of poem.

***Antonyms Type***

Antonyms are words that are opposite in meaning. Both words belong to the same part of speech.
**CONCERNED : INDIFFERENT**
Indifferent means unconcerned.
**WAX : WANE**
Wax, to grow larger, and wane, to dwindle, are opposites.

**ANARCHY : ORDER**
Anarchy is the opposite of order.

***Antonym Variants Type***

In an Antonym Variant, the words are not strictly antonyms: their meanings, however, are opposed. Take the adjective nervous. A strict antonym for the adjective nervous would be the adjective poised. However, where an Antonym would have the adjective poised, an Antonym Variant analogy has the noun poise. It looks like this:

**NERVOUS : POISE**
Nervous means lacking in poise.

**INIQUITOUS : VIRTUE**
Something iniquitous lacks virtue. It is the opposite of virtuous.
**ABSTINENT : GORGE**
Abstinent or sparing in eating means not inclined to cram or gorge.

***Synonyms Type***

Synonyms are words that have the same meaning. Both words belong to the same part of speech.
**MAGNIFICENTG : GRANDIOSE**
Grandiose means magnificent.
**RATIOCINATE : THINK**
To ratiocinate is to think.
**RECIDIVIST : BACKSLIDER**
A recidivist or habitual offender is a backslider.

***Synonym Variants Type***

In a Synonym Variant, the words are not strictly synonymous; their meanings, however, are opposed. Take the adjective willful. A strict synonym for the adjective willful would be the adjective unruly. However, where a Synonym would have the adjective unruly, a Synonym Variant analogy has the noun unruliness. It looks like this;

**WILLFUL : UNRULINESS**
Willful means exhibiting unruliness.
**VERBOSE : WORDINESS**
Someone verbose is wordy: he or she exhibits wordiness.
**SOLICITOUS : CONCERN**
Someone solicitous is concerned; he or she shows concern.

***Degree of Intensity Type***

**FOND : DOTING**
Found is less extreme than doting
**FLURRY : BLIZZARD**
A flurry or shower of snow is less extreme than a blizzard.
**GRASPING : RAPACIOUS**
To be grasping is less extreme than to be rapacious.

***Part to Whole Type***

**ISLAND : ARCHIPELAGO**
Many islands make up an archipelago

**SHARD : POTTERY**
A Shard is a fragment of pottery.
**CANTO : POEM**
A canto is part of poem.

***Function Type***

**ASYLUM : REFUGE**
An a sylum provides refuge or protection.
**BALLAST : STABILITY**
Ballast provides stability.
**LULL : STORM**
A full temporarily interrupts a storm.

***Manner Type***

**MUMBLE : SPEAK**
To mumble is to speak indistinctly
**STRUT : WALK**
To strut is to walk proudly.
**STRAINED : WIT**
Wit that is strained is forced in manner.

***Action and Its Significance Type***

**WINCE : PAIN**
A wince is a sign that one feels pain.
**BULUSH : EMBARRASMINT**
A blush signifies embarrassment.
**PROSTRATION : SUBMISSIVENESS**
Prostration ( assuming a prostrate position, face to the ground) is a sign of submissiveness or abasement.

***Worker and Article Created Type***

**POET : SONNET**
A poet creates a sonnet.
**ARCHITECT : BLUEPRINT**
An architect designs a blueprint.
**MASON : WALL**
A mason builds a wall.

***Worker and Tool Type***

**PAINTER : BRUSH**
A painter uses a brush
**SICKLE : REAPER**
A reaper uses a sickle to cut the grain.
**CARPENTER : VISE**
A carpenter uses a vise to hold the object being worked on.

***Worker and Action Type***

**ACROBAT : CARTWHEEL**
An acrobat performs a cartwheel.
**FINANCIER : INVEST**
A financier invests
**TENOR : ARIA**
A tenor sings an aria.

***Worker and Workplace Type***

**MUSICIAN : CONSERVATORY**
A musician studies at a conservatory.
**SCULPTOR : ATELIER**
A sculptor works in an atelier or studio.
**MINER : QUARRY**
A miner works in a quarry or pit.

***Tool and Its Action Type***

**DRILL : BORE**
A drill is a tool used to bore holes.
**CROWBAR : PRY**
A crowbar is a tool used to pry things apart.
**SIEVE : SIT**
A sieve is a tool used to strain or sift.

***Cause and Effect Type***

**SOPORIFIC : SLEEPINESS**
A soporific causes sleepiness.

***Sex Type***

**DOE : STAG**
A doe is a female deer; a stag, a male deer.

***Age Type***

**COLT : STALLION**
A colt if a young stallion.

**Time Sequence Type**

**CORONATION : REIGN**
The coronation precedes the reign.

***Spatial Sequence Type***

**ROOF : FOUNDATION**
The roof is the highest point of a house; the foundation, the lowest point.

***Symbol and Quality it Represents Type***

**DOVE : PEACE**
A dove is the symbol of peace.

**PRACTICE EXERCISES ( A-E )**

**Directions:** In each of the following questions, a related pair of words or phrases is followed by five lettered pairs of words phrases. Select the lettered pair that best expresses a relationship similar to that expressed in the original pair.

## Analogy Exercise A

1. MASON : WALL ::
   (A) artist : easel (B) fisherman : trout
   (C) author : book
   (D) congressman : senator
   (E) sculptor : mallet
2. FIRE : ASHES :: (A) accident : delay
   (B) wood : splinters (C) water : waves
   (D) regret : melancholy
   (E) event : memories
3. GOOSE : GANDER :: (A) duck : drake
   (B) hen : chicken (C) sheep : flock
   (D) dog : kennel (E) horse : bridle
4. CARPENTER : SAW ::
   (A) stenographer : typewriter
   (B) painter : brush (C) lawyer : brief
   (D) seamstress : scissors
   (E) runner : sneakers
5. CAPTAIN : SHOAL ::
   (A) lawyer : litigation (B) pilot : radar
   (B) soldier : ambush (D) doctor : hospital
   (E) corporal : sergeant
6. HORNS : BULL :: (A) mane : lion
   (B) wattles : turkey (C) antlers : stag
   (D) hoofs : horse (E) wings : eagle
7. JUDGE : COURTHOUSE ::
   (A) carpenter : bench (B) lawyer : brief
   (B) architect : blueprint
   (C) physician : infirmary
   (E) landlord : studio
8. HELMET : HEAD :: (A) pedal : foot
   (C) gun : hand (C) breastplate : chest
   (D) pendant : neck (E) knapsack : back
9. GULLIBLE : DUPED ::
   (A) Credible : cheated
   (B) careful : cautioned
   (C) malleable : molded
   (D) myopic : misled
   (E) articulate : silenced
10. DUNGEON : CONFINEMENT ::
    (A) church : chapel (B) school : truancy
    (C) asylum : refuge (D) hospital : mercy
11. HERMIT : GREGARIOUS ::
    (A) miser : penurious
    (B) ascetic : hedonistic
    (C) coward : pusillanimous
    (D) scholar : literate
    (E) crab : crustacean
12. MENDACITY : HONESTY ::
    (A) courage : cravenness
    (B) truth : beauty
    (C) courage : fortitude
    (D) unsophisticatedness : ingenuousness
    (E) turpitude : depravity
13. MARATHON : STAMINA ::
    (A) relay : independence
    (B) hurdle : perseverance
    (C) sprint : celerity
    (D) job : weariness
    (E) ramble : directness
14. NAÏVE : INGENUE ::
    (A) ordinary : genius
    (B) venerable : celebrity
    (C) urbane : sophisticate
    (D) crafty : artisan
    (E) modest : braggart
15. RETOUCH : PHOTOGRAPH ::
    (A) hang : painting (B) finger : fabric
    (C) retract : statement
    (D) compose : melody (E) refine : style
16. INDIGENT : WEALTH ::
    (A) contented : happiness
    (B) aristocratic : stature
    (C) smug : complacency
    (D) emaciated : nourishment
    (E) variegated : variety
17. SHALE : GEOLOGIST ::
    (A) catacombs : entomologist
    (B) aster : botanist
    (C) obelisk :fireman (D) love : philologist
    (E) reef astrologer

18. DIDATIC : TEACH :
(A) sophomoric : learn (B) satiric : mock
(C) reticent : complain (D) chaotic : rule
(E) apologetic : deny
19. HACKNEYED : ORIGINAL ::
(A) mature : juvenile (B) trite : morbid
(C) withdrawn : reserved
(D) evasive : elusive
(E) derivative : traditional
20. AUGER : CARPENTER ::
(A) studio : sculptor (B) awl : cobbler
(C) seam : seamstress
(D) cement : mason (E) apron : chef

## Analogy Exercise B

1. MUSTER : CREW ::
(A) convene : committee
(B) demobilize : troops
(C) dominate : opposition
(D) cheer : team (E) dismiss : jury
2. DWELL : DENIZEN :: (A) shun : outcast
(B) inherit : heir (C) squander : miser
(D) obey : autocrat (E) patronize : protégé
3. MEANDERING : DIRECTNESS ::
(A) menacing : ambition
(B) affable : permissiveness
(C) digressive : conciseness
(D) circuitous : rotation
(E) aboveboard : openness
4. CEMENT : TROWEL :: (A) lawn : rake
(B) conflagration : match
(C) paint : brush
(D) floor : polish (E) wallpaper : ladder
5. RIGHEADED : YIELD ::
(A) lionhearted : retreat
(B) lily-livered : flee (C) dogged : pursue
(D) featherbrained : giggle
(E) eagle-eyed : discern
6. ALARM : TRIGGER ::
(A) prison : escape
(B) tunnel : dig (C) criminal : corner
(D) fright : allay (E) trap : spring
7. QUOTATION : QUOTATION MARKS ::
(A) remark : colon (B) sentence : period
(C) aside : parentheses
(D) clause : semicolon
(E) interjection : exclamation point
8. SIGNATURE : ILLUSTRATION ::
(A) byline : column (B) alias : charge
(C) credit : purchase (D) note : scale
(F) reference : recommendation
9. SCALES : JUSTICE :: (A) weights : measures (B) laws : courts
(C) torch : liberty
(D) laurel : peace (E) balance : equity
10. SURPIRISE : EXCLAMATION ::
(A) insolence : bow (B) dismay : groan
(C) happiness : grimace
(D) deference : nod
(E) contentment : sigh
11. APOSTATE : RELIGION ::
(A) potentate : kingdom
(B) traitor : country
(C) bureaucrat : government
(D) jailer : law
(E) teacher : education
12. FOX : CUNNING :: (A) dog : play full
(B) hyena : amusing
(C) beaver : industrious
(D) vixen : cute (E) colt : sturdy
13. PERJURY : OATH :: (A) plagiarism : authority (B) embezzlement : trust
(C) disrespect : age (D) testimony : court
(E) jury : vow
14. EULOGY : BLAME : (A) elegy : loss
(D) satire : mockery (C) tirade : abuse
(D) simile : likeness (E) benediction : curse
15. PRIDE : LIONS :: (A) gaggle : geese
(B) honor : thieves (C) snarl : wolves
(D) arrogance : kings (E) lair : bears
16. RANGE : MOUNTAINS ::
(A) atlas : maps
(B) plain : prairie (C) string : beads
(D) novel : short stories (E) sea : rivers
17. EXCESSIVE : MODERATION ::
(A) extensive : duration (B) arbitrary : courage (C) impulsive : reflection (D) distinguished : reverence
(E) expensive : cost
18. DEADBEAT : PAY :: (A) killjoy : lament
(B) spoilsport : refrain (C) daredevil : risk
(D) diehard : quit (E) turncoat : betray

19. MENDICANT : IMPECUNIOUS ::
(A) critic : quizzical (B) complainer : petulant (C) physician : noble (D) liar : compulsive (E) philanthropist : prodigal
20. SNICKER : DISRESPECT ::
(A) whimper : impatience (B) chortle : glee (C) frown : indifference (D) sneer : detachment (E) glower : cheerfulness

## Analogy Exercise C

1. MYTH : LEGENDARY :: (A) sermon : lengthy (B) anecdote : witty (C) fable : didactic (D) epic : conic (E) allegory : obscure
2. TIRADE : ABUSIVE ::
(A) monologue : lengthy (B) aphorism : boring (C) prologue : conclusive
(D) encomium : laudatory
(E) critique : insolent
3. EXPEDITIOUS : SPEED :: (A) astute : wisdom (B) decorous : impropriety
(C) thoughtful : inanity
(D) haggard : sturdiness
(E) portable : frailty
4. ANNOTATE : TEXT :: (A) enact : law
(B) prescribe : medication
(C) caption : photograph
(D) abridge : novel (E) censor : film
5. DRUDGERY : IRKSOME ::
(A) encumbrance : burdensome
(B) journey : wearisome
(C) ambivalence : suspicious
(D) compliance : forced
(E) dissonance : harmonious
6. IMPROMPTU : REHEARSAL ::
(A) practiced : technique (B) makeshift : whim (C) offhand : premeditation (D) glib : fluency (E) numerical : calculation
7. ELISION : SYLLABLES ::
(A) contraction : letters
(B) thesis : ideas
(C) diagnosis : symptoms
(D) almanac : facts (E) abacus : numbers
8. STICKLER : INSIST ::
(A) mumbler : enunciate
(B) trickster : risk
(C) haggler : concede
(D) laggard : outlast
(E) braggart : boast
9. DETRITUS : GLACIER :: (A) thaw : snowfall (B) snow : ice cap (C) silt : river (D) range : mountain (E) foliage : tree
10. DESCRY : DISTANT :: (A) mourn : lost (B) whisper : muted (C) discern : subtle (D) destroy : flagrant (E) entrap : hostile
11. HORSE : CORRAL :: (A) oyster : reef (B) dog : muzzle (C) sheep : reef (D) pig : sty (E) deer : stag
12. RUBBER : ELASTIC :: (A) paper : brittle (B) diamond : hard (C) satin : sheer (D) metal : heavy (E) dust : allergic
13. REAM : PAPER :: (A) carton : milk (B) statue : marble (C) tablet : clay (D) ink : pen (E) cord : wood
14. HOBBLE : WALK :: (A) gallop : run (B) stammer : speak (C) stumble : fall (D) sniff : smell (E) cord : wood
15. DETECTIVE : INFORMER ::
(A) spy : counterspy (B) reporter: source
(C) author : editor
(D) architect : draftsman
(E) sailor : mutineer
16. SCULPTOR : STONE :: (A) essayist : words (B) painter : turpentine
(C) composer : symphony
(D) logger : timber (E) etcher : acid
17. MASTHEAD : NEWSPAPER ::
(A) footnote : essay (B) credits : film
(C) spine : book (D) ream : paper
(E) advertisement : magazine
18. FRAYED : FABRIC :: (A) thawed : ice
(B) removed : building
(C) frazzled : nerves
(D) watered : lawn
(E) cultivated : manner
19. INDOLENT : WORK :: (A) decisive : act
(B) gullible : cheat
(C) perceptive : observe
(D) theatrical : perform
(E) taciturn : speak
20. INFALLIBLE : ERROR ::
(A) irreversible : cure
(B) invulnerable : emotion
(C) impeccable : flaw (D) intolerable : defect (E) immovable : choice

## Analogy Exercise D

1. INFRACTION : LAW ::
(A) interruption : continuity
(B) renovation : structure
(C) establishment : order
(D) enactment : amendment
(E) punishment : crime

2. LACHRYMOSE : TEARS :: (A) effusive : requests (B) ironic : jests (C) morose : speeches (D) profound : sighs (E) verbose : words

3. MOISTEN : DRENCH : (A) enclose : confine (B) prick : stab (C) disregard : ignore
(D) scrub : polish (E) heat : chill

4. WITCH : COVEN :: (A) ogre : castle (B) seer : prophecy (C) actor : troupe
(D) fairy : spell (E) doctor : medicine

5. CONTINENT : ISLAND ::
(A) ocean : lake
(B) isthmus : peninsula (C) cape : cove
(D) river : canal (E) plateau : plain

6. SKINFLINT : STINGY :: (A) daredevil : alert (B) braggart : carefree
(C) blackguard : protective
(D) spendthrift : weak
(E) diehard : stubborn

7. STOREY : BUILDING :: (A) plot : outline
(B) rung : ladder (C) cable : elevator
(D)foundation : skyscraper
(E) spire : church

8. CANONIZE : SAINT :: (A) train :speedy
(B) guard : dignitary (C) deify : sinner
(D) lionize : celebrity
(E) humanize : scholar

9. STARE : GLANCE :: (A) participate : observe (B) scorn : admire
(C) hunt : stalk
(D) Listen : Hear (E) Go : Run

10. PERFORATE : HOLES :: (A) speckle : spots (B) evaporate : perfume (C) decorate : rooms (D) filter : water (E) repent : sins

11. PUGNACIOUS : BATTLE ::
(A) timorous : beg (B) loquacious : drink
(C) tenacious : persist (D) veracious : lie
(E) wicked : Survive

12. CLEARSIGHTED : PERSPICACITY ::
(A) daring : temerity (B) reserved : impulsiveness (C) transparent : opacity
(D) severe : clemency (E) lethargic : energy

13. PLEAD : SUPPLICANT :: (A) disperse : rioter (B) shun : outcast
(C) revere : elder
(C) beg : philanthropist
(E) translate : interpreter

14. EPIGRAM : PITHY ::
(A) allegory : lengthy (B) saga : heroic
(C) anecdote : humorous
(D) elegy : satiric (E) proverb : modern

15. BOLT : FABRIC :: (A) lock : key
(B) book : paper (C) roll : film
(D) needle : thread (E) light : lamp

16. WHISKEY : ALCOHOL ::
(A) cream : milk
(B) canteen : water (C) tanker : oil
(D) octane : gasoline (E) pulp : juice

17. INCUBATOR : INFANT :: (A) hen house : chicken (B) greenhouse : plant
(C) archives : document (D) cooler : wine (E) hive : bee

18. CITADEL : DEFENSE :: (A) chapel : refreshment (B) gazebo : refuge (C) marina : contemplation (D) warehouse : storage
(D) warehouse : storage

19. DRUDGERY : IRKSOME ::
(A) encumbrance : burdensome
(B) journey : wearisome
(C) ambivalence : suspicious
(D) compliance : forced
(E) dissonance : harmonious

20. TRYST : CLANDESTINE ::
(A) reverie : dreamy
(B) acquaintanceship : brief
(C) expectation : hopeless (D) glance : resentful (E) journey : leisurely

## Analogy Exercise E

1. WHISPER : SPEAK :: (A) brush : touch (B) skip : walk (C) listen : hear (D) request : ask (E) whimper : whine
2. ELUSIVE : CAPTURE :: (A) persuasive : convince (B) elastic : stretch (C) headstrong : control (D) sensible : decide (E) gullible : trick
3. LINEAGE : PERSON : (A) foliage : tree (B) derivation : word (C) adolescence : child (D) title : book (E) landscape : portrait
4. IMPANEL : JUROR :: (A) accuse : defendant (B) convict : culprit (C) testify : witness (D) enroll : student (E) involve : bystander
5. PECCADILLO : TRIFLING :: (A) pariah : popular (B) diagnosis : accurate (C) notion : farfetched (D) squabble : petty (E) pursuit : trivial
6. PHYSIQUE : STURDY :: (A) intellect : noble (B) punctuality : tardy (C) investment : sound (D) fabric : worn (E) technique : inept
7. TRAILER : MOTION PICTURE :: (A) truck : cargo (B) theater : play (C) edition : novel (D) commercial : product (E) libretto : opera
8. SIGN : ZODIAC : (A) poster : billboard (B) letter : alphabet (C) prediction : prophecy (D) signal : beacon (E) rhyme : almanac :
9. LUMINARY : ILLUSTRIOUS :: (A) zealot : intense (B) miser : prodigal (C) atheist : devout (D) dignitary : conceited (E) celebrity : wealthy
10. BUFFOON : DIGNITY :: (A) braggart : modesty (B) blackguard : strength (C) laughingstock : ridicule (B) imposter : identification (E) gambler : risk
11. ROUT : DEFEAT :: (A) ovation : applause (B) triumph : failure (C) grief : loss ( D) pathway : ruin (E) memory : oblivion
12. METAPHOR : FIGURATIVE :: (A) fable : contemporary (B) adage : paradoxical (C) precept : instructive (D) irony : dramatic (E) epic : literal
13. LAST : SHOE :: (A) cuff : trousers (B) finale : curtain(C) approval : criticism (C) expectation : threats (E) satire : lamentations
14. LAST : SHOE :: (A) cuff : trousers (B) finale : curtain (C) pattern : glove (D) buckle : belt (E) strap : slip
15. INDOLENT : SLOTH :: (A) wrathful : ire (B) arrogant : acquit (C) covetous : enigma (D) gluttonous : loyalty (E) impatient : apathy
16. GROVEL : SERVILITY :: (A) titter : arrogance (B) fume : anger (C) yawn : civility (D) preen : modesty (E) snivel : hypocrisy
17. DELICATE : FASTIDIOUS :: (A) hard-working : diligent (B) altruistic : mercenary (C) demonstrative : effusive (D)deceptive : fallacious (E) blithe :melancholy
18. RICOCHET : BULLET :: (A) soar : falcon (B) aim : crossbow (C) pierce : dart (D) carom : ball (E) catapult : missile
19. JUGGERNAUT : INEXORABLE :: (A) cosmonaut : worldly (B) colossus : gigantic (C) demagogue : liberal (D) philistine :cultivated (E) despot : immaculate
20. APOCRYPHAL : AUTHENTICTTY :: (A) nefarious : wickedness (B) dogmatic : assertiveness (C) hypocritical : integrity (D) perspicacious : discernment (E) deceptive : artifice

# ANSWER KEY

## Analogy Exercise A

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. | C | 5. | D | 9. | C | 13. | C | 17. | B |
| 2. | E | 6. | C | 10. | C | 14. | C | 18. | B |
| 3. | A | 7. | D | 11. | B | 15. | E | 19. | A |
| 4. | D | 8. | C | 12 | A | 16 | D | 20. | B |

## Analogy Exercise B

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. | A | 5. | A | 9. | C | 13. | B | 17. | C |
| 2. | B | 6. | E | 10. | B | 14. | E | 18. | D |
| 3. | C | 7. | C | 11. | B | 15. | A | 19. | B |
| 4. | C | 8. | A | 12 | C | 16 | C | 20. | B |

## Analogy Exercise C

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. | C | 5. | A | 9. | C | 13. | E | 17. | B |
| 2. | D | 6. | C | 10. | C | 14. | B | 18. | C |
| 3. | A | 7. | A | 11. | D | 15. | B | 19. | E |
| 4. | C | 8. | E | 12 | B | 16 | A | 20. | C |

## Analogy Exercise D

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. | A | 5. | A | 9. | D | 13. | E | 17. | B |
| 2. | E | 6. | E | 10. | A | 14. | C | 18. | D |
| 3. | B | 7. | B | 11. | C | 15. | C | 19. | A |
| 4. | C | 8. | D | 12 | A | 16 | D | 20. | A |

## Analogy Exercise E

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. | A | 5. | D | 9. | A | 13. | B | 17. | C |
| 2. | C | 6. | C | 10. | A | 14. | B | 18. | D |
| 3. | B | 7. | D | 11. | A | 15. | A | 19. | B |
| 4. | D | 8. | D | 12 | C | 16 | B | 20. | C |

# SENTENCE COMPLETION

**Sentence completion** questions হচ্ছে এক ধরণের reading question. এক্ষেত্রে একটি বড় passage এর বদলে একটি sentence দেয়া থাকে যার একটি বা দু'টি word missing. আপনাদের কাজ হবে এই একটি বা দু'টি শূন্যস্থান পূরণ করার জন্য most suitable word (s) answer choice থেকে খুঁজে বের করা। নিচের উদাহরণটি দেখুনঃ

**Example:** At such a serious moment, your ------ is inappropriate.

a) courtesy b) pertinence c) levity d) solemnity e) wisdom

Courtesy অর্থ ভদ্রতা, pertinence অর্থ প্রাসঙ্গিকতা এবং wisdom অর্থ জ্ঞান, levity অর্থ আচরণের লঘুতা বা চপলতা এবং solemnity অর্থ ভাবগাম্ভীর্য।

এখন প্রশ্ন হচ্ছে serious moment (গুরুগম্ভীর মুহূর্তে) - এ কি ধরণের আচরণ inappropriate (বেমানান)? Answer choice (c) অর্থাৎ levity (লঘু/চপল আচরণ)।

অন্য কোন শব্দ বসালে বক্তব্যটি meaningful হয় না।

এক্ষেত্রে সবচেয়ে important ব্যাপারটি লক্ষ্য করুন - আপনি যদি answer choice এর শব্দগুলোর অর্থ না জানেন, তাহলে এ ধরণের প্রশ্নের উত্তর দেয়া প্রায় অসম্ভব। সুতরাং এই section এ ভাল mark পেতে হলে আপনাকে অবশ্যই Vocabulary তে দক্ষ হতে হবে।

তবে আরেকটি কথা বলে রাখা প্রয়োজন। IBA এর admission test এর প্রথম চারবছর ছাড়া পরের বছরগুলোতে যেসব Sentence completion questions এসেছে, সেগুলোর maximum ছিল familiar (পরিচিত) words দিয়ে তৈরী। তাই আমাদের পরামর্শ এই যে, guide এর সবচেয়ে important অংশগুলো পড়া শেষ করে এই section এ মনোযোগ দিন। এই সময়টুকুর মধ্যে আপনার Vocabulary ও improve করবে।

যাই হোক, আমরা এখন sentence completion question এর nature এবং solution procedure নিয়ে আলোচনা করব।

## Patterns of sentence development:

যখন আপনারা sentence completion question পড়বেন, first imagine the question stem as a paragraph. এরপর চিন্তা করুন কি technique অথবা method এই sentence এর thought develop করার জন্য use করা হয়েছে। এই technique/method identify করতে পারলে question answer করা অনেক সহজ হয়ে যাবে। বিভিন্ন technique/method/pattern নিচে আলোচনা করা হলো -

### 1) DEFINITION :

Definition question এ এক ধরণের restatement করা হয়, অর্থাৎ একটি word এবং ঐ word এর অর্থ একটি sentence এ থাকে। নিচের sentence -গুলোতে defined word টি parentheses

এর ভিতর এবং definition টি underline করা থাকবে। Completion question এ either defined word টি অথবা definition এর একটা part missing থাকবে।

i) An (artist) is a dreamer consenting to dream of the actual world.

ii) (amusement) is the happiness of those that cannot think.

iii) Poverty is an (enigma) to rich people; it is very difficult to make out why people who want dinner do not ring the bell.

## 2) EXEMPLIFICATION :

Examples can awaken our senses, focus our thoughts, and stir our feelings. এজন্যই লেখকরা উদাহরণকে (examples) abstract words এর অর্থ বোধগম্য করার জন্য ব্যবহার করেন। নিচের example গুলোতে কঠিন শব্দটি অথবা বিভিন্ন অর্থবোধক শব্দটি parentheses এ রাখা হয়েছে এবং examples গুলো underline করা হয়েছে।

i) The (needy and adventurous), the gambling speculator, the dreaming land robbed the thriftless tradesman, the merchant with crashed credit – everyone driven to raise money by desperate means hurried to Mr. Jafar.

ii) Any struggle against the abuse of language is thoughtful a sentimental (archaism like preferring candles to electric light or hansom cabs to airplanes.

এ ধরনের question এ সাধারণত parentheses এর ভিতরের word টা missing থাকে।

## 3) COMPARISON:

এ ধরনের sentence completion questions এ সাধারণত একটি শব্দের অর্থকে illustrated করে দেয়া হয়। এই illustration এর সাথে compare করা যায় এমন কোন word answer choices থেকে বেছে নিতে হয়। নিচের example গুলোতে comparison টা underline করা আছে। এবং missing word টা parentheses দেওয়া আছে।

i) She'd a way of (laughing), too no longer the girlish giggle he knew but, a bright and limpid thing, like clear water sliding over a fall.

ii) (fatigue) flowed over him like warm water.

## 4) CONTRAST :

Contrast can help us understand meaning or shades of meaning. It tells us what something is like by telling us what it is not. "Although", "but", "however" প্রভৃতি শব্দ contrast নির্দেশ করে। "not that ---- but this" ধরণের expressions ও contrast নির্দেশ করতে পারে। নিচের example গুলোতে first key word টি parentheses এর ভেতর এবং second word টি অর্থাৎ বিপরীত শব্দটি underline করা আছে। দুটোর যে কোন একটা missing থাকতে পারে।

i) The greatest crimes are caused by (surfeit), not by want: men do not become tyrants so as not to suffer cold.

ii) Life must be lived (forward), but can only be understood backward.

iii) Whenever a doctor can't do (good), he must be kept from doing bad.

5) **CAUSE AND EFFECT :**

Sentences developed by cause and effect are statements of reasoning or argument. এক্ষেত্রে author একটি conclusion এ আসার চেষ্টা করেন । Since, for, because, therefore, so, why, when ---- then প্রভৃতি cause and effect reasoning এর signal words. নিচের example গুলোতে cause থাকবে parentheses এর ভিতরে, effect থাকবে underlined.

i) Liberty means (responsibility). That is why must men fear it.

ii) A man way take to drink because (the feels himself to be a failure) and then fail all the more completely because (he drinks).

## Putting the Approach to Work:

On sentence completion questions, begin by reading the sentence carefully. As you read, fill in the blanks with your own words. Then look at the answers and search for one that means the same as yours. If you find a good answer, reread the sentence with its new "official" words. (Never test half an answer at a time. If a question sentence has two blanks, test both half of the answer at the same time). If you are satisfied with your sentence, go on to the next question. If you can't find a suitable answer on your first reading, follow this procedure.

1. Look for signal words and punctuation.
2. Look for patterns. Underline clues until you see how the sentence is developed – by definition by contrast? By cause and effect? By comparison? Search for an answer that fits the pattern.
3. Look for words that are especially reach in meaning. What ideas do they imply? What images do they suggest? Search for a matching answer.
4. Test each answer that still seems likely by reading it into the entire sentence.
5. If you still have no answer, but can eliminate one or more choices, you must guess.

## PRACTICE EXERCISE

1. Nonviolent demonstrations often create such tensions that a community that has constantly refused to -------its injustices is forced to correct them the injustices can no longer be --------
(A) acknowledge. . ignored (B) decrease . . verified (C) tolerate . . accepted
(D) indifference . . followers (E) explain . . discussed

2. Since 1813 reaction to Jane Austen's novels has oscillated between ------ and condescension; but in general later writers have esteemed her works more highly than did most -------- of her literary.
(A) dismissal . . admirers (B) adoration . . contemporaries (C) disapproval . . readers
(D) indifference . . followers (E) approbation . . precursors

3. there are, as yet, no vegetation types or ecosystems whose study has been -------- to the extent that they no longer ------- ecologists.
(A) perfected . . hinder (B) exhausted . . interest (C) prolonged . . require
(D) prevented . . challenge (E) delayed . . benefit

4. Under ethical guidelines recently adopted by the National Institutes of Health, human genes are to be manipulated only to correct diseases for which -------- treatments are unsatisfactory.
(A) similar (B) most (C) dangerous (D) uncommon (E) alternative

5. It was her view that the country's problems had been ------- by foreign technocrats, so that to invite them to come back would be counterproductive.
(A) foreseen (B) attacked (C) ascertained (D) exacerbated(E) analyzed

6. Winsor MCCay, the cartoonist, could draw with incredible -----
(A) sincerity (B) efficiency (C) virtuosity (D) rapidity (E) energy

7. e actual ------ of Wilson's position was always -------- by his refusal to compromise after having initially agreed to negotiate a settlement.
(A) outcome .. foreshadowed (B) logic . . enhanced (C) rigidity . . betrayed
(D) uncertainty . . alleviated (E) cowardice . . highlighted

8. The senator's reputation, though ------- by false allegations of misconduct, emerged from the ----- ordeal.
(A) shaken . . unscathed (B) destroyed . . intact (C) damaged . . impaired
(D) impugned. . unclear (E) tarnished . . sullied

9. This poetry is not ------ it is more likely to appeal to an international audience than is poetry with strictly regional themes.
(A) familiar (B) democratic (C) technical (D) complex (E) provincial

10. Experienced employers recognize that business students who can ------ different points of view are ultimately more effective as managers than are the brilliant and original students who ---- dogmatically to their own formulations.
(A) discredit .. revert (B) assimilate . . adhere (C) impose . . refer
(D) disregard . . incline (E) advocate . . relate

11. Poe's ------ reviews of contemporary fiction, which often find great merit in otherwise ----- literary gems, must make us respect his critical judgment in addition to his well-known literary talent.
(A) thorough . . completed (B) petulant .. unpopular (C) insightful .. unappreciated
(D) enthusiastic . . acclaimed (E) harsh . . undeserving

12. The significance of the Magna Carta lies not in its ------ provisions, but in its broader impact: it made the king subject to the law.
(A) specific (B) revolutionary (C) implicit (D) controversial (E) finite

13. The theory of cosmic evolution states that the universe, having begun in a state of simplicity and -----, has ---------- into great variety.
(A) equilibrium .. modulated (B) homogeneity .. differentiated
(C) contrast . . metamorphosed (D) proportion . . accelerated
(E) intelligibility . . developed

14. Not wishing to appear --------, the junior member of the research group refrained from ------- any criticism of the senior members plan for dividing up responsibility for the entire project.
(A) reluctant . . evaluating (B) inquisitive . . offering
(C) presumptuous . . venturing (D) censorious .. undercutting
(E) moralistic . . observing

15. In the British theater young people under thirty-five have not had much ----- getting recognition onstage, but of offstage - in the ranks of playwrights directors, designers, administrators - they have mostly been relegated to relative obscurity.
(A) trouble (B) satisfaction (C) curiosity about (D) success at (E) fear of

16. An institution concerned about its reputation is at the mercy of the actions of its members, because the misdeeds of individuals are often used to ------- the institutions of which they are a part.
(A) reform (B) coerce (C) honor (D) discredit (E) intimidate

17. Since many casual smokers develop lung cancer and many ------- smokers do not, scientists believe that individuals differ in their ------ the cancer-causing agents known to be present in cigarette smoke.
(A) heavy .. susceptibility to (B) chronic .. concern about (C) habitual .. proximity to
(D) devoted . . reliance upon (E) regular .. exposure to

18. We accepted the theory that as people become more independent of one another, they begin to feel so isolated and lonely that freedom becomes ------ condition that most will seek to ---------.
(A) a permanent .. postpone (B) a common .. enter (C) a negative . . escape
(D) a political .. impose (E) an irreparable .. avoid

19. If animal parents were judged by human standards, the cuckoo would be one of nature's more ------- creatures, blithely laying its eggs in the nests of other birds, and leaving the incubating and nurturing to them.
(A) mettlesome (B) lackluster (C) industrious (D) domestic (E) feckless

20. The current penchant for ----- a product by denigrating a rival, named in the advertisement by brand name, seems somewhat -------: suppose the consumer remembers only the rival's name?
(A) criticizing .. inefficient (B) touting .. foolhardy (C) enhancing .. insipid
(D) evaluating .. cumbersome (E) flaunting .. gullible

## ANSWER KEY

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. A | 2. B | 3. B | 4. E | 5. D | 6.C | 7. C | 8. A | 9.E | 10. B |
| 11. C | 12. A | 13. B | 14. D | 15. A | 16. D | 17. A | 18. C | 19. E | 20. A |

# CORRECT USAGE OF WORDS

IBA admission test e Language and Communication section e newly included part হচ্ছে finding out the correct usage of a certain word. যেহেতু IBA admission test এর definite কোনো syllabus নেই, so e ধরণের new sections include করার possibility অনেক বেশি।

GB section টির মাধ্যমে mainly candidate দের basic knowledge and vocabulary evaluate করা হয়। এ ধরণের question solve করতে হলে কয়েটি বিষয়ের উপর ভাল দখল রাখা উচিৎ।
যেমন

- Parts of speech
- Meaning of words
- Usage of prefix and suffix
- Secondary meaning (if there is any)

Let us proceed with an example.
(i) I do believe my idea was well accepted since it was seconded by the chairperson.
(ii) She was ranked second : her performance was absolutely unparalleled.
(iii) The competition was at its peak as only a few seconds remained.

We need to find out which one or more of the given sentences in this set, the underlined word is being used correctly. The Basic Approach: The first step of solving this problem is to find the base word. এখানে main word টা হচ্ছে "second". Next, find out the meaning of the word used. What is the meaning of the word "second"? second means - A rank - A unit to measure time এখন আমাদের খেয়াল রাখতে হবে যে, কিছু কিছু word এর secondary meaning (dual) ও থাকতে পারে। যেমন এ ক্ষেত্রে second এর আরেকটি meaning হলো একমত প্রোষণ করা। যেটি sentence (i) তে use হচ্ছে। (ii) number G second rank হিসেবে এবং (iii) এ time হিসেবে বুঝানো হচ্ছে। Secondary meaning এর আরোকটি example হচ্ছে

1. The monitor has excellent *resolution*. (the act of finding an answer or solution to a conflict, problem, etc. : the act of resolving something)
2. We found a *resolution* to the dispute. (an answer or solution to something)
3. I made a resolution to mend my ways. (the ability of a device to show an image clearly and with a lot of detail)

Finally, look out for incorrectly put prefix/suffix. অনেক সময় দেখা যায় যে meaning হিসেবে sentence ঠিক আছে, কিন্তু ভুল prefix/suffix use করার কারণে word টি ভুল। এ ধরণের ভুল গুলো খেয়াল রাখতে হবে। একে ভুল parts of speech এর ক্ষেত্রে হতে পারে। For instance, "Advice" or "advise"? "Farther" or "further"? "Principal" or "principle"? It's easy to confuse words that are similar in sound, spelling, or meaning. Make sure that you know these words very well.

TIPS:
এই ধরণের question গুলো practice করার field comparatively কম। তবে SAT এর study of word root parts পরে নিলে কিছুটা সুবিধা হতে পারে। এর একটি সুবিধা হচ্ছে, given sentence এর সবগুলো না জানলেও (একটা/দুইটা sure হলেও) answer choice দেখে আপনি অনেক সমসয়ই predict করতে পারবেন process of elimination method এ।

1. Word: **Predicament**
   i) Not paying the taxes has put us in a grave predicament.
   ii) It is difficult for an affluent man to understand the predicaments of the poor.
   iii) The predicament that the soldier was in compelled him to open fire.
   A) i only B) both i and ii C) both i and iii D) both ii and iii E) all three sentences

2. Word: **Ostentatious**
   i) Your ostentatious display of wealth put off a lot of people.
   ii) His ostentatious remarks hurt the feelings of his family.
   iii) Our luxurious ostentatious car was turning heads throughout the city.
   A) i only B) both i and ii C) both i and iii D) both ii and iii E) all three sentences

3. Word: **Coherence**
   i) The supporting details in his argument lacked coherence.
   ii) The lack of coherence in her attitude was bothering a lot of people.
   iii) There was no coherence in the group, as a result they disbanded.
   A) i only B) both i and ii C) both i and iii D) both ii and iii E) all three sentences
4. Word: **Scepticism**
   i) The president's promises were met with scepticism by the press.
   ii) Scepticism from the masses did not deter the spirit of the ghost hunters.
   iii) His scepticism was soon converted to faith.
   A) i only B) both i and ii C) both i and iii D) both ii and iii E) all three sentences
5. Word: **Deranged**
   i) Your performance in the soccer match was very deranged.
   ii) The car was deranged following a head on collision with a truck.
   iii) The curriculum was too deranged for the students to cope with.
   A) i only B) both i and ii C) both i and iii
   D) both ii and iii E) none of the three sentences
6. Word: **Juxtapose**
   i) The American flag has the stripes juxtaposed alongside a sea of stars.
   ii) Picasso commonly has different viewpoints of the same figure juxtaposed together
   iii) Juxtaposition is the bane of my existence; if only I could get things done on time!
   A) i only B) both i and ii C) both i and iii D) both ii and iii E) all three sentences
7. Word: **Ephemeral**
   i) WWE Monday Night Raw, being the longest running episodic weekly television show, is considered ephemeral.
   ii) Compared to the Earth's life span our life span is merely ephemeral.
   iii) A eureka moment, although ephemeral, was all I needed to get my mojo back.
   A) i only B) both i and ii C) both i and iii D) both ii and iii E) all three sentences
8. Word: **Masochism**
   i) How can you call yourself a masochist? Do you not have any self-respect?
   ii) The fifty shades of Grey is basically the love life of a sadist and a masochist.
   iii) Jane is so kind and generous, always helping others. He is the perfect example of masochism.
   A) i only B) both i and ii C) both i and iii D) both ii and iii E) all three sentences
9. Word: **Lethargy**
   i) The summer vacation has made me lethargic. I can't seem to get any work done on time now.
   ii) Mostafa has been awarded the most active employee of the month for being so lethargic.
   iii) Raihan abhors lethargy and so he runs every morning. Consequently, he is the fastest runner in our class.
   A) i only B) both i and ii C) both i and iii D) both ii and iii E) all three sentences
10. Word: **Ubiquity**
    i) Almost every religion dictates that God is ubiquitous.
    ii) Akib always absent in class, so the class teacher labelled him as ubiquitous.
    iii) Ubiquity and Sifat go hand in hand. I don't even remember the last time I saw him.
    A) i only B) both i and ii C) both i and iii D) both ii and iii E) all three sentences

11. i) I would love to go on a round-the-world cruise
    ii) They cruised down the Padma
    iii) Bangladesh cruised to victory against England
    A. i  B. ii  C. i and ii  D. i and iii  E. i,ii, iii
12. i) He is glowing brightly
    ii) He gave her a warm glowing smile
    iii) When my mom looked at me, she felt a glow of pride
    A. i  B. ii  C. iii  D. ii and iii  E. i,ii,iii
13. i) My father's hair is greying at both sides
    ii) Life seems gray without your presence.
    iii) Bangladesh has huge greying workforce.
    A. i  B. ii  C. iii  D. i and iii  E. i,ii, iii
14. i) His clothes lay in a heap on the floor
    ii) Rocks were heaped up on the other side of the road
    iii) I heaped up on his house
    A. i  B. iii  C. ii  D. i and ii  E. None of the above
15. i) Troops patrolled the area day and night
    ii) We patrolled all the dusts
    iii) Security guards make regular patrol day and night.
    A. i and ii  B. i  C. ii  D i and iii  E. None of the above
16. i) The soap and water formed a lot of lather
    ii)The soap and water lathered
    iii) She was in a lather when she couldn't find her tickets
    A. i  B. ii  C. iii  D. i and ii  E. i, ii and iii
17. i) Each student must demonstrate mastery on the subject in order to pass.
    ii) the latest test result clearly demonstrates that the vaccine works
    iii) Would you mind demonstrating how this thing works?
    A. i,ii,iii  B. i and ii  C. i and iii  D. ii  E. i and ii
18. i) The girls were duped by the smugglers into carrying drugs for them
    ii) You are an innocent dupe
    iii) He was a vicious duper
    A. i  B. ii  C. iii  D. i and ii  E. none of the above
19. i) She was furious with rage.
    ii) His fury was clearly expressed.
    iii) The girl behaved rudely out of fury.
    A. i  B. ii  C. iii  D. i,ii and iii  E. i and ii
20. i) I made an incorrigible mistake
    ii) You're such an incorrigible prick!
    iii) She expressed incorrigible grief
    A. i and ii  B. i,ii,iii  C. i  D. iii  E. none of the above

## ANSWER KEY

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1.E | 2.A | 3.C | 4.E | 5.E | 6.B | 7.D | 8.B | 9.C | 10.A |
| 11.E | 12.D | 13.E | 14.D | 15.E | 16.E | 17.A | 18.D | 19.D | 20.A |

## Re-arrange of Sentences

The task of rearranging the jumbled sentences into a meaningful paragraph is both challenging as well as time consuming, since it is difficult to find the first and last sentence of a subsequent paragraph. The best approach to solve this also relies heavily on the technique to first find out the first and last sentence of the subsequent resulting paragraph. We will develop the following approach to find the way to solve this.

- Firstly, we must read the jumbled sentences to get us acquainted for the central theme or purpose for writing the paragraph.
- We try to figure out the second sentence of the subsequent paragraph, our initial reading will help us to find out this particular sentence.
- After finding the second sentence, the intermediate sentences must have narrative prepositions and conjunctions and follow the second sentence in a meaningful way.
- The last sentence must be the conciliatory one, to provide the substance to the resultant paragraph.

For example, নিচে প্রথম এবং শেষ sentence টি দেওয়া থাকবে, আপনাকে মাঝখানের 4 টি sentence re arrange করতে হবে।

S1. There are two tribes in the Andes-one lived in the valley and the other high up in the mountains. (first sentence)
S2. "We couldn't climb the mountain. How could you?", they asked. "It wasn't your baby!" she replied.
এখন নিচের 4 টি sentence এলোমেলো ভাবে দেওয়া আছে।
P. The able bodied men of the tribe gathered to discuss how to climb the mountain.
Q. As part of their plundering they kidnapped a baby od one of the families.
R. One day the mountain tribe invaded those living in the valley.
S. Two days later they notice the child's mother coming down the mountain that they hadn't yet figured out how to climb.

প্রথমে আমাদের উপরের story এর meaning বুঝতে হবে। We can see it's a story. R হবে second sentence following S1. এর, পরে consequence হিসেবে আসবে Q. যেহেতু আমরা last sentence এ দেখতে পাচ্ছি there is a dialogue from the mother, অবশ্যই এর আগে mother কে mention করতে হবে। Hence, last এর আগে sentence হবে S. এবং এর আগে আসবে P. So, the correct sequence is RQPS.

In the questions below, each passage consists of six sentences. The first and sixth sentences are given in the beginning as (S1) and (S2) respectively. The middle four sentences of each passage have been removed and jumbled up. These are labeled as P, Q, R and S. Find out the proper order for the questions:

1. S1: Thomas Edison was born February 11, 1847 in Milan, Ohio
S6: In 1870, Edison moved to New York City and improved the stock ticker.
P. At age 11, Edison moved to Michigan where he spent the remainder of his childhood.
Q. Soon, he decided to become an inventor.
R. He was nicknamed "Al" at an early age.
S. Edison often entertained himself by taking things apart to see how they worked.
A. QSRP B. RPSQ C. RQPS D. PQSR E. PRSQ

2. S1: The first shots of the Civil War were fired April 12, 1861 at Fort Sumter, South Carolina.
S6: The battle that ensued was one of the bloodiest battles in American history.
P. Neither the Union nor the Confederacy had the upper hand.

Q. Although there we no deaths reported that day, the shots at Fort Sumter signified the start of a long, bloody war that would become the most deadly in the history of the United States.
R. The turning point in the war, however, occurred on July 1, 1863, when Confederate and Union armies met at Gettysburg, Pennsylvania.
S. Many major battles such as Bull Run I and II, Antietam and Shiloh, among others, claimed tens of thousands of lives on both sides in 1861 and 1862.
A. QSRP B. RPSQ C. RQPS D. QSPR E. PSQR

3. S1: Bill Gates became interested in computer programming when he was 13, during the era of giant mainframe computers.
S6: At age 17, Gates and Allen were paid $20,000 for a program called Traf-O-Data that was used to count traffic.
P. Using this time, Gates wrote a tic-tac-toe program using BASIC, one of the first computer languages.
Q. Bill met Paul Allen, who shared his interest in computers.
R. His school held a fund-raiser to purchase a teletype terminal so students could use computer time that was donated by General Electric.
S. Later he created a computer version of Risk, a board game he liked in which the goal is world domination.
A. QSRP B. RPSQ C. RQPS D. QSPR E. PSQR

4. S1: To this day there are many theories concerning the disappearance of Amelia Earhart.
S6: Nevertheless, she remains a hero and inspiration to millions across the world today.
P. The world will probably never know what happened to Amelia Earhart.
Q. Some say her plane crashed in the ocean and she drowned.
R. Still others believe Amelia made an anonymous return to the states and lived as a housewife in New Jersey.
S. Others say her plane crashed but she was taken prisoner by the Japanese, who occupied many of the Pacific islands.
A. QSRP B. RPSQ C. RQPS D. QSPR E. PSQR

5. S1: In 2009, Bieber's debut album, My World, was released to the public and "One Time" became his first song played on international radio stations.
S6: Fans of Justin Bieber are referred to as "Beliebers."
P. That same year, Justin performed on popular television shows such as Good Morning America and Today.
Q. Bieber soon gained millions of followers on social media networks such as Twitter.
R. As of 2013, Bieber had over 45 million Twitter followers, more than any other person, and had penned over 23,000 tweets.
S. By this time, Bieber was well known as a teenage "heart-throb" with his streetwise style including backwards hat, hoodies, dog chains, and colorful sneakers.
A. QSRP B. RPSQ C. RQPS D. QSPR E. PSQR

6. S1: The Tyrannosaurus Rex, also known as T-Rex, was one of the largest land predators to have ever lived.
S6: It was sold to a museum for $8 million dollars, the highest amount ever paid for dinosaur fossils.
P. Some of these teeth could grow to be almost a foot long.
Q. The Tyrannosaurus Rex was a fearsome predator with strong jaws and up to 60 teeth.
R. The T-rex could grow to 40 feet in length and could stand 13 feet tall at the hips.
S. In 1990, a fossil hunter found the most complete skeleton of a Tyrannosaurus Rex ever found!
A. QSRP B. RPSQ C. RQPS D. QSPR E. PSQR

7. S1: A hurricane, also called a tropical cyclone, is the most powerful storm that forms on Earth.
S6: The clouds on the edge of the eye form the eye wall of the hurricane, which typically feature the hurricane's strongest winds, highest clouds, and fiercest precipitation.
P. In the center of a powerful hurricane (called the eye), air may sink rather than rise, which suppresses cloud formation, leading to calm skies and wind.
Q. As it grows in size and intensity, its powerful winds begin rotating around a center like water going down a drain.
R. A hurricane forms over warm ocean water.
S. The eye of a hurricane can be up to 240 miles in diameter, but is normally between 20 and 40 miles in diameter.
A. QSRP B. RPSQ C. RQPS D. QSPR E. PSQR

8. S1: The Emperor Penguin is the world's largest and tallest penguin.
S6: Estimates indicate about 200,000 breeding pairs.
P. Populations of Emperor Penguins are thought to be stable.
Q. It is also the heaviest penguin, with some individuals recorded at nearly 100 pounds.
R. The underparts are dingy white.
S. Adults have a black head, back, tail, and black wings.
A. QSRP B. RPSQ C. RQPS D. QSPR E. PSQR

9. S1: Spiders are not insects!
S6: In fact, a fear of spiders has its own name: Arachnophobia.
P. They are actually arachnids - invertebrates (animals without backbones) that have eight legs and which inject venom.
Q. There are over 44,000 known kinds of spiders.
R. Many people fear spiders.
S. Spiders are found on every continent except Antarctica.
A. QSRP B. RPSQ C. RQPS D. QSPR E. PSQR

10. S1: Despite the fear of Great White Sharks, at least in part generated by Steven Spielberg's 1975 movie, Jaws, Great White Sharks do not target humans as prey.
S6: While such bites do little damage to buoys and other objects, they obviously can inflict serious damage on the human body.
P. Many human injuries caused by Great White Sharks are cases of test-biting.
Q. Most attacks are attributed to mistaken identity.
R. If a shark is unsure about a floating object, it often gives it a test bite to determine what kind of object it is.
S. Sharks can easily mistake humans for seals.
A. QSRP B. RPSQ C. RQPS D. QSPR E. PSQR

11. S1 **Taiko** drums, a broad range of Japanese instruments,
S6 The other tribes are finding this amusing as well.
P. were introduced to Japan through Korean and Chinese cultural influence.
Q. They have seen use in Japan for communication, theatre, religious ceremonies, and festival and concert performances.
R. a mythological origin is mentioned in the Nihon Shoki, the second oldest book of Japanese classical history.
S. This is now used by many tribes throughout the world.
A. PQRS B. PRQS C.PRSQ D. QPRS

12. S1: How can we define biography?
S6: Legacy writing is a popular form too.
P. One in-depth form of biographical coverage is called legacy writing.
Q. A It is a detailed description or account of someone's life.
R. Biographical works are usually non-fiction, but fiction can also be used to portray a person's life.

S. Unlike a profile or CV, a biography presents a subject's life story, highlighting various aspects of his or her life

A. QSPR B. SQRP C. QSRP D. PSQR

13. S1: Mars is probably the most discussed planet.
S6: Surely mythology had great influence while naming the planet.
P. It is the fourth planet from thesunin our solar system.
Q. The prefix *areo-* refers to Mars in the same way *geo-* refers to Earth.
R. It is named after the Roman God of war Ares because of its apparent red color.
S. This feature has also earned it the nickname "The Red Planet".
A. RSQ B. PQRS C. QSRP D. PSQR

14. S1: Gravity is undoubtedly the most fascinating force discovered ever.
S6: However, this law is not accurate for all the applications.
P. Particularly when dealing with weak gravitational fields
Q. His law of universal gravitation was the standard theory of gravity until work by Albert Einstein and others on general relativity.
R. Since calculations in general relativity are complicated, and Newtonian gravity is sufficiently accurate for most applications
S. The first mathematical formulation of gravity was published in 1687 by Sir Issac Newton.
A. RPQ B. QSPR C.PQSR D. SQRP

15. S1: The domestic cat is a small carnivorous mammal
S6: No wonder we humans adore them so much.
P. which is known to hunt over 1,000 species for food, and intelligent enough that it can be trained (and can learn by itself) to obey simple commands and manipulate simple mechanisms.
Q. which is descended from the African wildcat.
R. The cat is a skilled predator and intelligent animal
S. It has lived in close association with humans for at least 9,500 years
A. PQRS B.QRPS C, RSQP D.PRSQ

## ANSWER KEY

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1.B | 2.C | 3.A | 4.D | 5.B | 6.B | 7.D | 8.B | 9.A | 10.E |
| 11.C | 12.C | 13.A | 14.E | 15.D | | | | | |

## ০ GRAMMAR

IBA ভর্তি পরীক্ষায় Language and Communication section এর সবচেয়ে important part হচ্ছে grammatical problem. এই অংশে কয়েকটি specific pattern follow করা হয়ে থাকে। তবে grammar বলতে অবশ্যই voice change বা narration বা transformation বোঝায় না।

IBA এর ভর্তি পরীক্ষায় সাধারণত students দের basic knowledge পরীক্ষা করা হয়।

সবচেয়ে বেশি প্রাধান্য পায় correct usage (সঠিক ব্যবহার)। কোন শব্দের ব্যবহার কোন sentence -এ সঠিক অথবা কোন preposition, conjunction etc.

কোন জায়গা বসা উচিত এধরণের বিষয়ের উপর questions করা হয়। Fill in the gaps, sentence correction, error detection প্রভৃতি এ section এর common types of questions.

এই review section -এ আমরা প্রতিটি section এর example এবং exercise সহ একটি common guideline students দের জন্য provide করেছি। এই guideline -এ প্রদত্ত rules গুলি ঠিকমত follow করতে পারলে grammar questions গুলো সহজেই solve করা যাবে। ইদানীংকার IBA question এ fill in the gaps question এর প্রাধান্য লক্ষ্য করা যাচ্ছে যেগুলো সাধারণত correct English usage এর উপর করা হয়।

Now, let's start with some sample questions from the real test.

**IBA admission test '08-'09** এর একটি error detection question ছিল নিম্নরূপ ঃ

It is far rewarding to strive and fail than to success without trying. No error.
A B C D E

এই sentence টিতে Success এর পরিবর্তে Succeed হবে কারণ এখানে to strive এর parallel to Succeed ব্যবহার করতে হবে। তাই answer হবে (D)

**IBA admission Test '05-'06** এর একটি error detection question দেখা যাক

Admittance for the inauguration ceremonies was only by special invitation of the committee.
A B C D
No Error.
E

এই sentence টিতে 'admittance' এর পরিবর্তে 'admission' হবে। এক্ষেত্রে answer choice (A).

IBA ভর্তি পরীক্ষার কোন নির্দিষ্ট syllabus নেই। তাই নতুন কোন section include করলে অবাক হওয়ার কিছু নেই। নিচের example টি লক্ষ্য করুন।

She not only was competent but also friendly.

আপনাকে বের করতে হবে এই underlined অংশটি আদৌ ভূল কিনা এবং ভূল হলে সঠিক expression কি হবে।

Answer choice গুলো নিচে দেওয়া হলো ঃ

A) not lonely was competent but also friendly.
B) was not only competent but friendly also.
C) not only was competent but friendly also.
D) was not only competent but also friendly.
E) not was onl competent but also friendly.

Choice (A) তে question কে হুবুহু repeat করা হয় অর্থাৎ কোন ভূল না থাকলে answer হবে (A). এখন খেয়াল করুন, এক্ষেত্রে mistake টা কিন্তু শুরুতেই। 'Not only was competent' এর জায়গায় 'was not only competent' হবে।

Answer choice (B) তে এ অংশটুকু ঠিকভাবে দেয়া আছে।

কিন্তু এটা আসলে একটা trap. (B) তে original sentence এর ভূলটা correction করা হয়েছে ঠিকই, কিন্তু original sentence এর আরেকটা সঠিক অংশকে আবার ভুলভাবে express

করা হয়েছে। এখানে 'but also friendly' কে 'but friendly also' করে দেয়া হয়েছে। সুতরাং be careful. সঠিক answer হবে (D).

Appropriate usage সংক্রান্ত **BBA admission test '09-'10** এর একটি question observe করা যাক -

Identify the sentence(s) that is/are showing the correct use of underlined words:

(i) The auctioneer was describing the antique in his hand to induce the audience to bid for it.
(ii) Some of the things he inherited can actually be called antiques!
(iii)It was absurd how they antiquated the chosen items to increase their value.

A) Both (i) and (ii)
B) Both (i) and (iii)
C) Both (ii) and (iii)
D) (i) only
E) All three sentences

এখানে (i) এবং (ii) sentence গুলো grammatically correct. (iii) তে antiquated – word টি verb হিসাবে use হয়েছে। কিন্তু শব্দটি adjective. Answer: (A)

আমরা এই Section এ common mistakes গুলো নিয়ে কিছু আলোচনা করব এবং এর পরপরই থাকবে Basic rules নামক একটি অংশ। পরের অংশটিতে বেশকিছু rules এবং সেগুলোর example থাকবে।
এই rules গুলো ঠিকমত বুঝতে পারলে grammatical questions solve করা খুবই সহজ হয়ে যাবে।

**Some Basic Concepts:**

- A noun is a word used to name a person, place, thing, or idea.
- A verb is a word that expresses action.
- An adverb is a word that modifies the verb, an adjective or another adverb.
- An adjective is a word that modifies a noun.
- A preposition is a word that notes the relation of a noun to an action or a thing.
- A phrase is a group of words acting as a single part of speech. A phrase is missing either a subject or a verb or both.
- A prepositional phrase is a group of words beginning with a preposition. Like any phrase a prepositional phrase does not contain both a subject and a verb.
- A pronoun is a word that takes the place of a noun.
- A clause is a group of words containing a subject and a verb.

## THE FOUR MAJOR ERRORS

1. **PRONOUN ERRORS :** দুই ধরণের pronoun error basically দেখা যায়।

The first one is called **pronoun reference.**

Shudipta and Farah went shopping, but she couldn't find anything she like.

এই sentence -এ 'she' pronoun টি ambiguous (দ্ব্যর্থবোধক) এটি Shudipta ও Farah দু'জনের যেকোন একজন কে refer করতে পারে। সুতরাং Sentence টি লেখা উচিত এভাবে

Shudipta and Farah went shopping, but Shudipta couldn't find anything she liked.

অথবা

Shudipta and Farah went shopping, but Farah couldn't find anything she liked.

অথবা

Shudipta and Farah went shopping, but they couldn't find anything they liked.

The second type of error is called **pronoun case**.
Here is a simple example:
The average male moviegoer expects to see at least one scene of violence per film, and they are seldom disappointed.

এক্ষেত্রে, 'they' pronoun টি অবধারিতভাবে average male moviegoer কে refer করছে, so there is no ambiguity of reference. However, "The average male moviegoer" is singular. "They" cannot be used to take the place of a singular noun. একমাত্র একটা উপায়েই এই error টি correction করা যায়:

The average male moviegoer expects to see at least one scene of violence per film, and ***he*** is seldom disappointed.

**HOW DO YOU SPOT A PRONOUN ERROR**

That's easy, look for pronouns. Here's list of common pronouns. (You don't need to memorize these, just be able to recognize them).

| Singular | Plural | Can be singular or plural |
|---|---|---|
| I, me | me, us | none |
| he, him | they, them | any |
| she, her | both | you |
| you | some | who |
| it | these | which |
| each | those | what |
| another | that | theirs |
| either | | |
| neither | | |
| one | | |
| other | | |
| such | | |
| mine | | |
| yours | | |
| his, hers | | |
| ours | | |
| this | | |
| that | | |

Every single time you spot a pronoun, you should immediately ask yourself the following two questions :

- Is it completely clear, not just to me but to a pedantic test-writer, **who** or **what** the pronoun is referring to?
- Does the pronoun agree in number with the noun it is referring to?

If any of the answers is **no**, you've spotted the error.

2. **MISPLACED MODIFIERS :** Let's take the following example :
Coming out of the department store, John's wallet was stolen.

যখন participial phrase (a phrase that starts with a verb ending in 'ing') দিয়ে কোন sentence শুরু হয়, সেই phrase টার কাজ হচ্ছে যে noun অথবা pronoun phrase টিকে immediately follow করেছে তাকে modify করা।

Was the 'wallet' coming out of the department store? No.
দুইভাবে sentence টিকে ঠিক করা যায়।
First, আমরা sentence টির second half এভাবে change করতে পারি,
Coming out of the department store, John was robbed of his wallet.
এখন sentence টি সঠিক, কারণ participial phrase টি noun John কে modify করেছে।
অথবা, আমরা sentence টির first half কে change করতে পারি-
As John was coming out of the Department store, his wallet was stolen.

**OTHER FORMS OF MISPLACED MODIFIERS:**

**A) Participial phrases preceded by a preposition :**
On leaving the department store, John's wallet was stolen.
(Correct: On leaving the department store, John was robbed of his wallet.)

**B) Adjectives :**
Frail and weak, the heavy wagon could not be budged by the old horse.
(Correct: Frail and weak, the old horse could not budge the heavy wagon.)

**C) Adjective phrases :**
An organization long devoted to the cause of justice, the mayor awarded a medal to the American civil Liberties Union.
(Correct: An organization long devoted to the cause of justice, the American civil liberties union was awarded a medal by the mayor.)

In each of these examples, the modifying phrase modified the wrong noun or pronoun.

**HOW DO YOU SPOT A MISPLACED MODIFIER**

That's also easy. Whenever a sentence begins with a modifying phrase followed by a comma, the noun or pronoun right after the comma should be what the phrase is talking about. Every single time you see a sentence that begins with a modifying phrase, check to make sure it modifies the right noun or pronoun. If it doesn't, you've spotted the error in the sentence.

**3. PARALLEL CONSTRUCTION:** দুই ধরণের parallel construction problems হতে পারে। The first is a sentence that lists there things, or has a series of actions set off from one another by commas, for example,

The film was **exciting, interesting**, and *it was made well.*
উপরের Sentence এ main verb হচ্ছে was. এই was verb টি sentence এর adjective গুলোকে Control করছে। কিন্তু it was made well একটি clause যেটিকে main verb control করছে না। সুতরাং এই clause কে change করে adjective বানাতে হবে।

The Cinema was exciting, interesting and **well-made**.
এখানে নিয়মটা হচ্ছে - when a main verb controls several parts of a sentence that follow it, each of those parts has to be set up in the same way.

The second kind of problem regarding parallel construction is a sentence that is divided into two parts. নিচের example টি লক্ষ্য করুন -

To say that the song patterns of the common robin are less complex than those of the indigo bunting is doing a great disservice to both birds.

Sentence এর প্রথম অংশটি যদি একটি particular way তে construct করা হয়, তাহলে দ্বিতীয় অংশটিও সেইভাবে construct করতে হবে। প্রথম অংশটি শুরু হয়েছে এভাবে To ----, সুতরাং দ্বিতীয় অংশটিও এভাবে শুরু হওয়া উচিত।

To say that the song patterns of the common robin are less complete than those of the indigo bunting is **to do** a great disservice to both birds.

**HOW DO YOU SPOT PARALLEL CONSTRUCTION**

Every time you read a sentence correction or error detection problem, look to see if you can find a series of actions, a list of three things, or a sentence that is divided into two parts. If you find any of these, you've spotted the problem. Now check whether the series of actions/the three sentences are constructed in a parallel way. If not, you've found the error.

4. **IDIOMS:** Idiomatic expression এর problem অত্যন্ত common একটি problem.
Here's an easy example:
There is little doubt that the larger corporations are indebted **for** the small companies that broke new ground in laser optics.

Idiomatic expressions এর সবচেয়ে বড় সমস্যা হচ্ছে যে এর জন্য কোন specific rule নেই। Each idiom has its own particular usage. There is no real reason why an idiomatic expression is correct. It is simply a matter of custom. উপরের sentence এর ক্ষেত্রে যেমন 'indebted for' এই expression টি correct নয়। এখানে 'indebted to' হবে -

There is little doubt that the larger corporations are indebted **to** the small companies that broke new ground in laser optics.

**HOW DO YOU SPOT IDIOMATIC ERRORS**

If you've gone through the first three items on your checklist – pronouns, misplaced modifiers, and parallel construction – and still haven't found an error, try pulling idiomatic expressions out of the sentence so you can see whether they're correct. Then make up your own sentence using the suspect idiom. Does the idiom sound correct? If not, you've spotted the error.
প্রথমেই বলেছি এই চার ধরণের error হচ্ছে major errors. আরও অনেক ধরণের error থাকতে পারে।সেগুলোর উপর বেশ কিছু rules আমরা দিয়েছি। Example সহ এসব rules গুলো পড়ে পড়ে বোঝার চেষ্টা করুন। বুঝতে না পারলে elaborate explanation এর জন্য Cliffs TOEFL বা Raymond Murphy র grammar বই consult করুন।
এই বইয়ের grammar অংশকে আরো দুটি ভাগে ভাগ করা হয়েছে।

**(1) Basic Knowledge on English Grammar;**

**(2) Review of Grammatical Structures.**

Try to go through these sections one by one.

# BASIC KNOWLEDGE ON ENGLISH GRAMMAR

## Basic Sentence Structure

When you write an English sentence, you must remember three basic things. Subject, verb, and compliment are the essential parts of any correct sentence without which the sentence makes no sense. You may, however, sometimes come across sentences without any compliment. Nevertheless, subject and verb can never be dropped out of any correct English sentence.

| She | visits | the zoo | everyday. |
|---|---|---|---|
| Subject | Verb | Complement | modifier |

| Rahman | is | studying. |
|---|---|---|
| Subject | Verb | Complement |

## Parts of Speech

The words that we use in a sentence are called parts of speech. There are eight types of parts of speech; that means English words can be classified into eight types.

**Noun**
**Pronoun**
**Verb**
**Adjective**
**Adverb**
**Preposition**
**Conjunction**
**Interjection**

***Nouns*** are the names of persons, objects, places, or anything else. A noun can be either Count or Non-count. Count nouns are measured in numbers. They can take singular or plural form. Non-count nouns are measured in quantities. They always take a singular form. The English language module of Mentors' has a detailed discussion on this.

***Pronouns*** are used to substitute the nouns. A pronoun performs the functions as noun. Pronouns can be subject or object, relative, reflexive, emphatic, and possessive. There is a basic difference between possessive pronoun and possessive adjective. When you say "This is **my** pen", you are using a possessive adjective. You are using a possessive pronoun when you say, "This pen is **mine**." See the English language module of Mentors' for detailed discussion on pronouns.

***Verbs*** are action words. They are driving forces of any sentence. Verbs can take present, past, or participle form. You have to change the form your verb according to the subject and tense of your sentence. Main verbs in an independent sentence are called finite verbs. Main verbs in a dependent sentence are called infinite verbs. There are, of course, auxiliary and principal verbs. Auxiliary verbs don't express the actual action; they are used to express the tense of the sentence.

***Adjectives*** are words that describe or qualify other words. Suppose you are praising your girlfriend saying that she is **pretty**, or your teacher scolds you by saying that you are **lazy**. In both cases, we are using adjectives. Please remember that adjectives qualify **only nouns** and **pronouns.**

On the other hand, ***adverbs*** qualify the other parts of speech. It describes adjectives, verbs, and even adverbs. In most cases, we get an adverb by just adding "ly" or "ally" at the end of an adjective. He is an **efficient** player. He plays **efficiently**. Here, **efficient** is the adjective because it qualifies **He**; whereas, **efficiently** is the adverb since it describes **plays**.

***Prepositions*** are short words that express the relationship between two parts of speech. Suppose, you see a book lying **on** the table; how do you relate the words table and book? The preposition **on** helps you do that. You have bought a gift **for** your sister. The preposition **for** helps establish a link between the book and sister.

***Conjunctions*** are words used to connect two independent clauses or items in a series. Rahman is a brilliant student **and** he is regular at his studies. Here, **and** is the conjunction. The best batsmen in today's cricket include Tendulkar, Dravid, Lara, Ponting, and Kallis. We have used **and** to connect the last item with the rest of the group.

***Interjections*** are simple translations of Bangla words like hai-hai, o-ma, yahoo etc. They express sudden expression or outburst of emotional feeling. For example: **Alas**! He has lost his father. **Hurray**! Ganguly has won the match for India by himself.

## Count and non count nouns

In English, there are two kinds of nouns: count nouns and non-count nouns. It is important to understand the difference between them, because they often use different articles, and non-count nouns usually have no plural

### Count nouns

They deal with things that we can count: one dog, a mule, one man, the barber shop. They usually have a singular and plural form: two dogs, ten mules, six men, ten barber shops.

### Non count nouns

They deal with things that we do not usually count: tea, sugar, water, air, rice, etc. or for abstract ideas or qualities such as knowledge, beauty, anger, fear, love.

They do not usually have a plural form. Examples of common uncountable nouns: money, advice, information, furniture, happiness, sadness, news, research, evidence, safety, beauty, knowledge.

You can usually work out whether a noun is count or non-count by thinking about it. Count nouns are usually objects which can be counted. Non-count nouns are often substances (such as sand, water or rice) which cannot be easily counted, or they may be large abstract ideas such as "nature", "space" or "entertainment".

You can put **"a"** or **"an"** before count nouns. For example: I have **an** apple. She doesn't need **a** table. You can also use "How many" with count nouns: How many horses are there in the farm? You can put **"some"** before non count nouns. For example: I have **some** chocoiate at the party. I just had **some** rice for lunch. You can also use "How much" with non-count nouns: How much traffic is there in San Francisco?

**Container, Piece, and Measurement Words**

Many things that you can buy in a supermarket are non count i.e. soap, cereal, butter, beef, ice, etc. However, we often want to talk about certain quantities of these things. In order to do this, we divide them into units that can be counted. Here is where the container words become handy.

**Container words**: a can of..., a box of..., a bowl of ..., a glass of ...i.e. I bought two boxes of cereal. **Piece words**: a piece of, a slice of..., a bar of ...i.e. A slice of pizza. Who needs a piece of paper? **Measurement words**: a quart of..., a liter of...: i.e. She has to get two quarts of milk.

**Use of Articles**

**A / AN: indefinite articles**

Use ***'a'*** with nouns starting with a ***consonant*** *(letters that are not vowels),* ***'an'*** with nouns starting with a ***vowel*** (*a, e, i, o, u*)

Examples:

**A** boy, **An** apple, **A** car, **An** orange, **A** house, **An** opera

**NOTE:**
**An** before an *h* mute - **an** hour, **an** honor. **A** before *u* and *eu* when they sound like *'you': a* **eu**ropean, *a* **u**niversity, *a* **u**nit

**The indefinite article is used:**

**to refer to something for the first time:** ***An elephant*** and ***a mouse*** fell in love. Would you like ***a drink***? I've finally got ***a good job***.

**to refer to a particular member of a group or class**

Examples:

**with names of jobs:** John is ***a doctor***. Mary is training to be ***an engineer***. He wants to be ***a dancer***.

**with nationalities and religions:** John is ***an Englishman***. Kate is ***a Catholic***.

**with musical instruments:** Sherlock Holmes was playing ***a violin*** when the visitor arrived.
(**BUT** to describe the activity we say, "He plays the violin.")

**with names of days:** I was born on ***a Thursday***

**to refer to a kind of, or example of something:** the mouse had ***a tiny nose*** the elephant had ***a long trunk*** it was ***a very strange car***

**with singular nouns, after the words *'what'* and *'such'*:** What ***a shame***! She's such ***a beautiful girl***.

**meaning 'one', referring to a single object or person:** I'd like ***an orange*** and two lemons please. The burglar took ***a diamond necklace*** and ***a valuable painting***.

Notice also that we usually say ***a hundred, a thousand, a million***.

**THE: definite article**

Articles in English are invariable. That is, they do not change according to the gender or number of the noun they refer to, e.g. **the boy, the woman, the children**

**'The'** is used:

1. to refer to something which has already been mentioned. Example: An elephant and a mouse fell in love.

**The mouse** loved **the elephant's** long trunk, and **the elephant** loved **the mouse's** tiny nose.

2. when both the speaker and listener know what is being talked about, even if it has not been mentioned before.

Example: 'Where's **the bathroom?**'

'It's on **the first floor**.'

3. in sentences or clauses where we define or identify a particular person or object:

Examples: **The man** who wrote this book is famous.

'Which car did you scratch?' '**The red one**.

My house is **the** one with a blue door.'

4. to refer to objects we regard as unique:

Examples: **the sun, the moon, the world**

5. before superlatives and ordinal numbers: (see Adjectives)

Examples: **the highest** building, **the first** page, **the last** chapter.

6. with adjectives, to refer to a whole group of people:

Examples: **the** Japanese (see Nouns - Nationalities), **the** old

7. with names of geographical areas and oceans:

Examples: **the** Caribbean, **the** Sahara, **the** Atlantic

8. with decades, or groups of years:

Example: she grew up in **the** seventies

**EXCEPTIONS TO USING THE DEFINITE ARTICLE**

There is **no** article:

with names of **countries** (if singular)

***Germany*** is an important economic power.

He's just returned from ***Zimbabwe***.

(**But:** I'm visiting ***the United States*** next week.)

with the names of **languages**

***French*** is spoken in Tahiti.

***English*** uses many words of ***Latin*** origin.

***Indonesian*** is a relatively new language.

with the names of **meals.**

***Lunch*** is at midday.

***Dinner*** is in the evening.

***Breakfast*** is the first meal of the day.

with people's **names** (if singular):

***John's*** coming to the party.

***George King*** is my uncle.

(**But:** we're having lunch with ***the Morgans*** tomorrow.)

with **titles** and **names**:

***Prince Charles*** is ***Queen Elizabeth's*** son.

***President Kennedy*** was assassinated in Dallas.

***Dr. Watson*** was Sherlock Holmes' friend.

(**But:** ***the Queen of England, the Pope.***)

After the **'s** possessive case:

His brother's ***car.***

Peter's ***house.***

with **professions**:

***Engineering*** is a useful career.

He'll probably go into ***medicine.***

with **names of shops**:

I'll get the card at ***Smith's.***

Can you go to ***Boots*** for me?

with **years**:

***1948*** was a wonderful year.

Do you remember ***1995***?

With **uncountable nouns:**

***Rice*** is the main food in Asia.

***Milk*** is often added to ***tea*** in England.

***War*** is destructive.

with the names of **individual mountains, lakes and islands**:

***Mount McKinley*** is the highest mountain in Alaska.

She lives near ***Lake Windermere.***

Have you visited ***Long Island***?

with most **names of towns, streets, stations and airports**:

***Victoria Station*** is in the centre of London.

Can you direct me to Bond Street?

She lives in Florence.

They're flying from Heathrow.

**Changing voice**

Sentences are active when the subject itself is responsible for the action in the sentence. Sentences are passive when the subject does not perform the action. Instead, the subject receives an action or is the result of an action. The person or thing that performed the action may be unimportant or unknown in a passive sentence.

The passive voice is formed with a form of **be** and the **past participle** of the main verb. For example: Dinner **is served** from 5:00 to 8:00. many people **were injured** by the tornado last night. The letter was mailed by Nick.

Passive sentences focus on the noun that is the receiver or result of an action rather than the noun that is performing the action (the agent). In fact passive sentence very often do not mention the agent at all. For example: Super computers were developed in order to solve complex problems. The mail is delivered at noon.

Passive sentences are used to make sentence sound more impersonal. For example: Passengers are requested to remain seated. An errors was made in this months payroll.

**Clauses and phrases**

When we combine a group of words, we try to express something. The meaning of the combination of words should be understandable. However, not all meaningful groups of words are sentences. When the group words have a verb, it can be called a clause. Otherwise, it is termed as a phrase. A sentence must have at least one complete clause.

Look at this group of words- "Harbhajan's off spin". These words do make sense; they convey a meaning, yet they do not have the verb within themselves. That is why we ca not call them a clause. A group of words that makes sense but doesn't have a verb can be phrase. A phrase alone cannot form a sentence.

On the other hand, "Cairns is the best all rounder in the world" is a complete clause because it has a finite verb. Therefore, one can use this group of words as a sentence.

A clause, if sufficiently independent to be a separate sentence, can be called a main clause. A dependent clause, on the other hand, cannot stand as a separate sentence. " I will go to school" is a main clause. However, " after I go to school" is a dependent clause. If one remains indiscreet about the type of clause used in one's sentences, there is highly possibility of a grammatical error.

**Simple sentence**

A simple senyence has only one finite verb. If you remember the basic sentence structure disciussed at the beginning of this section, you will recognize only one such structure in a simple sentence. For example: "Zahir bowled a perfect yorker." "Kumble defeated the batsman with his drift."

**Compound Sentences**

A compound sentence is made up of two simple sentences joined by a comma and a coordinating conjunction or by a semicolon. For example:

Mary is going to the party and she is wearing her red dress.
I can't speak now, but I will soon.
Over 10 percent of the students dropped out; They were forced out by poverty.

**Complex Sentences**

A complex sentence is made up of a simple sentence and one or more dependent or subordinate clauses. There are three different types of subordinate clauses:

**Adverbial clauses** are introduced by a subordinating conjunction such as after, although, as, because, before, once, though, until, whether, if, how, while, where, while. For example: While I was at the bathroom, a big fight started in the dancing area.

**Adjective clauses** are introduced by relative pronouns such as who, whom, that, which, whichever, whomever, whoever. For example: You may invite whomever you like to the party.

**Noun Clauses** are introduced by **that**, **whether, if**, or **questions words**. For example: It would be interesting to know where Susan is from.

**Fragments**

A fragment or incomplete sentence is a subordinate clause that stands alone, or it is without an independent clause. In written academic English it is never appropriate. However, in spoken English it is very common to use incomplete sentences or fragments. For example:
Why did you miss classes yesterday?
Because I was sick. (I missed classes because I was sick)
Beautiful day! ( It's a beautiful day!)
Found an apartment yet? (Have you found an apartment yet?

An ***adverb clause*** is a group of words that contains a subject and a verb of its own, but can not stand as a separate sentence, and that works to qualify the verb of the main clause of the sentence. Usually, an adverb clause tells how, when, why, or where the verb has been enacted. For example, "I will leave after my dad returns." Here, "after my daddy returns" suggests that when the verb leave will be enacted.

An ***adjective clause***, another type of dependent clause, tells the quality of a noun of the main clause that the adjective clause directly succeeds. It has no relation whatsoever with the verb of the main clause; its sole purpose is to clarify the noun by using a relative pronoun. "This is the man who helped me a lot." Here, "who helped me a lot" describes the man in the main clause.

Adjective clauses are also called **relative clauses**. They come after nouns and modify them. In other words, they tell the listener or reader more about the person or thing that the noun refer to. The pronouns that often begin adjective clauses are called relative pronouns ( **that, which, who, whom, whose, where**) For example: A person who sweeps the floor on buildings is known as janitor. A person who sails is a sailor.
The man who sold the red house is a friend of mine

A ***noun clause***, the last type of dependent clause, works as the subject or object of the main clause. For example, "who committed the crime is still unknown." Here, "who committed the crime" is the subject for the entire sentence. "Saurav could not believe what his bowlers were doing." Here, "what his bowlers were doing" is the object for the whole sentence.

### Noun Clauses as Subjects

Noun clauses are **that** clauses that have a subject and a verb. There is no comma between the main clause and the **that** clause. For example: That several students came late to class annoyed the professor. The fact that you are from South America made you ideal for the job. It is common in speaking to move the noun clause to the end of the sentence and to put **it** in the subject position e.g. It annoyed the teacher that Albert smoked in class.

### Noun Clauses as Objects

In this case, the word **that** is put before the clause, but it is not required e.g. The teacher reported that Albert smoked in class. or The teacher reported ~~that~~ Albert smoked in class.

## Conditional Sentences

A ***conditional sentence*** is a sentence that has a dependent clause denoting condition to the main clause. For example: He can do the job if we help him. Here, the dependent clause is imposing a condition to the main clause.

There are various ways to writing a conditional sentence; the meaning of the sentence changes along with the structure. We are providing a summary of how any correct conditional sentence may look like.

| IF-CLAUSE | RESULT CLAUSE | Explanation |
|---|---|---|
| simple present verb | simple present verb | if-clause → uses → simple present<br>result clause uses simple present |
| If it rains,<br>If it gets cold enough,<br>If I don't do my homework, | my car window leaks.<br>water becomes ice.<br>I learn nothing. | <-expresses an established or predictable fact, or it expresses a general truth |
| If Marie doesn't eat dinner,<br>If I exercise, | she gets hungry at midnight.<br>I look great! | <-expresses a habitual situation or a habitual activity. |
| If someone calls, | take a message please. | <-gives a command |
| simple present verb | modal + simple present verb | if-clause → uses → simple present<br>result clause uses modal + verb |
| If it rains, | my window might leak. | <-expresses a fact |
| If the phone rings, | I will answer it. | <-expresses a future situation |
| If the weather is sunny, | we can go to the beach Sunday. | <-expresses a future activity |

# REVIEW OF GRAMMATICAL STRUCTURES WITH EXAMPLES

## ADJECTIVES AND ADVERBS

Adjectives noun এবং pronoun কে modify করে Adverb modify করে verbs, adjectives, এবং অন্যান্য adverbs কে। নীচে adjective এবং adverb জনিত ভুলগুলো কিভাবে হয় এবং কিভাবে ঠিক করতে হয় তা আলোচনা করা হলো।

(1) Linking verbs are followed by adjectives, not adverbs. Here is a list of common linking verbs:

| | |
|---|---|
| be | remain |
| become | feel |
| appear | smell |
| look | sound |
| seem | taste |

Note that some of the verbs listed as linking verbs may sometimes function as verbs of action:

| **Adjectives** | **Adverbs** |
|---|---|
| I feel *tired.* | I felt my way *slowly* in the darkness. |
| He looked *angry.* | He looked about the room *angrily.* |
| The pie tastes *delicious.* | She tasted the pie *cautiously.* |

(2) Verbs are modified by adverbs, not by adjectives:

| | |
|---|---|
| Mr. Monir is a good teacher. | Mr. Monir teaches well. |
| Her brother is a bad driver. | He drives badly. |
| There has been a considerable change in the weather. | The weather has changed considerably. |
| My sister is a superb dancer. | My sister dances superbly. |
| The teacher gave a quick explanation of the problem. | The teacher explained the problem quickly. |
| This is a slow exercise. | This exercise must be done slowly. |

WRONG: The girl looks ***intelligently***.
RIGHT: The girl looks ***intelligent***.
WRONG: That perfume smells ***sweetly***, doesn't it?
RIGHT: That perfume smells ***sweet***, doesn't it?
WRONG: They physician appeared ***nervously*** when he talked to the patient.
RIGHT: The physician appeared ***nervous*** when he talked to the patient.
WRONG: This bed seems very ***comfortably***.
RIGHT: This bed seems very ***comfortable***.
WRONG: I felt ***badly*** about forgetting the appointment.
RIGHT: I felt ***bad*** about forgetting the appointment.
WRONG: We all agreed that the new film was ***real*** good.
RIGHT: We all agreed that the new film was ***really*** good.
WRONG: The students found the physics examination ***extreme*** difficult.
RIGHT: The students found the physics examination ***extremely*** difficult.
WRONG: If you speak ***firm***, he will listen to you.
RIGHT: If you speak ***firmly***, he will listen to you.
WRONG: He made ***considerable*** more progress than I.
RIGHT: He made ***considerably*** more progress than I.
WRONG: The professor presented an ***obvious*** important point in class.
RIGHT: The professor presented an ***obviously*** important point in class.

WRONG: He said that the medicine tasted ***terribly***.
RIGHT: He said that the medicine tasted ***terrible***.
WRONG: It rained ***steady*** all day yesterday.
RIGHT: It rained ***steadily*** all day yesterday.
WRONG: The dog remained ***faithfully*** to its master until the end.
RIGHT: The dog remained ***faithful*** to its master until the end.
WRONG: He can do the job ***easier*** than you can.
RIGHT: He can do the job ***more easily*** than you can.
WRONG: The problem seemed ***exceeding*** complex to me.
RIGHT: The problem seemed ***exceedingly*** complex to me.

(3) Negative adverbs, such as hardly, seldom, rarely, and never, should not be used with other negatives.

WRONG: He ***hasn't never*** seen a copy of our latest book.
RIGHT: He ***has never*** seen a copy of our latest book.
or
He ***hasn't ever*** seen a copy of our latest book.
WRONG: He rarely eats at that restaurant, ***doesn't he***?
RIGHT: He rarely eats at that restaurant, ***does he***?
WRONG: I ***can't scarcely*** believe it's true.
RIGHT: I ***can scarcely*** believe it's true.
WRONG: I ***hadn't hardly*** gotten out the door when the phone rang again.
RIGHT: I ***had hardly*** gotten out the door when the phone rang again.

(4) When these and those are used as demonstrative adjectives, they must be followed by a plural noun.
WRONG: These ***combination*** of chemicals can be dangerous.
RIGHT: These ***combinations*** of chemicals can be dangerous.
WRONG: Those ***kind*** of jackets are very popular.
RIGHT: Those ***kinds*** of jackets are very popular.
or
That kind of jacket is very popular.

(5) Some adjectives and adverbs have the same form, such as fast, hard, right, straight, and late.
WRONG: Several people arrived too ***lately*** to be admitted to the performance.
RIGHT: Several people arrived too ***late*** to be admitted to the performance.
WRONG: The horse ran ***fastly*** enough to win the race.
RIGHT: The horse ran ***fast*** enough to win the race.
WRONG: The architect worked ***hardly*** to finish his drawings by the next day.
RIGHT: The architect worked ***hard*** to finish his drawings by the next day.

## ADVERBIAL CLAUSES

নীচে সবচেয়ে গুরুত্বপূর্ণ ছয় রকমের adverbial clause এর স্বরূপ দেয়া হলো। (Be especially careful with the verbs in adverbial clauses of time).

(1) Reason or Purpose
The soccer game was called of because the weather was bad.
Since most students go out on Saturday, nights, the dormitories are usually quiet then.
I carried some extra money with me so that I wouldn't be short of cash.

(2) Result
I found the house dark, so I turned on a few lights.
The coffee was so strong that the guests had trouble drinking it.
It was such an informative lecture that many of the students wanted to tape it.

(3) Time
When I visited Nashville, I toured the famous Parthenon.
I will wait at home until Mike calls. (not until Mike will call.)
(express future action by using only the simple present tense of the verb after words such as when, before, after, as soon as, whenever, until.)
When I visit. Nashville, I will tour the famous Parthenon.
Before I lock the doors, I will make certain that all of the lights have been turned off.
He talked about his travels to Europe whenever he visited his relatives in New York.

(4) Place
Wherever he walked, people stared at him in amazement.
Please leave the key where it belongs.

(5) Opposition (Contrast)
Although he had studied diligently for several months, he was unable to pass the examination.
He dressed poorly and drove an old car despite the fact that he had recently inherited three million dollars.

(6) Comparison
The food is better in the cafeteria today than it was yesterday.
I don't swim as well as she does.

| | |
|---|---|
| WRONG: | Unless Terry ***will pass*** his chemistry course, he won't graduate this semester. |
| RIGHT: | Unless Terry ***passes*** his chemistry course, he won't graduate this semester. |
| WRONG: | ***Although*** it was raining, Anita refused to take her swimming lesson. |
| RIGHT: | ***Because*** it was raining, Anita refused to take her swimming lesson. |
| WRONG: | Vincent will wait on the corner until the bus ***will come***. |
| RIGHT: | Vincent will wait on the corner until the bus ***comes***. |
| WRONG: | We will continue the game after the rain ***will stop***. |
| RIGHT: | We will continue the game after the rain ***stops***. |
| WRONG: | He carefully taped the chemistry lecture so that he ***can*** listen to it again. |
| RIGHT: | He carefully taped the chemistry lecture so that he ***could*** listen to it again. |
| WRONG: | As soon as he ***will get*** his check, he can buy the books he needs. |
| RIGHT: | As soon as he ***gets*** his check, he can buy the books he needs. |
| WRONG: | Police officers stop citizens when they ***will drive*** too fast. |
| RIGHT: | Police officers stop citizens when they ***drive*** too fast. |
| WRONG: | Before you go to bed, ***you will turn off*** the lights. |
| RIGHT: | Before you go to bed, ***turn off*** the lights. |
| WRONG: | If anyone ***will have*** a question, I'll be happy to answer it. |
| RIGHT: | If anyone ***has*** a question, I'll be happy to answer it. |

## SUBJECT-VERB AGREEMENT

Sentence এর subject plural হলে verb plural এবং subject singular হলে verb I singular হবে ।
A verb must agree in number with its subject. Keep the following rules in mind when making certain that subjects and verbs agree:

(1) A ***prepositional phrase*** that comes between a subject and a verb does not affect the verb form.

(2) Some ***indefinite pronouns*** are always singular and therefore require singular verbs. The ones that are most likely to be used incorrectly with a plural verb include ***one***, ***each***, ***everyone***, ***either***, and ***neither***.

(3) Two or more subjects joined by ***"and"*** usually require a plural verb.

(4) When the conjunctions "***or***" and "***nor***" and the pairs of conjunctions ***"either . . . or," "neither . . . nor,"*** and ***"not only . . . but also"*** are used to join subjects, the verb agrees in number with the part of the ***subject nearest the verb.***

(5) When normal word order (subject-verb) is inverted (verb-subject) either by simply placing the subject after the verb or by beginning the sentence with "***there,***" the verb agrees in number with the true subject following the verb. Remember, however, that a verb does not agree with its complement or object.

(6) ***Collective nouns*** (army, audience, committee, etc.) usually take singular verbs, but require a plural verb when the collective noun refers to the members of the group and not to the group as a unit.

(7) Expressions referring to ***quantity or extent*** (miles, liters, pounds, etc.) take singular verbs when the amount is considered as a unit and plural verbs when the amount is considered as a number of individual units.

(8) "Number" may be singular of plural. ***The number*** refers to the total sum and takes a singular verb; ***a number*** refers to the individual units and takes a plural verb.

(9) Words ending in "***-ics***" (mathematics, acoustic, athletics, etc.) take a singular verb when they refer to a science, art, or body of knowledge; they take a plural verb when they refer to physical activities or qualities.

(10)The verb in clauses that begin "***one of*** _____ (who, which, or that)" is plural.

**Examples:**

| | |
|---|---|
| WRONG: | The man, as well as his wife and children, ***were*** injured in the accident. |
| RIGHT: | The man, as well as his wife and children, ***was*** injured in the accident. |
| WRONG: | One of the students in the class ***are*** absent today. |
| RIGHT: | One of the students in the class ***is*** absent today. |
| WRONG: | A crate of apples and oranges ***have*** been delivered to our doorstep. |
| RIGHT: | A crate of apples and oranges ***has*** been delivered to our doorstep. |
| WRONG: | His grasp of many areas of radio and television technology ***make*** it easy for him to find a job. |
| RIGHT: | His grasp of many areas of radio and television technology ***makes*** it easy for him to find a job. |
| WRONG: | Each man and each woman ***have*** to consider how to react to such an emergency. |
| RIGHT: | Each man and each woman ***has*** to consider how to react to such an emergency. |
| WRONG: | Every one of the employees ***are*** angry about the new contract. |
| RIGHT: | Every one of the employees ***is*** angry about the new contract. |
| WRONG: | The man and his assistant ***is*** pleased with the new office. |
| RIGHT: | The man and his assistant ***are*** pleased with the new office. |
| WRONG: | My friend and teacher ***are*** my mother. |
| RIGHT: | My friend and teacher ***is*** my mother. |
| WRONG: | Either the students or the teacher ***have*** made a mistake. |
| RIGHT: | Either the students or the teacher ***has*** made a mistake. |
| WRONG: | The parent or the children ***inherits*** the estate. |
| RIGHT: | The parent or the children ***inherit*** the estate. |
| WRONG: | Buried under the floorboards ***are*** the murdered man. |
| RIGHT: | Buried under the floorboards ***is*** the murdered man. |
| WRONG: | There ***is*** at least fifteen angry demonstrator outside. |
| RIGHT: | There ***are*** at least fifteen angry demonstrators outside. |
| WRONG: | The best time to take a nap ***are*** the two hours after lunch. |
| RIGHT: | The best time to take a nap ***is*** the two hours after lunch. |

WRONG: The jury ***agree*** on the verdict.
RIGHT: The jury ***agrees*** on the verdict.
WRONG: The jury ***disagrees*** on the verdict.
RIGHT: The jury ***disagree*** on the verdict.
WRONG: Ten miles ***are*** not far to go for a delicious meal.
RIGHT: Ten miles ***is*** not far to go for a delicious meal.
WRONG: Thirty dollars ***are*** too much to pay for that purse.
RIGHT: Thirty dollars ***is*** too much to pay for that purse.
WRONG: A number of students ***fails*** every test.
RIGHT: A number of students ***fail*** every test.
WRONG: The number of students who pass ***are*** increasing.
RIGHT: The number of students who pass ***is*** increasing.
WRONG: Economics, my major, ***are*** difficult.
RIGHT: Economics, my major, ***is*** difficult
WRONG: The acoustics of the building ***is*** good.
RIGHT: The acoustics of the building ***are*** good.
WRONG: One of the men who ***is*** being considered for the job is from this university.
RIGHT: One of the men who ***are*** being considered for the job is from this university.

## AGREEMENT OF PRONOUN AND ANTECEDENT

Antecedent of pronoun বলতে বাক্যে ব্যবহৃত যে noun টিকে ঐ pronoun টি নির্দেশ করেছে, তাকে বোঝায় । এই noun টিই প্রকৃতপক্ষে pronoun এর person, number, এবং gender নির্ণয় করে । Study the rules given in the section on Agreement of Subject and Verb. These rules are also important for pronoun-antecedent agreement. In short, the pronoun must be singular if its antecedent is singular; the pronoun must be plural if its antecedent is plural.

WRONG: Neither of the two women wants ***their*** office renovated.
RIGHT: Neither of the two women wants ***her*** office renovated.
WRONG: I always give each of my students the attention ***they need***.
RIGHT: I always give each of my students the attention ***he needs***.
WRONG: He is one of those speakers who make ***his*** ideas perfectly clear.
RIGHT: He is one of those speakers who make ***their*** ideas perfectly clear.
WRONG: No one would wish to lose all of ***their*** money in the stock market.
RIGHT: No one would wish to lose all of ***his*** money in the stock market.
WRONG: Neither the members of the committee nor the chairman submitted ***their*** reports on time.
RIGHT: Neither the members of the committee nor the chairman submitted ***his*** reports on time.
WRONG: My insurance company has recently increased ***their*** premiums on liability policies.
RIGHT: My insurance company has recently increased ***its*** premiums on liability policies.
WRONG: One can find a great deal of information on world religions if ***they go*** to the library.
RIGHT: One can find a great deal of information on world religions if ***he goes*** to the library.
WRONG: A parent should never allow ***themselves*** to neglect ***their*** children.
RIGHT: A parent should never allow ***himself*** to neglect ***his*** children.
WRONG: The state of Texas has changed ***their*** laws on adoption.
RIGHT: The state of Texas has changed ***its*** laws on adoption.
WRONG: If anyone has a question, I'll see ***them*** after class.
RIGHT: If anyone has a question, I'll see ***him*** after class.
WRONG: Which student forgot to sign ***their*** name in the proper place?
RIGHT: Which student forgot to sign ***his*** name in the proper place?
WRONG: In inflationary times a person ought to spend ***their*** money wisely.
RIGHT: In inflationary times a person ought to spend ***his*** money wisely.

WRONG: A baby tiger lives with its mother for two years, but at the age of seven months ***they*** can kill for ***themselves***.
RIGHT: A baby tiger lives with its mother for two years, but at the age of seven months ***it*** can kill for ***itself***.
WRONG: Neither the man nor the woman carried ***their*** luggage with ***them.***
RIGHT: Neither the man nor the woman carried ***her*** luggage with ***her***.
WRONG: A lawyer must deal honestly with ***their*** clients if ***they wish*** to maintain a good reputation.
RIGHT: A lawyer must deal honestly with ***his*** clients if ***he wishes*** to maintain a good reputation.
WRONG: Many people enjoy reading about the Netherlands and ***their*** people.
RIGHT: Many people enjoy reading about the Netherlands and ***its*** people.
WRONG: Any senior can rent ***their*** cap and gown for graduation from the bookstore.
RIGHT: Any senior can rent ***his*** cap and gown for graduation from the bookstore.

## CASE OF PRONOUNS

Be especially careful to distinguish between the subjective case (I, you, he, she, it, we, they, who) and the objective case (me, you, him, her, it, us, them, whom.) Study the following rules:

(1) The subjective case of the pronoun must be used if the pronoun is the subject of a verb, an appositive of a subject or a predicate nominative, or a predicate nominative.
(2) The objective case of the pronoun must be used if the pronoun is a direct or indirect object, the object of a preposition, or an appositive of a direct object, indirect object, or object of a preposition.

WRONG: Hasan and ***me*** took the last two seats
RIGHT: Hasan and ***I*** took the last two seats
WRONG: Poly is much more charming than ***her***.
RIGHT: Poly is much more charming than ***she***.
WRONG: We, you and ***me***, are responsible for sending out the newsletter.
RIGHT: We , you and ***I***, are responsible for sending out the newsletter.
WRONG: ***Whom*** do you believe is to blame?
RIGHT: ***Who*** do you believe is to blame?
WRONG: You may invite ***whoever*** you choose.
RIGHT: You may invite ***whomever*** you choose.
WRONG: It was ***them*** who participated in the strike.
RIGHT: It was ***they*** who participated in the strike.
WRONG: I gave the keys to them – Susan and ***she***.
RIGHT: I gave the keys to them – Susan and ***her***.
WRONG: Let you and ***I*** decide who caused the accident.
RIGHT: Let you and ***me*** decide who caused the accident.
WRONG: People like him and ***she*** should be punished.
RIGHT: People like him and ***her*** should be punished
WRONG: Everyone but Joy and ***he*** accepted the player's excuse for being late.
RIGHT: Everyone but Joy and ***him*** accepted the player's excuse for being late.
WRONG: Between you and ***I***, the new proposal seems to be poorly written.
RIGHT: Between you and ***me***, the new proposal seems to be poorly written.
WRONG: Carole, unlike ***they***, understood the mathematical equation.
RIGHT: Carole, unlike ***them***, understood the mathematical equation.
WRONG: The chairman refused to acknowledge either John or ***I***.
RIGHT: The chairman refused to acknowledge either John or ***me***.
WRONG: Be sure to speak to my husband or ***I*** about your suggestion.
RIGHT: Be sure to speak to my husband or ***me*** about your suggestion.
WRONG: Please remind ***whomever*** comes in first to open the windows.
RIGHT: Please remind ***whoever*** comes in first to open the windows.

WRONG: ***Us*** teachers are accustomed to spending hours preparing classes.
RIGHT: ***We*** teachers are accustomed to spending hours preparing classes.

## COMMA SPLICES AND RUN-TOGETHER SENTENCES

Comma splices এবং run-together sentences are খুবই মারাত্মক দুটি ভুল। নীচের examples গুলো লক্ষ্য করুনঃ

(1) Marla rode the horse for several hours then she walked him around the ring. (run-together sentence)
(2) The test was difficult, he couldn't pass it. (comma splice)
(3) They had a flat tire on the way to the airport they arrived on time. (run-together sentence)
(4) He had checked the yard for footprints, he entered the den to question the family members. (comma splice)

উপরের প্রত্যেকটি sentence ই ভুল। চারটি basic পদ্ধতিতে comma splices (two independent clauses connected by a comma) এবং run-together sentences (two independent clauses without any connection) correction করা যায়। নিচে এই চারটি পদ্ধতি আলোচনা করা হল।

(১) Separate the two independent clauses with a period. (যতিচিহ্ন)।

**Example:** Marla rode the horse for several hours. Then she walked him around the ring.

(2) Connect the two independent clauses by a semicolon if they are closely related. Or use a ***transitional connective*** (however, thus, therefore, etc.) to show the relationship between the two clauses.

**Example:** The test was difficult; as a result, he couldn't pass it.
The test was difficult; he couldn't pass it.

(3) Place a ***coordinating conjunction*** (and, but, for, or, nor, yet, or so) after the comma.

**Example:** They had a flat tire on the way to the airport, but they arrived on time.
(4) Make one of the clauses into a dependent clause. Use a subordinating conjunction, such as when, although, because, since, if, after, etc. or a relative pronoun to introduce the dependent clause.

**Example:** After he had checked the yard for footprints, he entered the den to question the family members.

WRONG: The children were tired, their mother put them to bed.
RIGHT: The children were tired, ***so*** their mother put them to bed.
or
***Since*** the children were tired, their mother put them to bed.
WRONG: The spider is an insect, it spins a web.
RIGHT: The spider is an insect ***which*** spins a web.
WRONG: Greenland is a large island few people live there.
RIGHT: Greenland is a large island, ***but*** few people live there.
or
***Although*** Greenland is a large island, few people live there.
or
Greenland is a large island; ***however***, few people live there.
WRONG: The Vikings ate fish they drank ale.
RIGHT: The Vikings ate fish; they drank ale.

or

The Vikings ate fish ***and*** drank ale.

WRONG: George Washington Carver was a slave, he became a famous man.
RIGHT: George Washington Carver was a slave ***who*** became a famous man.
WRONG: Vesuvius is a famous volcano, it is located near Naples, Italy.
RIGHT: Vesuvius is a famous volcano ***which*** is located near Naples, Italy.
WRONG: Many snakes are poisonous people avoid them.
RIGHT: Many snakes are poisonous; ***thus***, people avoid them.

or

People avoid snakes ***because*** many of them are poisonous.

WRONG: John F. Kennedy was a well-known person he established the Peace Corps.
RIGHT: John F. Kennedy, ***who*** established the Peace Corps, was a well-known person.

or

John F. Kennedy was a well-known person ***who*** established the Peace Corps.

WRONG: That boy speaks German fluently he knows English too.
RIGHT: That boy speaks German fluently; ***moreover***, he knows English.

or

That boy speaks German fluently, ***and*** he knows English too.

or

That boy not only speaks German fluently ***but also*** knows English.

## COMPARISON

অধিকাংশ adjectives এবং adverb কে compare করা হয় –er বা –est যোগ করে আমরা শুরুতে more or most ব্যবহার করে। Most short modifiers are compared by adding –er or est to the positive form. In general, more and most are used before "long" adjectives and adverbs (adjectives and adverbs of more than two syllables).

List 1. Some adjectives and adverbs that are compared regularly

| POSITIVE | COMPARATIVE | SUPERLATIVE |
|---|---|---|
| lazy | lazier | the laziest |
| tall | taller | the tallest |
| cheap | cheaper | the cheapest |
| expensive | more expensive | the most expensive |
| intelligent | more intelligent | the most intelligent |
| quickly | more quickly | the most quickly |
| easily | more easily | the most easily |
| useful | more useful | the most useful |
| common | more common | the most common |

List 2. Some adjectives and adverbs that are compared irregularly

| POSITIVE | COMPARATIVE | SUPERLATIVE |
|---|---|---|
| bad, badly | worse | the worst |
| far | farther | the farthest (distance) |
| | further | the furtherest |
| good, well | better | the best |
| little | less | the least |
| many, much | more | the most |

WRONG: This shirt is more cheaper than that one.
RIGHT: This shirt is ***cheaper*** than that one.
WRONG: The Thai student speaks English ***as fluent as*** the Frenchman.
RIGHT: The Thai student speaks English ***as fluently*** as the Frenchman.

WRONG: My information is better than ***their***.
RIGHT: My information is better than ***theirs***.
WRONG: She looks a great deal taller ***as*** he.
RIGHT: She looks a great deal taller ***than*** he.
WRONG: I ran much ***further*** than the other contestants.
RIGHT: I ran much ***farther*** than the other contestants.
WRONG: I hope that you drive more ***carefuler*** than he does.
RIGHT: I hope that you drive more ***carefully*** than he does.
WRONG: Was my composition the ***most longest*** that you read?
RIGHT: Was my composition the ***longest*** that you read?
WRONG: Tokyo is ***larger*** city than New York.
RIGHT: Tokyo is ***a larger*** city than New York.
WRONG: He made few mistakes ***as*** I.
RIGHT: He made ***as*** few mistakes ***as*** I.
WRONG: Your pronunciation is the ***worse*** that I have ever heard.
RIGHT: Your pronunciation is the ***worst*** that I have ever heard.
WRONG: He usually does as ***less*** work as he can.
RIGHT: He usually does as ***little*** work as he can.

**Additional notes on comparison:**

(1) Use the comparative degree when only two people or things are compared.

(2) Use 'any other' rather than 'any' when comparing people or things of the same type of class.

(3) Be sure to make your comparisons logical.

WRONG: He is the ***most*** successful of the two businessmen.
RIGHT: He is the ***more*** successful of the two businessmen.
WRONG: Of the twins, Susan was the ***most*** talkative.
RIGHT: Of the twins, Susan was the ***more*** talkative.
WRONG: I looked at the two games and then chose the ***easiest*** one.
RIGHT: I looked at the two games and then chose the ***easier*** one.
WRONG: Soccer is more popular than ***any*** sport on our campus.
RIGHT: Soccer is more popular than ***any other*** sport on our campus.
WRONG: Calculus 102 is harder than ***any*** course in the mathematics department.
RIGHT: Calculus 102 is harder than ***any other*** course in the mathematics department.
WRONG: Are Kennedy's children more famous than ***Nixon***?
RIGHT: Are Kennedy's children more famous than ***Nixon's***?
WRONG: Her skin is as soft as a ***baby***.
RIGHT: Her skin is as soft as a ***baby's***.
WRONG: I like animals more than most adults.
RIGHT: I like animals more than most adults ***do***.

## CONDITIONAL SENTENCES

Basic তিন ধরণের conditional sentence দেখা যায়।

(1) You will (might) get sick if you eat too much. This sentence means that something will occur if a certain condition is fulfilled. (future-probable)

(2) You would (could, might) get sick if you ate too much. This sentence means that something is unlikely to occur. (present-unreal)

(3) You would have (could have, might have) gotten sick if you had eaten too much. This sentence means that something did not occur because a certain condition was not fulfilled. (past-unreal)

Remember the following important points in writing conditional sentences:
(1) Do not use will, would or would have in the ***if*** clause.

(2) Use the subjunctive form 'were' instead of 'was' in the ***if*** clause.

(3) Unless means "if not."

WRONG: If you study hard, you pass the next test.
RIGHT: If you study hard, you ***will*** pass the next test.
WRONG: You might have enjoyed yourself if you ***would have*** gone with us.
RIGHT: You might have enjoyed yourself if you ***had*** gone with us.
WRONG: If I lived during the seventeenth century, I could have known Sir Isaac Newton.
RIGHT: If I ***had*** lived during the seventeenth century, I could have known Sir Isaac Newton.
WRONG: The woman could explain these sentences if she ***was*** a teacher.
RIGHT: The woman could explain these sentences if she ***were*** a teacher.
WRONG: If my friends ***would have*** a car, they would certainly pick me up.
RIGHT: If my friends ***had*** a car, they would certainly pick me up.
WRONG: He ***could*** use the machine unless it is broken.
RIGHT: He ***can*** use the machine unless it is broken.
WRONG: If you ***will*** need help, I'll be happy to help you.
RIGHT: If you need help, I'll be happy to help you.
WRONG: He ***didn't understand*** you unless you had spoken slowly.
RIGHT: He ***wouldn't have understood*** you unless you had spoken slowly.
WRONG: If you ***would have*** called, I would have gone out with you.
RIGHT: If you ***had*** called, I would have gone out with you.
WRONG: Plants ***don't*** grow if the sun didn't shine.
RIGHT: Plants ***wouldn't*** grow if the sun didn't shine.
WRONG: The dog will bite you if you ***will*** enter the gate.
RIGHT: The dog will bite you if you enter the gate.
WRONG: If dinner ***was*** ready, I'd eat now.
RIGHT: If dinner ***were*** ready, I'd eat now.
WRONG: I wouldn't have paid the money unless I ***would have*** owed it.
RIGHT: I wouldn't have paid the money unless I ***had*** owed it.
WRONG: He ***doesn't*** change his mind unless he were wrong.
RIGHT: He ***wouldn't*** change his mind unless he were wrong.

**Additional notes on conditional sentence**

(1) When the agreement of another person is needed or requested, will is used after if.

**Example:** If you will be quiet, I'll try to explain. (If you agree to be quiet, I'll try to explain).
**Example:** I can help you if you will wait a minute. (I can help you if you agree to wait a minute).
**Example:** If you will play the piano, I'll sing. (If you agree to play the piano, I'll sing):
(2) In addition to if, some other conjunctions are often used in conditional sentences.

**Example:** He acts ***as if*** he were rich. (But he really isn't rich.)
**Example:** ***As long as*** it doesn't rain, we'll have the picnic. (As long as means "if.")
**Example:** He will pay the rent ***provided that*** he gets his check. (Provided that means "if.")
**Example:** ***Supposing that*** you were a lawyer, would you give me some legal advice? (Supposing that means "if.")
**Example:** She looks ***as though*** she is ill. (She might be ill.)
**Example:** ***In the event that*** it had rained, the game would have been postponed. (In the event that means "if.")
**Example:** If ***only*** I had known you were coming, I would have prepared lunch. (The word only is used for emphasis.)

(3) In past-unreal conditional sentences, or in present-unreal conditional sentences which contain the verb were, the conjunction if is sometimes omitted.

**Example:** Had she had time, she probably would have finished the letter. (Had she had time means "if she had had time.")

**Example:** Had you failed the exam, you might not have passed the course. (Had you failed means "if you had failed.")

**Example:** Were he a counselor, he could give me some good advice. (Were he a counselor means "if he were a counselor.")

**Example:** Were the speech intelligible, I might understand it. (Were the speech intelligible means "if the speech were intelligible.")

## MISPLACED MODIFIERS

একটি বাক্যের related parts গুলোকে আলাদা করলে (কথা দিয়ে) এই সমস্যাটি প্রায়ই দেখা দেয়। নিচের example লক্ষ্য করুন।

| | |
|---|---|
| Example: | On arriving at the picnic, the moon was high in the sky. Moon নিশ্চয়ই picnic এ আসেনি, অর্থাৎ এখন sentence টি ঠিক করার জন্য একটি noun দরকার, যেটি ২য় অংশের শুরুতে (কথার পরে) থাকবে। On arriving at the picnic, the group (the campers, we, etc.) found the moon high in the sky. |
| WRONG: | When in grammar school, his teachers taught him to read. |
| RIGHT: | When in grammar school, ***he*** was taught to read (by his teachers.) |
| WRONG: | Discovered many years ago, we find ***uranium*** a useful metal. |
| RIGHT: | Discovered many years ago, uranium is a useful metal. |
| WRONG: | To dance well, practice is needed. |
| RIGHT: | To dance well, ***one*** needs practice. |
| WRONG: | Watching the slides carefully, many familiar scenes appeared. |
| RIGHT: | Watching the slides carefully, ***we*** (the girls, they, etc.) saw many familiar scenes. |
| WRONG: | Hurrying to class, an accident happened in my car. |
| RIGHT: | Hurrying to class in my car, ***I*** had an accident. |
| WRONG: | Having traveled at a high speed, a ticket was issued to the motorist. |
| RIGHT: | Having traveled at a high speed, ***the motorist*** was issued a ticket |
| WRONG: | After considering the plan for several days, it was adopted. |
| RIGHT: | After considering the plan for several days, ***we*** (the committee, the representatives, etc.) adopted it. |
| WRONG: | With a great deal of effort, his courses were passed. |
| RIGHT: | With a great deal of effort, ***he*** passed his courses. |
| WRONG: | When sick, see a doctor at once. |
| RIGHT: | When sick, ***you*** should see a doctor at once. |
| WRONG: | While cooking dinner, her finger was burned badly. |
| RIGHT: | While cooking dinner, ***she*** burned her finger badly. |
| WRONG: | If not eaten, ***you*** should throw away the dessert. |
| RIGHT: | If not eaten, ***the dessert*** should be thrown away. |
| WRONG: | By looking in the telephone book, his number can be found. |
| RIGHT: | By looking in the telephone book, ***you*** (she, I, etc.) can find his number. |
| WRONG: | Shopping in the department store, a pretty blouse came to my attention. |
| RIGHT: | Shopping in the department store, ***I*** noticed a pretty blouse. |

## GERUNDS AND INFINITIVES

Gerunds আর infinitives হচ্ছে verb forms যেগুলো verb এর মত কাজ করে। A gerund is the –ing form of a verb that functions as a noun (going, wearing, making, etc.). An infinitive is a verb introduced by to which may be used as a noun, an adjective, or an adverb (to go, to wear, to make, etc.).

List 1. Some common verbs followed by a gerund.

| | | | |
|---|---|---|---|
| admit | consider | mind (negatives and questions) | risk |
| allow | delay | miss | stop (=cease) |
| appreciate | deny | practice | |
| avoid | dislike | put off (= postpone) | |
| can't help | enjoy | remember (= recall) | |
| can't stand | finish | resent | |

WRONG: I will never consider ***to leave*** this job.
RIGHT: I will never consider ***leaving*** this job.
WRONG: Many people avoid ***to wear*** safety belts when they drive.
RIGHT: Many people avoid ***wearing*** safety belts when they drive.
WRONG: A busy person can't stand ***to wait*** in line.
RIGHT: A busy person can't stand ***waiting*** in line.
WRONG: Do you enjoy ***to be*** in the United States?
RIGHT: Do you enjoy ***being*** in the United States?
WRONG: Students must practice ***to use*** different words.
RIGHT: Students must practice ***using*** different words.
WRONG: Tani finished ***to iron*** his shirt a few minutes ago.
RIGHT: Tani finished ***ironing*** his shirt a few minutes ago.
WRONG: Would you please stop ***to talk*** so loudly?
RIGHT: Would you please stop ***talking*** so loudly?

List 2 Some common verbs followed by an infinitive.

| | |
|---|---|
| agree | need |
| attempt | offer |
| decide | plan |
| demand | prepare |
| expect | pretend |
| happen | promise |
| hesitate | refuse |
| hope | remember (= not to forger) |
| intend | seem |
| learn | want |
| manage | wish |
| mean | |

WRONG: Do you hope ***getting*** your degree by next year?
RIGHT: Do you hope ***to get*** your degree by next year?
WRONG: I hesitate ***saying*** what I mean.
RIGHT: I hesitate ***to say*** what I mean.
WRONG: Birds have to learn ***using*** their wings.
RIGHT: Birds have to learn ***to use*** their wings.
WRONG: Men of peace have attempted ***putting*** an end to war.
RIGHT: Men of peace have attempted ***to put*** an end to war.
WRONG: Can that student demand ***seeing*** his grades?
RIGHT: Can that student demand ***to see*** his grades?

WRONG: He surely expects ***paying*** all of his bills.
RIGHT: He surely expects ***to pay*** all of his bills.
WRONG: My father is planning ***changing*** jobs shortly.
RIGHT: My father is planning ***to change*** jobs shortly.
WRONG: Did the cook remember ***adding*** salt?
RIGHT: Did the cook remember ***to add*** salt?

List 3 Some common verbs followed by either a gerund or an infinitive with no change in meaning.

| | |
|---|---|
| begin | love |
| continue | prefer |
| hate | start |
| like | |

WRONG: Almost everyone loves ***have*** free time.
RIGHT: Almost everyone loves ***having*** free time.
or
Almost everyone loves ***to have*** free time.
WRONG: The homesick child started ***think*** about his family.
RIGHT: The homesick child started ***thinking*** about his family.
or
The homesick child started ***to think*** about his family.
WRONG: It should begin ***rain*** before midnight.
RIGHT: It should begin ***raining*** before midnight.
or
It should begin ***to rain*** before midnight.

List 4 Some common verb/preposition combinations followed by a gerund.

| | |
|---|---|
| approve of | look forward to |
| argue about | insist on |
| complain about | keep on |
| concentrate on | object to |
| depend on | plan on |
| decide on | rely on |
| feel like | succeed in |
| forget about | think about |
| give up | worry about |

WRONG: Don't worry about ***make*** a mistake
RIGHT: Don't worry about ***making*** a mistake
WRONG: Did Paul object to ***pick*** you up?
RIGHT: Did Paul object to ***picking*** you up?
WRONG: We're looking forward to ***visit*** our friends.
RIGHT: We're looking forward to ***visiting*** our friends.
WRONG: I haven't succeeded in ***find*** a job yet.
RIGHT: I haven't succeeded in ***finding*** a job yet.
WRONG: The Browns are planning on ***to buy*** more furniture.
RIGHT: The Browns are planning on ***buying*** more furniture.
WRONG: Most teachers insist on ***to correct*** their students' mistakes.
RIGHT: Most teachers insist on ***correcting*** their students' mistakes.
WRONG: He rarely complains about ***to have*** to get up early.
RIGHT: He rarely complains about ***having*** to get up early.
WRONG: You must concentrate on ***to do*** your best.
RIGHT: You must concentrate on ***doing*** your best.

List 5 Some common adjectives followed by an infinitive.

| | | | |
|---|---|---|---|
| afraid | eager | lucky | qualified |
| ashamed | foolish | pleased | ready |
| considerate | fortunate | prepared | sorry |
| disappointed | happy | proud | surprised |

WRONG: I'm afraid ***drive*** alone at night.
RIGHT: I'm afraid ***to drive*** alone at night.
WRONG: The actress seems eager ***going*** on stage.
RIGHT: The actress seems eager ***to go*** on stage.
WRONG: Citizens ought to feel lucky ***be*** able to vote.
RIGHT: Citizens ought to feel lucky ***to be*** able to vote.
WRONG: Were you disappointed ***not*** win the race?
RIGHT: Were you disappointed ***not to*** win the race?
WRONG: The parents are proud ***having*** a healthy child.
RIGHT: The parents are proud ***to have*** a healthy child.
WRONG: He was not at all surprised ***hearing*** the news.
RIGHT: He was not at all surprised ***to hear*** the news.
WRONG: I'm looking for someone qualified ***typing*** a thesis.
RIGHT: I'm looking for someone qualified ***to type*** a thesis.

List 6 Some common adjective/preposition combinations followed by a gerund

| | |
|---|---|
| accustomed to | interested in |
| afraid of | opposed to |
| ashamed of | proud of |
| bored with | responsible for |
| capable of | sorry about |
| disappointed in (with) | successful in |
| essential to | surprised at |
| excited about | tired from (=physically tired) |
| famous for | tired of (= mentally tired) |
| fond of | used to |
| hopeful of | worried about |
| intent on | |

WRONG: Police soon get accustomed to ***arrest*** criminals.
RIGHT: Police soon get accustomed to ***arresting*** criminals.
WRONG: Are you capable of ***complete*** the work within an hour?
RIGHT: Are you capable of ***completing*** the work within an hour?
WRONG: Eli Whitney is famous for ***invent*** the cotton gin.
RIGHT: Eli Whitney is famous for ***inventing*** the cotton gin.
WRONG: The driver was intent on ***to pass*** the other car.
RIGHT: The driver was intent on ***passing*** the other car.
WRONG: The treasurer is responsible for ***to keep*** the books.
RIGHT: The treasurer is responsible for ***keeping*** the books.
WRONG: Ornothologists are interested in ***to learn*** about birds.
RIGHT: Ornothologists are interested in ***learning*** about birds.
WRONG: Minu Salk was successful in ***find*** a vaccine against polio.
RIGHT: Minu Salk was successful in ***finding*** a vaccine against polio.
WRONG: No one is opposed to ***reduce*** taxes.
RIGHT: No one is opposed to ***reducing*** taxes.

List 7 Some common verbs followed by the short infinitive (the infinitive without to).

| | | |
|---|---|---|
| let | make | have |

WRONG: Would you let me ***to use*** your pencil?
RIGHT: Would you let me ***use*** your pencil?
WRONG: The company made the customer ***to pay*** his bill.
RIGHT: The company made the customer ***pay*** his bill.
WRONG: I had an electrician ***to repair*** the wiring.
RIGHT: I had an electrician ***repair*** the wiring.

Some verbs are followed by a present participle or by a short infinitive. (Although the present participle is an "-ing" form, it is not a true gerund. Therefore, it cannot have a possessive form before it.)

WRONG: I heard ***John's knocking*** at the door.
RIGHT: I heard ***John knocking*** at the door.
or
I heard ***John knock*** at the door.
WRONG: Have you ever seen a ***tiger's attacking*** a human being?
RIGHT: Have you ever seen a ***tiger attacking*** a human being?
or
Have you ever seen a ***tiger attack*** a human being?
WRONG: Did you notice the ***car's moving***?
RIGHT: Did you notice the ***car moving***?
or
Did you notice the ***car move***?
WRONG: Parents enjoy watching their ***children's playing***.
RIGHT: Parents enjoy watching their ***children playing***.
or
Parents enjoy watching their ***children play***.

**Additional notes on gerunds and infinitives:**

(1) The gerund is a noun. Therefore, it is logical to put a possessive form before it.

WRONG: Why do you dislike ***me*** cooking?
RIGHT: Why do you dislike ***my*** cooking?
WRONG: I can't remember the ***teacher announcing*** a test.
RIGHT: I can't remember the ***teacher's announcing*** a test.
WRONG: Will you forgive ***us leaving*** early?
RIGHT: Will you forgive ***our leaving*** early?
WRONG: ***Liton winning*** the race surprised everyone.
RIGHT: ***Liton's winning*** the race surprised everyone.
WRONG: The movie is not worth ***you paying*** four dollars to see.
RIGHT: The movie is not worth ***your paying*** four dollars to see.
WRONG: I won't insist on ***him wearing*** formal clothes.
RIGHT: I won't insist on ***his wearing*** formal clothes.
WRONG: The doctor has recommended my ***father having*** an operation.
RIGHT: The doctor has recommended my ***father's having*** an operation.
WRONG: Every ***citizen casting*** a vote is important.
RIGHT: Every ***citizen's casting*** a vote is important.
WRONG: The boss excused his ***secretary failing*** to come to work.
RIGHT: The boss excused his ***secretary's failing*** to come to work.

(2) With the verb need, the gerund or the passive infinitive is often used.

WRONG: His hair needs ***cut***.
RIGHT: His hair needs ***cutting***.
or
His hair needs ***to be*** cut.
WRONG: Does the bed need ***to make***?
RIGHT: Does the bed need ***making***?

or
Does the bed need ***to be made***?

WRONG: My pencil needed ***to sharpen.***
RIGHT: My pencil needed ***sharpening.***
or
My pencil needed ***to be sharpened.***

## SOME COMMON IRREGULAR VERBS

মনে রাখবেন যে have, has, or had এর সাথে verb এর যে form ব্যবহৃত হয়, তা হলো past participle. Past participle এর দ্বারা past perfect বা present perfect tense তৈরী হয়।

| PRESENT | PAST | PAST PARTICIPLE |
|---|---|---|
| become | became | become |
| begin | began | begun |
| blow | blew | blown |
| break | broke | broken |
| choose | chose | chosen |
| come | came | come |
| do | did | done |
| drink | drank | drunk |
| drive | drove | driven |
| eat | ate | eaten |
| fall | fell | fallen |
| fly | flew | flown |
| forget | forgot | forgot(ten) |
| go | went | gone |
| give | gave | given |
| know | knew | known |
| ring | rang | rung |
| run | ran | run |
| see | saw | seen |
| sing | sang | sung |
| sink | sank | sunk |
| speak | spoke | spoken |
| steal | stole | stolen |
| swim | swam | swum |
| take | took | taken |
| tear | tore | torn |
| throw | threw | thrown |
| wear | wore | worn |
| write | wrote | written |

WRONG: He shouldn't have been ***chose*** as secretary.
RIGHT: He shouldn't have been ***chosen*** as secretary.
WRONG: He ***swum*** across the river without any difficulty.
RIGHT: He ***swam*** across the river without any difficulty.
WRONG: The girl's arm was ***broke*** in the car accident.
RIGHT: The girl's arm was ***broken*** in the car accident.
WRONG: After he had ***ate*** dinner, he rested on the sofa.
RIGHT: After he had ***eaten*** dinner, he rested on the sofa.
WRONG: I have ***saw*** that move several times.
RIGHT: I have ***seen*** that movie several times.
WRONG: He had knocked at the door and ***rang*** the doorbell for ten minutes before someone answered.

RIGHT: He had knocked at the door and ***rung*** the doorbell for ten minutes before someone answered.

WRONG: Have you ever ***took*** pictures with this kind of camera?
RIGHT: Have you ever ***taken*** pictures with this kind of camera?
WRONG: The speaker has just ***began*** his talk.
RIGHT: The speaker has just ***begun*** his talk.
WRONG: Many people died when the boat ***sunk***.
RIGHT: Many people died when the boat ***sank***.
WRONG: He's already prepared and ***drank*** a cup of tea.
RIGHT: He's already prepared and ***drunk*** a cup of tea.
WRONG: Have you ever ***wrote*** a letter in green ink?
RIGHT: Have you ever ***written*** a letter in green ink?
WRONG: Had I ***drove*** eighty miles and hour, I would have been arrested.
RIGHT: Had I ***driven*** eighty miles an hour, I would have been arrested.
WRONG: I believe that someone has ***took*** my books.
RIGHT: I believe that someone has ***taken*** my books.
WRONG: He has made and ***broke*** promises to his friends all of his life.
RIGHT: He has made and ***broken*** promises to his friends all of his life.
WRONG: Her husband hasn't ***gave*** her a birthday present yet.
RIGHT: Her husband hasn't ***given*** her a birthday present yet.
WRONG: He ***come*** in at midnight last night.
RIGHT: He ***came*** in at midnight last night.
WRONG: Having ***spoke*** to the audience for an hour, the speaker left the auditorium.
RIGHT: Having ***spoken*** to the audience for an hour, the speaker left the auditorium.

## MISPLACED CLAUSES, WORDS, AND PHRASES

Sentence এর meaning কে perfectly clear করতে হলে খেয়াল রাখতে হবে যেন ঐ sentence এর modifying element টি ঠিক জায়গায় বসানো হয়েছে। লক্ষ্য করুনঃ

WRONG: It ***only took*** two days to get there by train.
RIGHT: It ***took only*** two days to get there by train.
WRONG: He was hoping to ***by the end of the year find a job.***
RIGHT: He was hoping to ***find a job by the end of the year.***
WRONG: I ***nearly saw*** 100 bears at the zoo.
RIGHT: I ***saw nearly*** 100 bears at the zoo.
WRONG: To ***logically think*** in English is my goal.
RIGHT: To ***think logically*** in English is my goal.
WRONG: ***The tiger*** escaped from the cage ***which came from Africa.***
RIGHT: ***The tiger which came from Africa*** escaped from the cage.
WRONG: We ***almost have written*** twenty compositions this semester.
RIGHT: We ***have written almost*** twenty compositions this semester.
WRONG: ***The woman*** went to the dentist ***with a toothache.***
RIGHT: ***The woman with a toothache*** went to the dentist.
WRONG: He was asked to ***later*** sharpen his pencil.
RIGHT: He was asked to sharpen his pencil ***later.***
WRONG: I intend to after class ***go shopping.***
RIGHT: I intend to ***go shopping*** after class.
WRONG: The school children learned ***in 1942*** that Columbus had discovered America.
RIGHT: The school children learned that Columbus had discovered America ***in 1942.***
WRONG: The carpenter makes furniture for people ***of any size.***
RIGHT: The carpenter makes furniture ***of any size*** for people.
WRONG: ***Hiding in the bushes***, the policeman found the robber.
RIGHT: The policeman found the robber ***hiding in the bushes.***
WRONG: The vicuna has beautiful, silky hair ***which lives high in the mountains of Peru.***
RIGHT: The vicuna, ***which lives high in the mountains of Peru,*** has beautiful, silky hair.

WRONG: The mansion ***was constructed by a new company*** which the governor lives in.
RIGHT: The mansion which the governor lives in ***was constructed by a new company.***
WRONG: ***Jumping from branch to branch,*** I was fascinated by a squirrel.
RIGHT: I was fascinated by a squirrel ***jumping from branch to branch.***

## OMISSIONS

এমন কোন word omit (remove) করবেন না যেটি sentence এর necessary part. Study the following points carefully:

(1) Be certain to include the correct article if one is needed.

WRONG: On the way to ***office***, Richard stopped to buy a morning paper.
RIGHT: On the way to ***the office***, Richard stopped to buy a morning paper.
WRONG: Lying on the beach were a towel, a red ball, and ***broken*** tennis racket.
RIGHT: Lying on the beach were a towel, a red ball, and ***a broken*** tennis racket.
WRONG: It was ***so pleasant day*** that we sat on the patio for hours.
RIGHT: It was ***so pleasant a day*** that we sat on the patio for hours.

(2) Do not omit necessary prepositions.

WRONG: He is both interested in and ***dedicated*** cancer research.
RIGHT: He is both interested in and ***dedicated to*** cancer research.
WRONG: The person I ***spoke*** was a native of Raceland, Louisiana.
RIGHT: The person I ***spoke to*** was a native of Raceland, Louisiana.
WRONG: The thing that I was most ***surprised*** was his attitude.
RIGHT: The thing that I was most ***surprised at*** was his attitude.

(3) Do not omit important verb parts.

WRONG: The glasses were washed and the ***silver*** polished.
RIGHT: The glasses were washed and the ***silver was*** polished.
WRONG: I wanted her to help me, but she must not have ***wanted.***
RIGHT: I wanted her to help me, but she must not have ***wanted to.***
WRONG: Laziness in people always ***has*** and always will be one of my pet peeves.
RIGHT: Laziness in people always ***has been*** and always will be one of my pet peeves.

(4) Do not omit that from a dependent clause if there is a possibility that the reader will misunderstand the sentence.

WRONG: We saw ***Alex***, if not warned, would drive off the highway and onto the shoulder.
RIGHT: We saw ***that Alex***, if not warned, would drive off the highway and onto the shoulder.
WRONG: It is believed, especially in the capital, ***the government*** is gaining strength.
RIGHT: It is believed, especially in the capital, ***that the government*** is gaining strength.

(5) Do not omit necessary words in comparisons.

WRONG: The traffic in New Orleans is heavier than Baton Rouge.
RIGHT: The traffic in New Orleans is heavier than ***that of*** Baton Rouge
or
The traffic in New Orleans is heavier than in Baton Rouge.
WRONG: Earl is ***as tall***, if not taller than, Wade.
RIGHT: Earl is ***as tall as***, if not taller than, Wade.
WRONG: Owning a house is more expensive today.
RIGHT: Owning a house is more expensive today ***than it was in the past.***
WRONG: Teaching young children is not so different from teenagers.
RIGHT: Teaching young children is not so different from ***teaching*** teenagers.

## PARALLEL STRUCTURE

Parallel structure বলতে বোঝায় একই রকম grammatical structure যখন কোন sentence-এ series of action দেয়া থাকবে, তখন a noun with a noun, an infinitive with an infinitive, an active verb with an active verb, a preposition with a preposition, a clause with a clause, and an adjective with an adjective-এভাবে connect করতে হবে। লক্ষ্য করুনঃ

WRONG: The day is ***dark, with cloudy skies*** and ***has a high humidity***.
RIGHT: The day is ***dark, cloudy***, and ***humid***.
WRONG: As a teenager, she ***had babysat, working*** in a restaurant, and ***typing*** for her mother.
RIGHT: As a teenager, she ***had babysat, worked*** in a restaurant, and ***typed*** for her mother.
WRONG: The statesman died ***loved*** by his friends, ***feared*** by his enemies, and ***everyone respected him***.
RIGHT: The statesman died ***loved*** by his friends, ***feared*** by his enemies, and ***respected*** by everyone.
WRONG: I am studying the sources of educational theory and ***how educational theory has evolved.***
RIGHT: I am studying the sources and ***the evolution of educational theory.***
WRONG: I read Hegel ***for*** the profound ideas in his philosophy but ***not his style*** of writing.
RIGHT: I read Hegel ***for*** the profound ideas in his philosophy but ***not for his style*** of writing.
WRONG: In his hands he was holding ***a book*** and ***interesting*** magazine.
RIGHT: In his hands he was holding ***a book*** and ***an interesting*** magazine.
WRONG: He was not only sympathetic but also ***knew when to be considerate.***
RIGHT: He was not only sympathetic but also ***considerate.***
WRONG: Not only did he enjoy the movie but also the play.
RIGHT: He enjoyed not only the movie but also the play.
WRONG: He was successful both as ***a church architect*** and ***writing poetry***.
RIGHT: He was successful both as ***a church architect*** and ***a poet***.
WRONG: ***Playing*** tennis is more strenuous than ***to ride*** a bicycle.
RIGHT: ***Playing*** tennis is more strenuous than ***riding*** a bicycle.
WRONG: I was concerned about ***the price*** of the car and ***if it was comfortable.***
RIGHT: I was concerned about ***the price*** and ***the comfort*** of the car.
WRONG: Their homeland was cold and ***with many mountains.***
RIGHT: Their homeland was cold and ***mountainous***.
WRONG: Neither does he speak Spanish nor Helen.
RIGHT: Neither he nor Helen speaks Spanish.
WRONG: She wanted the ***roof repaired*** and ***to paint the fence***.
RIGHT: She wanted the ***roof repaired*** and ***the fence painted***.
WRONG: Poli decided ***to go to the university*** rather than ***a job***.
RIGHT: Poli decided ***to go to the university*** rather than ***to get a job***.
WRONG: Razu is a man ***of many ideas*** and ***who knows how to express them.***
RIGHT: Razu is a man ***who has many ideas*** and ***who knows how to express them.***
WRONG: He is a poor teacher but ***who treats*** his students fairly.
RIGHT: He is a poor teacher, but ***he treats*** his students fairly.
WRONG: For my birthday he gave me a watch ***and which*** I really like.
RIGHT: For my birthday he gave me a watch ***which*** I really like.
WRONG: The vicuna is a timid animal and which ***lives*** in Peru.
RIGHT: The vicuna is a timid animal which lives in Peru.

or

The vicuna is an animal ***which is timid*** and ***which lives in*** Peru.

WRONG: I learned ***that*** he was young, ***but he was***, nevertheless, ambitious.
RIGHT: I learned ***that*** he was young, ***but that he was***, nevertheless, ambitious.

## PAST PERFECT TENSE

Past perfect tense দ্বারা পূর্বে ঘটে গেছে (particular moment এর আগে) এমন ঘটনাকে বোঝায়। এক্ষেত্রে দুটি past এর মধ্যে একটি simple এবং একটি perfect (যেটি আগে ঘটেছে) tense ব্যবহৃত হয়।

WRONG: They said that they ***didn't meet*** him before.
RIGHT: They said that they ***hadn't met*** him before.
WRONG: We heard that the president ***gave a speech*** on television.
RIGHT: We heard that the president ***had given a speech*** on television.
WRONG: I was surprised to learn that she ***was*** injured in an accident.
RIGHT: I was surprised to learn that she ***had been*** injured in an accident.
WRONG: The librarian wanted to know where I ***lost*** the book.
RIGHT: The librarian wanted to know where I ***had lost*** the book.
WRONG: We found out that our friend ***went*** to California.
RIGHT: We found out that our friend ***had gone*** to California.
WRONG: The robber wouldn't say where he ***spent*** all the money.
RIGHT: The robber wouldn't say where he ***had spent*** all the money.
WRONG: When I saw him later, he ***gained*** over fifty pounds.
RIGHT: When I saw him later , he ***had gained*** over fifty pounds.
WRONG: Mr. Masud ***just left*** when his wife called.
RIGHT: Mr. Masud ***had just left*** when his wife called.
WRONG: She was hurt to learn that her boyfriend ***forgot*** her birthday.
RIGHT: She was hurt to learn that her boyfriend ***had forgotten*** her birthday.
WRONG: He asked me what countries I ***visited***.
RIGHT: He asked me what countries I ***had visited***.
WRONG: I discovered that someone ***drank*** all the milk.
RIGHT: I discovered that someone ***had drunk*** all the milk.
WRONG: I saw that my wallet ***was*** stolen when I opened my purse.
RIGHT: I saw that my wallet ***had been*** stolen when I opened my purse.
WRONG: The clerk assured me that she ***told*** the manager about my complaint.
RIGHT: The clerk assured me that she ***had told*** the manager about my complaint.
WRONG: It already ***began*** to rain when we started for the beach.
RIGHT: It ***had*** already ***begun*** to rain when we started for the beach.
WRONG: The little girl asked what ***happened*** to her dog.
RIGHT: The little girl asked what ***had happened*** to her dog.
WRONG: The senator declared that he ***voted*** for the new amendment.
RIGHT: The senator declared that he ***had voted*** for the new amendment.

## PERFECT INFINITIVES AND PERFECT PARTICIPLES

Perfect Infinitives and Perfect Participles তখনই use হয় যখন main verb এর action এর আগে ঘটনাটি ঘটে।

| PRESENT INFINITIVE | PERFECT INFINITIVE | PRESENT PARTICIPLE | PERFECT PARTICIPLE |
|---|---|---|---|
| to be | to have been | being | having been |
| to do | to have done | doing | having done |
| to go | to have gone | going | having gone |
| to see | to have seen | seeing | having seen |
| to write | to have written | writing | having written |

WRONG: I seem to ***leave*** my key in the car last night.
RIGHT: I seem to ***have left*** my key in the car last night.
WRONG: He would like to ***live*** during the eighteenth century.
RIGHT: He would like to ***have lived*** during the eighteenth century.
WRONG: ***Eating*** lunch, he took a nap.
RIGHT: ***Having eaten*** lunch, he took a nap.
WRONG: She is happy to ***meet*** Rumi when he was here.
RIGHT: She is happy to ***have met*** Rumi when he was here.

or

She ***was*** happy to meet Rumi when he was here.

WRONG: ***Driving*** for ten hours, we stopped to rest.
RIGHT: ***Having driven*** for ten hours, we stopped to rest.
WRONG: I would have been afraid to ***have touched*** the lion at the zoo yesterday.
RIGHT: I would have been afraid to ***touch*** the lion at the zoo yesterday.
WRONG: My mother would have liked to ***have been*** in Florida last week.
RIGHT: My mother would have liked to ***be*** in Florida last week.

or

My mother would ***like*** to ***have been*** in Florida last week.

## PRESENT PERFECT TENSE

Present perfect tense হচেছ সবচেয়ে বেশি ব্যবহৃত একটি tense. এই tense present time এ ব্যবহৃত হয় এবং কখনোই নির্দিষ্ট সময় এর সাথে ব্যবহৃত হয় না। লক্ষ্য করুনঃ

WRONG: I ***have bought*** a new hat last weekend. (present perfect)
RIGHT: I ***bought*** a new hat last weekend. (past)
WRONG: We ***don't have*** a meeting since last month.
RIGHT: We ***haven't had*** a meeting since last month.
WRONG: Where ***is he*** all day?
RIGHT: Where ***has he been*** all day?
WRONG: They ***are waiting*** in the hall for half an hour.
RIGHT: They ***have been waiting*** in the hall for half an hour
WRONG: The architect ***has finished*** his plans a week ago.
RIGHT: The architect ***finished*** his plans a week ago.
WRONG: ***Have you written*** your composition last night?
RIGHT: ***Did you write*** your composition last night?
WRONG: I ***don't see*** Pushon since last Monday.
RIGHT: I ***haven't seen*** Pushon since last Monday.
WRONG: He's looking for a wife, but he **doesn't find** one yet.
RIGHT: He's looking for a wife, but he ***hasn't found*** one yet.
WRONG: The foreign student ***doesn't meet*** many Americans so far.
RIGHT: The foreign student ***hasn't meet*** many Americans so far.
WRONG: I ***am already speaking*** to her about that matter.
RIGHT: I ***have already spoken*** to her about that matter.
WRONG: What ***are you doing*** since yesterday?
RIGHT: What ***have you been doing*** since yesterday?
WRONG: They ***don't see*** a movie in a year.
RIGHT: They ***haven't seen*** a movie in a year.
WRONG: He ***likes*** me ever since we met.
RIGHT: He ***has liked*** me ever since we met.
WRONG: My wife ***has died*** over six months ago.
RIGHT: My wife ***died*** over six months ago.
WRONG: The girl ***is practicing*** the piano since early this morning.
RIGHT: The girl ***has been practicing*** the piano since early this morning.
WRONG: I still ***don't learn*** to speak English very well.
RIGHT: I still ***haven't learned*** to speak English very well.
WRONG: Shakespeare ***has written*** many dramas.
RIGHT: Shakespeare ***wrote*** many dramas.

## REFERENCE OF PRONOUNS

Pronoun ব্যবহৃত হয় noun এর পরিবর্তে এবং একটি pronoun একটি নির্দিষ্ট হড়ঁহ কে replace করে। ঐ noun টিকে উক্ত pronoun এর antecedent বলা হয়। খেয়াল রাখতে হবে যেন antecedent clear থাকে। মনে রাখুনঃ

(1) Do not use two nouns as possible antecedents.

(2) Do not use which, this, or that to refer to an entire idea.

(3) Do not use the personal pronouns you, they, them, or it unless they refer to a particular noun.

WRONG: Sally told Linda that ***she*** was overweight.
RIGHT: Sally told Linda, "You are overweight."
or
Sally told Linda, "I am overweight."
WRONG: Mr. Daniel always challenges everything I say, ***which*** unnerves me.
RIGHT: Mr. Daniel always challenges everything I say, a habit which unnerves me.
WRONG: Oswald assassinated President John Kennedy. ***This*** shocked the world.
RIGHT: Oswald assassinated President John Kennedy. This crime shocked the world.
WRONG: Mr. Young said that he would sell his farm at a very cheap price. ***It*** surprised all of the members of the Farm Bureau.
RIGHT: Mr. Young said that he would sell his farm at a very cheap price. This statement surprised all of the members of the Farm Bureau.
WRONG: In college you have to study more than ***you do*** in high school.
RIGHT: In college one has to study more than he does in high school.
WRONG: He is bad at tennis because he can't hit ***them*** across the net.
RIGHT: He is bad at tennis because he can't hit the balls across the net.
WRONG: When Karim was painting the garage, some of ***it*** spilled on his pants.
RIGHT: When Karim was painting the garage, some of the paint spilled on his pants.
WRONG: In Chicago ***they*** have snow during the winter.
RIGHT: In Chicago the people have snow during the winter.
WRONG: In the newspaper ***it*** said that a new tax law had been passed.
RIGHT: The newspaper reported that a new tax law had been passed.

লক্ষ্য করুন, wrong sentence Gi underlined pronoun গুলো কাকে বা কোন জিনিসকে refer করছে, তা স্পষ্ট নয়।

NOTE: It is used correctly in the following sentences:

(1) It is clear that the students understood the lesson.

(2) It was suggested that he keep his old textbooks.

(3) It is fifty miles to the next town.

(4) It was foggy almost all morning.

(5) It was the clerk who made the mistake.

(6) I think that it is time for us to begin.

**RESTRICTIVE (IDENTIFYING) AND NON-RESTRICTIVE (NON-INDENTIFYING) ADJECTIVE CLAUSES**

Study the following sentences with restrictive adjective clauses:

(1) A student who studies hard usually learns quickly.
that studies hard

(2) I want a car which is economical to drive.
that is economical

(3) Thomas Edison was the scientist who invented the electric light.
that invented the electric light.

(4) I have already finished the lesson which the teacher assigned.
that the teacher assigned.

(5) The man whom you recommended did an excellent job.
that you recommended

Study the following sentences with non-restrictive adjective clauses:

(1) John Morgan, who studies hard, usually learns quickly.

(2) I want a Toyota, which is economical to drive.

(3) Thomas Edison, who invented the electric light, was a scientist.

(4) I have already finished Lesson Two, which the teacher assigned.

(5) San Peters, whom you recommended, did an excellent job.

Remember the following important points about restrictive and non-restrictive adjective clauses:

(1) Restrictive adjective clauses identify the noun which they modify.

(2) Non-restrictive adjective clauses describe, but do not identify, the noun which they modify.

(3) The relative pronoun that cannot be used in non-restrictive adjective clauses.

(4) Commas are used to set off non-restrictive adjective clauses.

WRONG: Iowa, ***that*** lies in the north-central section of the United States, is between the Mississippi and Missouri rivers.

RIGHT: Iowa, ***which*** lies in the north-central section of the United States, is between the Mississippi and Missouri rivers.

WRONG: The chief city of Hungary is Budapest, to ***that*** great damage was done during World War II.

RIGHT: The chief city of Hungary is Budapest, to ***which*** great damage was done during World War II.

WRONG: The Iowa country was first visited in 1673 by Joliet and Marquette, ***that*** were French explorers.

RIGHT: The Iowa country was first visited in 1673 by Joliet and Marquette, ***who*** were French explorers.

WRONG: Some important discoveries about gravitation were made by Sir Issac Newton, ***that*** was a seventeenth-century scientist.

RIGHT: Some important discoveries about gravitation were made by Sir Issac Newton, ***who*** was a seventeenth-century scientist.

WRONG: The impala, ***that*** is one of the fastest and most graceful of antelopes, is found wild only in Africa.

RIGHT: The impala, ***which*** is one of the fastest and most graceful of antelopes, is found wild only in Africa.

WRONG: Most of the world's supply of dates comes from Iraq, ***that*** is rapidly becoming an important modern country.

RIGHT: Most of the world's supply of dates comes from Iraq, ***which*** is rapidly becoming an important modern country.

WRONG: Kentucky was the home of Abraham Lincoln, ***that*** was president during the Civil War.
RIGHT: Kentucky was the home of Abraham Lincoln, ***who*** was president during the Civil War.

## SHIFT IN TENSE

বর্ণনামূলক লেখার ক্ষেত্রে আপনাকে verb এর tense এ সামঞ্জস্য রাখতে হবে। আপনি যদি একটি tense দিয়ে শুরু করেন, গ্রহনযোগ্য কারণ ছাড়া sentence এর মাঝখানে অন্য tense use করবেন না। লক্ষ্য করুনঃ

WRONG: After the bell rings, it ***was*** time to close the door.
RIGHT: After the bell rings, it ***is*** time to close the door.
WRONG: Everyone in class knew that the examination ***is*** going to include six chapters.
RIGHT: Everyone in class knew that the examination ***was*** going to include six chapter.
WRONG: When I spoke to him, he ***is*** just getting ready to leave.
RIGHT: When I spoke to him, he ***was*** just getting ready to leave.
WRONG: As soon as I finish biology, I ***take*** chemistry.
RIGHT: As soon as I finish biology, I ***will take*** chemistry.
WRONG: She once heard a record of his, but she ***never sees*** him in person.
RIGHT: She once heard a record of his, but she ***has never seen*** him in person.
WRONG: As the ship sank, he jumped overboard and ***tries*** to keep himself afloat.
RIGHT: As the ship sank, he jumped overboard and ***tried*** to keep himself afloat.
WRONG: He had a serious operation while he ***is*** in the hospital.
RIGHT: He had a serious operation while he ***was*** in the hospital.
WRONG: I will answer the phone if it ***rang***.
RIGHT: I will answer the phone if it ***rings***.
WRONG: Like almost all teachers, she was well prepared and never ***comes*** to class late.
RIGHT: Like almost all teachers, she was well prepared and never ***came*** to class late.
WRONG: When we reached the station, it ***is*** well after midnight.
RIGHT: When we reached the station, it ***was*** well after midnight.
WRONG: When you got home, ***do*** you notice what time it was?
RIGHT: When you got home, ***did*** you notice what time it was?
WRONG: That essay is very timely even though it ***is*** written two hundred years ago.
RIGHT: That essay is very timely even though it ***was*** written two hundred years ago.
WRONG: If you had told her that she was wrong, she ***would be*** angry.
RIGHT: If you had told her that she was wrong, she ***would have been*** angry.
WRONG: When Napoleon ***loses*** the Battle of Waterloo, he was exiled to the island of St, Helena.
RIGHT: When Napoleon ***lost*** the Battle of Waterloo, he was exiled to the island of St. Helena.

## SIMPLE PRESENT AND PRESENT CONTINUOUS TENSES

Simple present tense সাধারণত permanent বা habitual (অভ্যাসজনিত) action এর জন্য ব্যবহৃত হয়। Present continuous tense, অথবা real present সেসব action কে বোঝায় যেগুলো এই মূহুর্তে ঘটছে ( at the moment of speaking ).

WRONG: I see that you ***wear*** your new coat today.
RIGHT: I see that you ***are wearing*** your new coat today.
WRONG: The sun ***is giving*** us light.
RIGHT: The sun ***gives*** us light.
WRONG: He ***sleeps*** because he worked very hard this morning.
RIGHT: He ***is sleeping*** because he worked very hard this morning.

WRONG: When I go to work, I generally ***am meeting*** many school children.
RIGHT: When I go to work., I generally ***meet*** many school children.
WRONG: I ***listen***, but I cannot hear a sound.
RIGHT: I ***am listening***, but I cannot hear a sound.

WRONG: He needs to wear warm clothes today because it ***freezes***
RIGHT: He needs to wear warm clothes today because it ***is freezing***.
WRONG: How often ***are you studying*** in the library?
RIGHT: How often ***do you study*** in the library?
WRONG: That man who ***talks*** to the policeman just got a ticket.
RIGHT: That man who ***is talking*** to the policeman just got a ticket.
WRONG: Policemen ***are issuing*** ticks to speeders.
RIGHT: Policemen ***issue*** tickets to speeders.
WRONG: Look! That woman *runs* to catch the bus .
RIGHT: Look! That woman ***is running*** to catch the bus.
WRONG: They ***are sitting*** in class everyday for several hours.
RIGHT: They ***sit*** in class everyday for several hours.
WRONG: When the student wants to ask a question, he ***is raising*** his hand.
RIGHT: When the student wants to ask a question, he ***raises*** his hand.
WRONG: Why ***do you wash*** your car this morning?
RIGHT: Why ***are you washing*** your car this morning?
WRONG: Bad students usually ***are not working*** hard.
RIGHT: Bad students usually ***do not work*** hard.
WRONG: I almost always think in English, but today I ***think*** in my native language.
RIGHT: I almost always think in English, but today I ***am thinking*** in my native language.

## UNINFLECTED VERBS

The uninflected form of the verb (the simple infinitive) in a dependent noun clause is used after some particular verbs or expressions. Study the list of verbs and expressions below which are often followed by a noun clause with an uninflected verb. নিম্নোক্ত verbs এবং expressions গুলোর পরে সাধারণত simple infinitive ব্যবহৃত হয়।

| | |
|---|---|
| ask | require |
| advise | request |
| command | suggest |
| insist | urge |
| order | essential that |
| prefer | important that |
| propose | necessary that |
| recommend | urgent that |

WRONG: The director advises that we ***are*** on time for the next meeting.
RIGHT: The director advises that we ***be*** on time for the next meeting.
WRONG: The counselor has insisted that Tommy ***takes*** time to relax.
RIGHT: The counselor has insisted that Tommy ***take*** time to relax.
WRONG: Did the general urge that his troops ***fought***?
RIGHT: Did the general urge that his troops ***fight***?
WRONG: My father suggested that I ***didn't*** buy a used car.
RIGHT: My father suggested that I ***not*** buy a used car.
WRONG: It is essential that each camper ***brings*** his own equipment.
RIGHT: It is essential that each camper ***bring*** his own equipment.
WRONG: Is it important that she ***finishes*** the typing today?
RIGHT: Is it important that she ***finish*** the typing today?
WRONG: Was it recommended that the young woman ***didn't*** drive after dark?

RIGHT: Was it recommended that the young woman ***not*** drive after dark?
WRONG: It seemed urgent that the meeting ***began*** immediately.
RIGHT: It seemed urgent that the meeting ***begin*** immediately.
WRONG: Your request that the test ***is*** delayed has been denied.
RIGHT: Your request that the test ***be*** delayed has been denied.

## WISH CLAUSES

Notice the meaning of the following sentences with the verb wish:

(1) I wish that he were here today.
(But he isn't here today.)

(2) The boys wish that they had won the game.
(but they didn't win game)

(3) She wishes that he could understand Japanese.
(But she can't understand Japanese.)

(4) Farmers wish it would rain soon.
(Farmers want it to rain soon.)

(5) I wish you would eat your food.
(But you won't eat your food. You refuse to eat your food.)

Wish verb ব্যবহার করে sentence লেখার সময় নিচের important point গুলো মনে রাখতে হবে।

(1) In a wish clause, the verb is never in the present tense. Therefore, you can never use **will** or **can** in the wish clause.

(2) The word **that** is often omitted in the wish clause.

(3) Instead of **was**, use **were** in the wish clause.

(4) Don't use **would have** in the wish clause. Use **had**.

WRONG: I wish you ***would have*** called me yesterday.
RIGHT: I wish you ***had*** called me yesterday.
WRONG: The student wishes that he ***took*** English in high school.
RIGHT: The student wishes that he ***had taken*** English in high school.
WRONG: I wish it ***rains*** more in this area during the spring.
RIGHT: I wish it ***rained*** more in this area during the spring.
WRONG: Don't you wish you ***can*** dance better?
RIGHT: Don't you wish you ***could*** dance better?
WRONG: I wish I ***knew*** you ten years ago.
RIGHT: I wish I ***had known*** you ten years ago.
WRONG: The secretary wishes that she ***has*** time to type the letter now.
RIGHT: The secretary wishes that she ***had*** time to type the letter now.
WRONG: I wish you ***won't*** interrupt me while I'm taking.
RIGHT: I wish you ***wouldn't*** interrupt me while I'm talking.
WRONG: She wishes that she ***was*** a good actress.
RIGHT: She wishes that she ***were*** a good actress.

## WORDINESS

Avoid wordiness by choosing economical constructions to express ideas clearly and concisely and by eliminating all unnecessary words. নিচের বাক্যগুলোতে শব্দের বাহুল্য (wordiness) কিভাবে avoid করা হয়েছে লক্ষ্য করুনঃ

WORDY: There are several causes of malnutrition, one of which is vitamin deficiency.
CONCISE: Vitamin deficiency is one cause of malnutrition.
WORDY: I think that Being There is Peter Sellers' best movie, superior to all others.

CONCISE: I think that Being There is Peter Sellers' best movie.
WORDY: Regarding the subject of laws governing motorists, many people feel that the speed limit should be increased to sixty-five miles per hour.
CONCISE: Many people feel that the speed limit should be increased to sixty-five miles per hour.
WORDY: The novel was neither interesting nor was it well written.
CONCISE: The novel was neither interesting nor well written.
WORDY: The famous singing group, "The Rolling Stones," is known internationally throughout the world.
CONCISE: "The Rolling Stones" is an internationally known singing group.
WORDY: The reason why he left New York two days early was that he had to attend a conference in Miami.
CONCISE: "He left New York two days early to attend a conference in Miami.
WORDY: There are various and sundry reasons why one should avoid discussing religion.
CONCISE: There are various reasons why one should avoid discussing religion.
WORDY: The Bridge stretched across the vast swampland, and the bridge was twenty-five miles long.
CONCISE: The twenty-five-mile-long bridge stretched across the vast swampland.
WORDY: It was clearly evident that the grass had been cut.
CONCISE: It was evident (or it was clear) that the grass had been cut.
WORDY: She is a tennis player who plays tennis regularly.
CONCISE: She plays tennis regularly.
WORDY: I picked up the heavy tools with my two hands.
CONCISE: I picked up the heavy tools with my hands.
WORDY: Sir Thomas More was a writer who wrote Utopia.
CONCISE: Sir Thomas More wrote Utopia.
WORDY: There is a society called the Audubon Society, which was named in honor of John Audubon, the great artist.
CONCISE: The Audubon Society was named in honor of John Audubon, the great artist.

## WORD ORDER

The order of most adverbs in English is very flexible, and their position is often changed. Adverb এর position কোথায় হবে তা জানার general rules গুলো হলো-

(1) The normal position for most adverbs is at the end of the sentence. An adverb of manner will come first, followed by an adverb of place, and finally, an adverb of time.

(2) The verb and object are never separated by an adverb.

(3) The adverb of time often comes at the beginning of a sentence.

(4) With verbs of movement, the place adverb follows the verb.

লক্ষ্য করুন, নিচের sentence গুলোতে adverb কোথায় বসেছে লক্ষ্য করুন

WRONG: He spoke at the meeting knowledgeably this morning. } adverb of manner বসেছে
RIGHT: He spoke knowledgeably at the meeting this morning. } adverb of place এর আগে।
WRONG: The family came in 1975 to the United States by boat. } place adverb verb কে
RIGHT: The family came to the united States by boat in 1975. } follow করেছে।
WRONG: I read quickly the letter from my parents. } adverb দ্বারা verb ও object
RIGHT: I read the letter from my parents quickly. } কে separate করা যায়না।
WRONG: The student spent in the library six hours yesterday. } adverb of time verb কে
RIGHT: The student spent six hours in the library yesterday. } follow করছে।
WRONG: Do you want to go to tonight to the movies? } verb এ object logical

RIGHT: Do you want to go to the movies tonight? order এ থাকছে।
WRONG: The Arab speaks very well English. } normal position of adverb
RIGHT: The Arab speaks English very well. }
WRONG: She does completely her assignments every night. } verb I object logical
RIGHT: She does her assignments completely every night. } order এ থাকছে।
WRONG: My husband prefers to eat at home his lunch at noon. } verb ও object logical
RIGHT: My husband prefers to eat his lunch at home at noon. } order থাকছে।

**Additional notes on word order:**

(1) In noun clauses introduced by a question word, use statement word order.

**Example:** I'm not sure what he bought at the store.

(2) Place the frequency adverb in front of the principal verb of the sentence except for the verb "be."

**Example:** The chairman is always on time.
**Example:** The children never quarrel with each other.
**Example:** We have often visited them.

(3) When a sentence begins with a negative or near-negative word or phrase, use question word order.

**Example:** Never do the children quarrel with each other.
**Example:** Only at the zoo can you see monkeys.
WRONG: I forget sometimes my phone number.
RIGHT: I sometimes forget my phone number.
WRONG: We just have finished eating.
RIGHT: We have just finished eating.
WRONG: The highways usually are crowded on the weekend.
RIGHT: The highways are usually crowded on the weekend.
WRONG: Rarely I have been to court.
RIGHT: Rarely have I been to court.
WRONG: Almost never he irons his own clothes.
RIGHT: Almost never does he iron his own clothes.
WRONG: Hardly ever they attend church.
RIGHT: Hardly ever do they attend church.
WRONG: Not only he broke two glasses, but also he left the table dirty.
RIGHT: Not only did he break two glasses, but also he left the table dirty.
WRONG: Nowhere in this city you will find high fashion.
RIGHT: Nowhere in this city will you find high fashion.
WRONG: Do you know why is he so angry?
RIGHT: Do you know why he is so angry?
WRONG: It is unclear how did he escape.
RIGHT: It is unclear how he escaped.
WRONG: He doesn't know when will he be here again.
RIGHT: He doesn't know when he will be here again.
WRONG: Please show me how does this machine work.
RIGHT: Please show me how this machine works.
WRONG: I'm never quite sure whom can I trust.
RIGHT: I'm never quite sure whom I can trust.
WRONG: I need to know what time is it.
RIGHT: I need to know what time it is.
WRONG: Cam you tell me where is his house?
RIGHT: Cam you tell me where his house is?
WRONG: I wonder why did he tell a lie.
RIGHT: I wonder why he told a lie.

# PRACTICAL USAGE

This chapter includes some practical English usage materials. This stuff is brought about to in this book from the well-renowned English Grammar Book **PRACTICAL ENGLISH USAGE** by **MICHAEL SWAN**.
Go through these things. This will help you recognize the errors in the grammatical section. This section will also help you for the Written English section.

**About and On:**
***On*** is used to suggest that a book, article, lecture etc is serious or academic, suitable for specialists. ***About*** is usual when the information given is more general, or the style of communication is more casual.
Example:
a textbook on African history ;a book for children about Africa and it's peoples ;
a lecture on economics ; a conversation about money ;
an article on British industrial problems ;an argument about strikes.

**Above and over:**
Above and over can both be used to mean 'higher than '.
Example: The water came up above /over knees. Can you see the helicopter above /over the place?
When the meaning is 'covering' or 'crossing ' , we usually use over.
Example: The plane was flying over Denmark. Electricity cables stretch over the fields.
With numbers , and expressions of quantity or measurement , it is more common to use over (= 'more than ').
Example: There were over 10,000 people at the pop festival. You have to be over 18 to see this film.
But above is used when we think about measurement on a vertical (up and down) scale.
Example: The temperature is three degrees above Zero. She's well above average in intelligence.

**Confusing Adjectives and adverbs:**
**Across and through:**
Across and through can both be used for a movement from one side of an area to another.
Across is related to on –it suggests that the movement is on a surface. Through is related to in –you move through a three dimensional space, with things on all sides.
Example: I walked across the square to the café. I pushed through the crowds to the bar.

Through is not used for a movement from one side to other of something 'long and thin ', like a river.
Example: She swam across the river. (Not through the river)

**Across and Over:**
The preposition across and over are often used with same meanings but there are some differences.

They can both be used to mean "on or to the other side "of a line , river road etc.
Example: We walked over/across the road. His room's just over /across the corridor.
Both across and over can mean "on the other side of 'a high barrier, but only over is used for movement to the other side of something high.

Example: If we can be over/across the fence before sunrise we've got a chance.
When I last saw him he was climbing very slowly over the fence. (Not across the fence).

The preposition across and over can both be used for movement inside an area.
Example: Who are those people wandering across /over the field?
However, when we mean 'from one side to other side of the area ', we only use across.
Example : It only took him six weeks to walk across the desert.(Not over the desert)

**Ago:**
Ago is placed after an expression of time, not before it.
Example: I met her three years ago; a long time ago.

Ago is used with a past tense, not the present perfect.
Example: I left school years ago.

Ago and for are not the same. Ago tells you how long before the present something happened ; for tells you how long an action or situation lasted .
Example: My father died three years ago. He was ill for three years before he died.

**Alike :**
Alike means 'like each other '.It is only used after a verb .
**Example:** His two daughters are very ( much ) alike. He's got two similar –looking daughters. (Not .....alike daughters).

**All and whole:**
Whole and all are often used with the same meaning. However the word order is different .All comes before an article, possessive or other determiner; whole comes after articles etc.
Example: all the time, the whole time.
All my life. My whole life.

**Almost and nearly:**
Nearly and almost have similar meanings, and in many cases they can both be used without much difference. Usually, almost is used to mean that something is a little nearer than nearly. We might say It's nearly lunch time. It's almost lunch time.
Example: We are nearly there. We are almost there.
She is nearly six feet tall. She is almost six feet tall.
Sometimes almost don't talk about progress towards an end or about things that are easy to measure .In cases like these almost, not nearly, is used.
Example: I almost think you're right. It's almost incredible.
My aunt almost sounds foreign. In that long dress she looks almost graceful.
Nearly is not often used with never, nobody, no-one, nothing nowhere, no and none. Instead we use almost and ,or we use hardly with a non-negative form.

Example: Almost never Almost nobody
Hardly anybody Hardly ever

**Along:**
Along is used with nouns like river, corridor, road, line (words that refer to things with a long, thin shape.
Example: I saw her running along the road.
His office is along the corridor.

But with more abstract words (or nouns that refer to time or activities),
We use through.
Example : All through the journey...
Through the story we learn how to .....

**Already and all ready :**
Already means by now, sooner than expected.
Example: She is already here - I was not expecting her till ten.

All ready is just a combination of the two words all and ready.
Example: Are you all ready ?

**Anyway:**
Anyway most often means 'What was said before does not matter'.
Example: I can't remember when Shakespeare died .Perhaps it was in 1614 or 1615 – anyway, I know it was around then.
Any how is used in a same way.
Do not confuse anyway and any way .
Example: She was not very polite , but anyway ,I helped her.
Can I help you any way?

**In :**
In is also used to say how soon something will happen, and to say how long something takes to happen.

Example: Ask me again in three or four days.
I can run 200metere in about 23 seconds.
The expression in.....'s time normally refers to the future.
Example: I'll see you again in a week's time.
It'll be finished in about three week's time.

**AT, IN and ON expression of place**
Pronunciation: At has a week from and this is the most usual pronunciation. In and on do not have weak forms.

GENERAL
At, in and on are all used to talk about position in space. The difference between them are rather complicated, and it is not always easy to know which of three is correct.

AT A POINT
Example: My house is at the third crossroads after the bridge.
If you are at the North Pole, every direction is south.

ON A LINE
Example: We've got a nice little cottage on the river.
There's a good restaurant on the Glasgow road.

ON A SURFACE
Example: What's that black mark on the ceiling?
You used to have a picture on that wall, didn't you?

**ON [Lines]:**

We use on to say that something is touching or close to a line, or something like a line [e g a river, a road, a frontier].

Example: We live on a small river that flows into the Tames.
Carlisle is on the road to Newcastle on Tames.

Note : However that in is used to talk about the position of things which actually form part of the line.

Example: There's a misprint in the sixth line on page 22.
Who's the blonde girl the front row?

On is also used for a fixed location by a body of water.

Example: Bowness is on Lake Windermere.
Southened is on Sea.

**ON [surfaces:]**

ON is often used to say that something is resting on top a surface. However, it can also be for position in contact underneath a surface.

Example: Come on – supper's on the table!
We spent the afternoon in a boat on the lake.
I think that picture would I look better on the other wall.
I've got something on the sole of my shoe.
I wish I could walk on the ceiling like a fly.

**IN:**

In is used when n the surroundings are three – dimensional [when something id surrounded on all sides.]

Example: Who's the stay man in the wardrobe?
I won't stay in bed; I'll just lie down on the bed for half an hour.
I've lost my ball in the long grass. [but on the lawn].

In is also used for position on a surface with a wall, fence etc round it [so that it seems enclosed ands three dimensional].

Example: Let's picnic in that field over there.
I last saw her in the car park. [but on the beach ]

With larger areas [countries, regions, and large island] we say in even if they are not enclosed.

Example: She lives with Buckinghamshire
He lived with nomads in the Sahara desert for two years.
I've got a cottage in Jersey.[ but on a desert island]

**Part of the Body**

Typical mistake: She had blood in her forehead.

On is used with the names of most part of the body surface.

Example: She had blood on her forehead.
I kissed her on both cheeks.

In is used with the softer and more "hollow' parts of the surface.

Example: I hit him on the jaw/ ear/ shoulder /nose/neck.
I hit him in the eye / mouth/ ribs/stomach.

In is usually used to talk about wounds, and [of course ] for position inside the body .
Example: He was wounded in the shoulder.
I've got a pain my head.

**Means of Transport**

On [or onto ] and off used to talk about public transport [ and of course horses, motorbikes and bicycles]. In other cases [e g cars , taxis, lorries ,small boats private planes]we normally use in, into, out and out of.

Example: You'd better get on the next plane to Berlin.
He was arrested as he got off the train.
I saw Gloria in a new Mercedes yesterday.
The taxi stopped and a beautiful girl got out.

**Addresses:**

At is used with the house number:
Example: She lives at number 73.

In British English, in is used with the name of the street, but American says on:
Example: She lives in Hazel Avenue. [British]
She lives on Hazel Avenue.
If both the number and the street name are given, only at is used.
Example: She lives at 73 Hazel Avenue.

On is used with the word floor [to say what part of a house somebody lives in].
Example: I live on the third floor.

Note that the names of the floor are not the same in British and American English:
Example:

| U.S | G.B |
|---|---|
| Third | Second |
| Second | first |
| First | ground |

**At [target]:**

At is used after several verbs to indicate the target of an attack of some sort. The most common are shoot at , throw.....at, shout at , laugh at .[ Throw .....to and shout to are used when there is no idea of attack.] We also say smile at and arrive at [never * arrive to].

**Wake (Up)/And Waken**

Wake (woke, woken) is the commonest word of these two. It is used to mean stop sleeping or stop (somebody else) sleeping. It is often followed by up.
Example: Could you wake me (up) at about eight?
I woke (up) early this morning.
Regular forms (waked) are also possible, but they are unusual in British English.

Waken (regular) is sometimes used instead of wake with a direct object.
Example: The prince wakened her with a kiss on the forehead.

**Awfully/ terribly/ frightfully,** etc.

Awfully, and some other words with similar meanings, are often used in informal English to mean 'very'. (They are particularly common in upper-class speech.).

Example:

Awfully sorry to trouble you – could you help me for a moment?
The film was terribly good.
It's getting dreadfully late.
She's a frightfully nice girl.

Note the difference between the adjectives terrific and terrible. Terrific is used in an informal style to mean 'very good'; terrible means 'very bad'.

Example:

There's a terrific new restaurant in South Street – shall we go there for lunch?
Don't ask me to take you – I'm a terrible driver.

**Back:**

Back (or back again) is used for a movement in the opposite direction to the movement that was talked about before.

Example:

Give my watch back to me. ( or: Give back my watch to me.)
Give it back to me.
I think I'll take the meat back to the shop. ( Or : .... Take back the meat ....)
I think I'll take it back.

Again (without back) is different. It is an adverb, and is generally used to indicate a repetition of the same action or movement.

Example:

When I've recorded your voice I'll play it back (again).
That was lovely. Can you play it again?
I enjoyed our evening at Susan's place. We must invite her back (again).

**Be** (as progressive tenses):

You can say I'm being careful or You're being annoying, but not
I'm being happy or She's being tired.
We use the progressive tenses of be (I'm being, etc), to talk about people's activity and behavior, but not about states of mind and feelings.

Example:

I'm being careful.
You're being annoying.
You're being very patient with me.
She was being terribly energetic .
You were being stupid (= behaving stupidly).

**Be + infinitive :**

This structure is often used to talk about arrangements which have been planned for the future.

Example:

The Queen is to visit Japan next year.
There's to be a rail strike on July 18th.

Be + infinitive can also be used to give orders. (Parents often tell children to do things in this way.)

Example:

You're to do your homework before you watch TV.
Tell her she's not to be back late.

**Because and because of:**

Typical mistakes : I was worried because of Mary was late.
She was late because the traffic.

Because is a conjunction (used before a clause, with a subject and verb); because of is a preposition (used before a noun or pronoun).

Example:

I was worried because Mary was late.
She was late because of the traffic.

**Been and gone:**

Both of these words are used as past participles of to go, but with different meanings.

Example:

My husband's gone to London today. (He hasn't returned.)
My husband's been to London today. (And he's returned.)
Mary's gone to Nigeria. (She's there now, or on her way.)
Have you ever been to Nigeria? (Said to somebody who is not in Nigeria.)

**Before and in front of:**

Typical mistake: I think I'll put the desk before the window.

In modern English, before is not very often used as a preposition of place; we use in front of instead.

Example:

I think I'll put the desk in front o the window.
There's a car parked right in front of our gate, and I can't get out!
Before is used to refer to place in a few cases:
Talking about the order in which things come (in lists, etc.)
Your name comes before mine.

Sometime before is used to mean 'in the presence of (somebody important)'

Example:

I came up before the magistrates for dangerous driving last week.

**Begin, start and commence:**

In many cases, begin and start can be used with no real difference.

Example:

I started/began mountain climbing when I was eighteen.
It's no use waiting for Jeremy – let's start/begin.
In an informal style, start is more common than begin. It would seem more natural to say Damn, it's starting to rain! Than Damn, it's beginning to rain!
Start is used in some cases where begin is not possible.

Example:

'To start a journey'
I think we ought to start at six, while the roads are still clear.
'To start working' (for machines)
The car won't start.
'To make (machines) start'
How do you start the washing machine?

**Commence:**
Commence is used in the same way as begin, but it is a much more formal word, and unusual in spoken English.
Example:
Term will commence on September 4th.

**Belong:**
Typical mistake : It's belong to me.

Belong is a verb: we say It belongs to me.

Note also the use of belong before a preposition or adverb, to talk about the right place for a person or thing.
Example:
The knives belong in the left-hand drawer.
I don't really feel I belong in the accounts department.
We belong together.

**Beside and besides:**
Beside is a preposition that means 'at the side of' or 'by',
Example:
Who's the big blonde sitting beside Philip?

Besides is both a preposition and an adverb.

As a preposition, it is used rather like as well as, when we want to add new information to what is already known.
Example:
Besides literature, we have to study history and philosophy. (history and philosophy as well as literature)
Who was at the party besides Jack and the Bensons? (I know about Jack and the Bensons, but who else was there?)

As an adverb, it means 'also', 'moreover' or 'as well'. It usually goes before a clause.
Example:
I don't like those shoes; besides, they're too expensive.
It's too late to go out no. Besides, it's starting to rain.

**Better:**
We often say that someone is better when we mean that he has recovered from an illness. In this sense, better can be used with the words completely or quite. (Other comparative adjectives cannot be used in this way:
Example:
Don't start work again until you're quite better.
Do not use better to correct a mistake. We say or rather.
Example:
She's gone to Hungary – or rather Poland.

**Can and could :**
Typical mistakes:
I can to swim.

Do you can speak French?
I'd like to can stay here.

Can and could are 'modal auxiliary' verbs, like for example must, should and may. These verbs have no infinitives or participles (to can, canning, I've could do not exist) ; when necessary, we use the infinitives and participles of other verbs instead.
Example:
I'd like to be able to stay here.
You'll be able to walk soon. (Not: You'll can ...)
I've always been allowed to do what I like. (Not: I've always could ...)

Like other modal auxiliary verbs, can has no -s with the third person (he cans); questions and negatives are made without do (can you?, not do you can?) can and could are followed by an infinitive without to.
Example:
I can swim.
Can you speak French?
Can Shirley get here by lunchtime, do you think?
Could is not only the past of can: it can be used to talk about the present and the future.
You could be right.
Could I see you tomorrow evening?

Could also have a conditional use.
I could marry him if I wanted to. (=I would be able to ...)

**Can as Present and future:**
Can is usually used to talk about the present, or about 'general ability' – the ability to do something any time you want to.
Example:
Look! I can do it!
You can certainly cook, even if you can't do anything else.

Be able to is also possible, but less common.
Example:
You are certainly able to cook.
You are certainly able to beat him.

To talk about future ability, will be able to is normally used.
Example:
I'll be able to speak German in another few months.
One day people will be able to run a kilometer in two minutes.
If I have a good sleep I'll be able to work out the problem.

But can is often possible when people make present decisions about future ability.
Example:
We're too busy today, but we can repair your car tomorrow.
We can talk about that later.
Can you come to a party on Saturday?

Could is used for 'general ability', to say that you could do something any time you wanted to. (Was/were able to is also possible.)
Example:
She could sing like an angel when she was a kid. (Or: She was able to sing ....)
My father could speak ten languages.

Could is also used in a conditional sense (meaning 'would be able to')
Example:
I could have a really good time if I had a flat of my own.
We could do it by midday if we had the tools.
I could break your neck!

**Can and could with see, hear, etc. :**
The verbs see, hear, feel, smell and taste have several different meanings.
Example:
I'm seeing him tomorrow. (=I'm interviewing him)
I can see stars. (Not: *I'm seeing .....)

Could is used for the past.
Example:
I can see Henry over there.
I can feel something crawling up my leg.
When I got off the train I could smell the sea.

**Can and could, may and might as possibility:**
Typical mistakes: Will you answer the phone? It can be your mother.
According to the radio it can rain this evening.

When we say that something is possible, we can mean two different things.
Example:
It's possible to hold one's breath for three minutes, with practice.
'Do you think you'll come back next year?' – 'It's quite possible.

When we want to say that there is a chance of something happening, we use could (or may or might).
Example:
Will you answer the phone? It could (may, might) be your mother.
According to the radio it could (may, might) rain this evening.

**Can and could, may and might as permission:**
Can, could, may and might are all used in asking for permission. Can is probably the commonest of the four (though some people consider that can is 'not correct' and that one should say May I ..... ?).
Example:
Can I have a drop more whisky?
Could I ask you something, if you're not too busy?

May and might are used in a more formal style; they often suggest respect. Might is more hesitant, and is not very common.

Example:
May I make a suggestion?
May I stop work a little earlier tonight?
Might I take the liberty of pointing out that you have made a small mistake?

**As Conditional:**
Could can be used in a conditional sense (='would be allowed to'). With a perfect infinitive, it means 'would have been allowed to'.
Example:
He could borrow my car if he asked.
I could have kissed her if I'd wanted to.

**Can and could as offers and requests:**
Can and could are often used to offer to do things for people, and to ask other people to do things. Could is more 'hesitant', less definite, than can, and it is used when we want to make an offer or a request seem more polite or respectful. Statements and questions are both common.

**Offers :**
Example:
I can lend you a pound till Wednesday, if that will help.
I could do the shopping for you, if you're tired.
Can I carry your bag?
Could I give you dinner one of these days?
In questions, may is also possible
May I buy you a drink?

**Requests and orders:**
Example:
You can start by doing the washing up, and then you can clean the car.
Celia can do the shopping, and I'll do the cooking. Harold can do the washing-up.
You could phone Alice and see what time she's coming.
Can you come here a minute, please?
Could you help me with this letter?

**Borrow and lend**
Typical mistakes: Can I lend your bicycle?
Can I borrow you five pounds?

Borrowing is like taking. You borrow something from somebody.
Example:
Can I borrow your bicycle?
I borrowed a pound from my brother.

Lending is like giving. The verb can be used with two objects, or with the preposition to (like give).
Example:
Lend me your comb for a minute, will you?
I lent my car to my brother's girl-friend, and she smashed it up.

In passive sentences, lend (but not borrow) can be used with a personal subject.
Example:
We've been lent a cottage in the Alps for the summer.

**Both:**

Both can be used in two main ways in a sentence. It can come in the noun group (with the subject or object), or it can come with the verb.

Example:

Both (of) the children have been to Greece.
The children have both been to Greece.

There is no real difference of meaning in these two ways of using both, but there are one or two grammatical problems. Both (with or without of) can be followed by the + noun, by possessive + noun, or by demonstrative + noun.

Example:

Both (of) the cars broke down soon after the start.
Both (of) my children are fair-haired.
I got both (of) these vases in Spain.

Both is used without of if there is no article, possessive or demonstrative with the noun.

Example:

I've got blisters on both feet. (Not: * ... both of feet.)
Both children have been to Greece.

**Bring and take**

Typical mistake: Let's have one more drink, and then I'll bring you back home.

It is not always easy to choose correctly between these two words. Basically, bring is used for a movement towards the person who is speaking or writing; take (in one sense) is used for movements in other directions.

Example:

Come over here and bring your book.
I'm bringing my wife back home from hospital this evening.
I once had to take a group of students from Rome to Berlin.
Let's have one more drink, and then I'll take you back home.

**By and near**

By means just at the side of; something that is by you may be closer than something that is near you.

Example:

We live near the sea (perhaps five kilometer away).
We live by the sea (we can see it).

**By: time**

One meaning of by is not later than. For instance, by five o'clock means at or before five, but not after.

Example:

You can borrow my camera, but I must have it back by five o'clock.

By the time (that) is used with a verb, to mean not later than the moment that something happens.

Example:

I'll be in bed by the time you get home.
By the time that the security guards had realized what was happening, the gang were already inside the bank.

**Determiners**

Articles (a, the), possessives (my, your, etc) and demonstratives (this, that, these, those) are grammatically similar. They all come at the beginning of noun phrases.

Example:

a nice day  my fat old cat  this house

Grammarians call these words (and some others) 'determiners'. Usually, only one determiner can be used in noun phrase. You can say the house, my house, this house, but not *the may house or *the this house or *this my house.

The other determiners are :

Some, any, no

Each, every; either, neither

What, whatever; which; whichever

Enough

Much, many, more, most; little, less, least; few, fewer, fewest several

All, both, half

These determiners, too, are used at the beginning of noun phrases,

Example:

some strange people  either possibility  what time?

Enough money  most problems  several warm days

Both lecture rooms

Most of the words in the list in section 2 above can also be used as pronouns, without nouns.

Example:

I've found some.

You can choose either.

What do you want?

I haven't go enough.

There are several.

Both need cleaning.

Most of the words in the list in section 2 above can be used either as determiners in a noun phrase, or as pronouns followed by of + noun phrase.

Example:

Some people  some of the people

Most holidays  most of my holidays

Enough red wine  enough of this red wine

Before another determiner (article, possessive or demonstrative), the of-structure must be used.

Example;

Some of the people (Not: *some the people)

Most of my holidays (Not: *most my holidays or *my most holidays)

Enough of this red wine (Not: *enough this red wine)

When there is no other determiner in the noun phrase, of is not used.

Example:

Some people (Not : *some of people)

Most holidays (Not : *most of holidays)
Enough red wine (Not: *enough of red wine)

Most determiners can be used with both singular and plural nouns and verbs.
Example:

Which is your favorite composer ?
Which are your favorite novelists?

Each, every, either and neither are always used with singular words when they are determiners.
Example:

Each day is different from the next.
Neither plan really suits me.

When they are used as pronouns, they are also usually used with a singular verb.
Example:

Each of them is broken.
Either of the houses is big enough.

However, a plural verb is possible after neither of ---- and after either of ----- in negative sentences.
Example:

Neither of them want(s) to come.
I don't think either of them is/are at home.

**During and in:**
Both these prepositions can be used when we are talking about periods of time (during the summer/in the summer). In many cases there is no difference, but sometimes one seems more natural than the other, and occasionally only one of them is possible.

Both in and during can be used to talk about something that happens: (1) right through a particular period of time; (2) at some point (or at several points) between the beginning and the end of the period.
Example:
We'll be on holiday in/during August.
I woke up in/during the night.
I woke up three times in/during the night.

We prefer in when we are saying exactly when something happens; to say in this period, not in that one.
Example:

No, it was in 1970, not 1969.
We usually go on holiday in July, but last year we went in September.

When we refer to an activity, rather than to a period of time, only during can be used.

He had some amazing experiences during his military service.
(Not: ..... in his military service.)

Example:

He had some amazing experiences during/in his childhood.

**Each and every:**
Each and every do not mean quite the same. Every puts people or things into a group, like all; we often use every to generalize. (For the exact difference between all and every). Each separates; when we say each violinist, each child or each player.

Example:

Every professional violinist practices for several hours a day.
Each violinist has his own way of playing the Beethoven concerto.
We want every child do succeed.
Each child will find his own personal road to success.
Every player was on top form.

Each is used as a 'determiner' with a singular (countable) noun.

Example:

Each day is better than the one before.
I've inspected each repair myself.

When there is another determiner (article, possessive or demonstrative), each of is used with a plural noun.

Example:

Each of my aunts gave me socks for Christmas.
I've invited each of my colleagues in turn.
Each of is also used before a personal pronoun.
Each of them gave me socks.
She phoned each of us.

**Either and Neither:**

Either is instead of too and also in negative sentences.

Example:

'I like opera.' – 'I do too.'
'I don't like opera.' – 'I don't either.'
I don't enjoy tennis, and I don't much like swimming either.

In 'short answer', structures with nor and neither are also possible.

Example:

'I haven't read any Dickens.' – 'Nor/neither have I' (Or: 'I haven't either.')

Either can be used with or to talk about two possibilities (and sometimes more than two).

Example:

You can either come with me now or walk home.
Either you leave this house or I'll call the police.
You can either have soup, fruit juice or melon.

Either is used as a pronoun, alone or with of + plural noun phrase.

Example:

'Do you want whisky or gin?' – 'Oh, I don't mind. Either.'
Has either of your parents visited you?

Enjoy can't be used without an object. When we talk about having fun, having a nice time in general, we use the expression to enjoy oneself.

Example:

I enjoyed myself very much at the party.
Well, have a good holiday – enjoy yourself, and don't do anything that I wouldn't do!

You can also enjoy an activity, a meal, etc.

Example:

She really enjoys her food: it's a pleasure to watch her eating.
I very much enjoyed the party.
I don't enjoy travelling very much. (Not: ..... enjoy to travel ...)

**Enough:**

Enough with adjectives and adverbs

Example:

You're not working enough carefully.

Enough comes after adjectives and adverbs.

Example:

good enough fast enough
soon enough carefully enough
I'd like to be a professional singer, but I don't think I've got a good enough voice.

Enough comes before nouns. Enough of is used before a determiner (article, possessive or demonstrative), but of is not used when there is no determiner.

Example:

Is there enough of the blue material?
I've had enough of this nonsense.
Is there enough blue material?
Have we got enough bread?

**Even:**

Typical mistake:

She got very angry; even she told me to get out of the house.

If we want to say that an action is surprising, we put even with the verb (in 'mid-position).

Example:

She even told me to get out of the house.
He's done everything – he's even been a racing driver.

Even can go in other places to give special emphasis to particular parts of the sentence.

Example:

Anybody can do this. Even a child could do it.
He'll eat anything – even raw potatoes.

**Ever:**

Ever usually means 'at any time' (for the meaning of any). It is not the same as always, which means 'at all times' or 'all the time.

I will always remember you.

Ever is opposite in meaning to never, which means 'at no time'.

Example:

Come and see me if you are ever in London.' – 'No, I'm afraid I never go there.'

Ever is used mainly in questions. It can also be used in affirmative sentences with if, and with words that express a negative idea (like hardly, stop).

Example:

Do you ever go to the opera?
We hardly ever go out.

Ever is used with the present perfect tense to mean 'at any time up to now'.

Example:

Have you ever been in a submarine?

It can also be used with a past or past perfect tense.

Example:

Did you ever meet Jake Allwright at university?

She asked me if I had ever been in trouble with the police.

We can use ever after comparative – than.

Example:

You're looking lovelier than ever.

Ever has a special use in the expressions forever (also written for ever), ever since, and in compounds like ever-loving, evergreen. Here it means 'always,' and can be used in affirmative sentences.

Example:

I shall love you forever.

Ever means 'at any time in the past'.

Example:

Have you ever been to Canada?

**Yet and Already:**

Yet and already are both used when we are thinking about a time close to the present. Yet is used to talk about things we expect to happen.

Example:

'I'm travelling round the world.' – 'Have you been to Canada yet?

Already suggests that things have happened earlier than expected, or earlier than they might have happened.

Example:

Good heavens! Are you back home already?

**Whoever and Whatever:**

Whoever, whatever and so on mean something like 'It doesn't matter, it doesn't make any difference who/what, etc'. There is a grammatical difference. But whoever, whatever, etc are conjunctions: they can only be used to join two clauses together.

Example:

It doesn't matter where you go; I'll go with you.

Wherever you go, I'll go with you.

Whatever you say to her, she still keeps smiling.

Come and see me whenever you're in Liverpool.

Whoever means no matter who.

Example:

Whoever telephones, tell them I'm out.

I 'm not opening the door, whoever you are

The object form is whoever, not whomever.

Example:

Whoever you marry, make sure be can cook.

The clause with whoever can be the subject or object of the verb in the other clause; in this case, whoever means 'anybody who', or 'the person who'.

Example:

Whoever told you that was lying.
I'll give my ticket to whoever wants it.

Whatever means 'no matter what'. It can be used with a noun (as a determiner') or alone (as a pronoun).

Example:

Whatever problems you have, you can always come to me for help.
Whatever you do, I'll always love you.
Keep calm, whatever happens.

Sometimes the clause with whatever is the subject or object of the verb in the other clause. In this case, whatever means 'anything that'.

Example:

Whatever you want is fine with me.
Prisoners have to eat whatever they' re given.

Whichever is used in a similar way to whatever (but nearly always with a following noun).

Example:

Whichever day you come, we'll be pleased to see you.
I'll take whichever pen you're not using.

## PRACTICE EXERCISES

### Exercise 1

**Directions:** Choose the one word or phrase that best completes each sentences.

1. By measuring changing conditions in the atmosphere, _____ general weather patterns.
   (A) meteorologists who are predicting (B) meteorologists were predicted
   (C) predicting meteorologists (D) meteorologists can predict
2. Not until the end of the nineteenth century, ____ become a scientific discipline.
   (A) plant breeding had (B) did plant breeding (C) plant breeding have (D) have plant breeding
3. The cerebral cortex is _____ where the process of remembering faces takes place.
   (A) the area is brained (B) the area of the brain (C) and a brain area (D) brain area
4. By the end of the nineteenth century, Thomas Edison had invented the first practical light bulb,_____.
   (A) source of cheap electrical light (B) the light of electricity cheap source
   (C) a source light cheap electrically (D) light with cheap electricity source
5. _____ about babies' feelings inferred from their facial expressions.
   (A) What we know (B) To be known by us (C) Knowing (D) Known
6. _____, communities are formed in a variety of ways.
   (A) Created a division of labor (B) To create a division of labor
   (C) Create a division of labor (D) Creation of division of labor
7. Often weighing _____100 pounds, large dogs are used to pull sleds in the snow.
   (A) more than (B) just an (C) than it is (D) than
8. _____ some countries that have two seasons of the year instead of four seasons.
   (A) Are (B) Any (C) There are (D) There is
9. Approximately ninety percent of the U.S. population will probably live in _____ near cities by the beginning of the year 2000.
   (A) or (B) for (C) so (D) by
10. Not until recently did scientists have enough data _____to do a statistical analysis.
    (A) on animal life spans (B) life span on animals
    (C) difference about life animal spans (D) life span about animal different

### Exercise 2

**Directions:** Choose the one word or phrase that best completes each sentences.

1. The conditions necessary _____ this project have not been met.
   (A) for the complete of (B) of completion of (C) for the completion of (D) of complete
2. _____ are found in virtually every country in the world.
   (A) Fruit flies and mosquitoes (B) Now that fruit flies and mosquitoes
   (C) When fruit flies and mosquitoes (D) Fruit flies and mosquitoes which
3. Successful salespeople ____ and understand the needs of the market.
   (A) products are thoroughly known (B) know their products thoroughly
   (C) thoroughly know their products are (D) their products are thoroughly known

4. _____the number of members of the executive board in a big corporation is fixed by the by-laws.
   (A) nevertheless (B) instead (C) despite (D) not
5. Lasers _____ steel by focusing an intense beam on the metal.
   (A) cutting (B) cut (C) to cut (D) of cutting
6. _____ common nuclear reaction, cold fusion does not require a high temperature.
   (A) Alike (B) It is unlikely (C) It is not like (D) Unlike
7. Native American people arrived on the North American continent _____Europeans.
   (A) since (B) for (C) before (D) ahead
8. The ways of travelling _____ dramatically since the late nineteenth century.
   (A) will have changed (B) has changed (C) have changed (D) will change
9. How many of us _____ over complicated changes in the law!
   (A) not frustrated (B) not become frustrated
   (C) have not become frustrated (D) is not frustrated
10. A promissory note _____anything without the trust deed.
    (A) does mean (B) is mean (C) have not mean (D) may not mean

## Exercise 3

**Directions:** Choose the one underlined portion of each sentence that must be changed in order for the sentence to be correct.

1. Leaves <u>are believed</u> to be one of the best <u>substance</u> <u>to form</u> compost <u>piles</u>.
   A B C D
2. Wood <u>is</u> an excellent <u>resource</u> for <u>heating</u> homes, cooking food, and <u>build</u> houses.
   A B C D
3. River water <u>pollution is</u> often <u>indicator</u> <u>by</u> <u>algae distribution</u>.
   A B C D
4. <u>Modern farms</u> are <u>much larger</u> than <u>that</u> of <u>former times.</u>
   A B C D
5. <u>It is</u> often not until the end of their lives <u>that</u> famous people receive the <u>recognize</u> they <u>deserve</u>.
   A B C D
6. <u>Usually</u> <u>the</u> climate in mountainous areas becomes <u>much windly</u> <u>at higher</u> altitudes.
   A B C D
7. A <u>physical chemist</u> is <u>required</u> to <u>function</u> simultaneously as a physicist, <u>chemistry</u>, and mathematician.
   A B C D
8. A baby gorilla is a <u>shy</u>, <u>friendly</u> animal <u>that</u> <u>like</u> attention.
   A B C D
9. <u>Every liquid</u> has <u>its own</u> threshold temperature <u>which above</u> it becomes <u>a gas</u>.
   A B C D
10. <u>After</u> being exposed to moist air, copper <u>forms</u> a patina, <u>the</u> thin green <u>crust</u>.
    A B C D

## Exercise 4

Directions: Choose the one underlined portion of each sentence that must be changed in order for the sentence to be correct.

1. Both personality and external looking vary greatly even among brothers and sisters.
   A B C D
2. Atomic units, the determinant quantities of energy, time, length, charge and to weight, are vital
   A B C
   to the functioning of physical science.
   D
3. A chemist's job often deals with the classify of organic chemicals.
   A B C D
4. Trace contaminates can found even in purified gases that are labeled 99,9999% pure.
   A B C D
5. Many scientists having had their works distributed by a scientific publishing house based in
   A B C D
   New York.
6. Some universities has set up small colleges for closer relationships between professors and
   A B C D
   students.
7. The number of teaching assistants required meeting undergraduate course needs is rapidly
   A B C D
   increasing.
8. Some skunks can walking briefly on their hind legs.
   A B C D
9. Franklin Delano Roosevelt, who confined to a wheelchair, was a very popular and successful
   A B C D
   U.S. president.
10. Not until the electrolysis experiments of Michael Faraday did the first ideas about the nature of
    A B
    chemical bonding became a serious topic in chemistry.
    C D

**Answer Key for Exercises 1-4**

| Exercise 1 | Exercise 2 | Exercise 3 | Exercise 4 |
|---|---|---|---|
| 1. D | 1. C | 1. B | 1. B |
| 2. B | 2. A | 2. D | 2. B |
| 3. B | 3. B | 3. B | 3. C |
| 4. A | 4. D | 4. C | 4. A |
| 5. A | 5. B | 5. C | 5. A |
| 6. B | 6. D | 6. C | 6. A |
| 7. A | 7. C | 7. D | 7. B |
| 8. C | 8. C | 8. D | 8. B |
| 9. A | 9. C | 9. C | 9. B |
| 10. A | 10. D | 10. C | 10. C |

## Answer Expnations

### Exercise 1

1. (D) This sentence needs a subject and verb. The verb must be in the present (can predict) because the sentence is a general statement of fact.
2. (B) This is an example of reversed order of subject and verb for emphasis. Remember that not until.....did..... commonly go together. It means that plant breeding did not become a scientific discipline until the nineteenth century.
3. (B) This is a noun and prepositional phrase. It is necessary to use the word the two times because the sentence is referring to two specific items; the area and the brain.
4. (A) This phrase describes the light bulb with a noun plus prepositional phrase, a source of cheap electrical light.
5. (A) This sentence begins with a word as part of the subject of the sentence. The complete subject of the sentence is what we know about babies' feelings. The main verb is the word is.
6. (B) This sentence begins with an infinitive, to create. You could also say, in order to create.
7. (A) This is a comparison question. The weight of the dogs is compared to a measure of 100 pounds.
8. (C) This is a use of the non-referential, or expletive, there. There is followed by are to agree with the noun countries.
9. (A) The word or connects the words in and near. The meaning of the sentence is that the population might live either in cities or near cities.
10. (A) The prepositional phrase on animal life spans describes the data. The word animal describes the kind of life span. The words life span mean the length of time that a person or animal lives.

## Exercise 2

1. (C) This sentence needs the noun completion to complete the prepositional phrase. Answer B is incorrect because the word of is incorrect and because the word the must come before the noun.
2. (A) This sentence needs a simple subject, not a phrase.
3. (B) The answer to this sentence must be a verb phrase with a verb in the present tense. Answers A and D are in the passive voice and answer C has two verbs so it does not combine with the rest of the sentence.
4. (D) This sentence uses the word not to begin a contrasting phrase.
5. (B) This sentence needs a plural present tense verb to go with the noun lasers.
6. (D) The word unlike shows a contrast between a common nuclear reaction and cold fusion.
7. (C) The word before is the correct time phrase. The word since is used to name the begining of a time duration and the word for introduces a phrase of duration. The word ahead would be correct with the word of.
8. (C) This sentence needs a verb in the present perfect tense because of the phrase since the late nineteenth century. It must begin with have because of the plural noun ways.
9. (C) The word have is necessary in this sentence because the verb is in the present perfect tense, have become. Answer D is not correct because the verb is singular.
10. (D) This verb must be negative or use a modal because of the word anything. The answer cannot be answer C because if you use have then you must use the past participle form, meant.

## Exercise 3

1. (B) The noun substance should be plural (substances) because it is in the phrase one of the best substances.
2. (D) This is a parallel construction sentence. The word build must be building to match heating and cooking.
3. (B) The noun indicator is incorrect. It should be a passive verb from: indicated.
4. (C) The word that should be those because it must be plural, referring to farms.
5. (C) The word recognize is a verb. In this sentence a noun is needed: recognition.
6. (C) This is a comparative sentence. The phrase much windy is incorrect. It should be more windy.
7. (D) This is a parallel construction sentence. Even though the three words in the series are all nouns, the word chemistry is a noun that describes a science. The other words are names of people. In this sentence you need a noun for the name for a person: chemist.
8. (D) The correct word should be likes because it must agree with the singular noun, animal.
9. (C) These two words are reversed. The correct answer is above which it becomes a gas. In this sentence, the word which refers to threshold temperature. The word threshold here means the point which produces a new response. Another way to say this sentence would be, At a certain high temperature, every liquid becomes a gas.
10. (C) This is an incorrect article. The correct word here is a, not the because the description a thin green crust is the definition of any patina.

## Exercise 4

1. (B) This is an incorrect word form. The word looking should be looks. External looks refers to what people look like (hair color, eye color, tall, short, etc.).
2. (B) This is a parallel construction sentence. The correct word should be weight, the noun form. You could also classify this sentence as unnecessary word since the sentence is correct without the word to.
3. (C) This is an incorrect word form. The correct word should be classification, the noun form : indicated
4. (A) The word "be" should be used since the sentence is in passive voice.
5. (A) "Having" should be replaced by "have".
6. (A) "Has" should be replaced by "have" since the word "universities" is in plural.
7. (B) The infinitive form ("to meet") should be used instead of a gerund ("meeting") after the word required.
8. (B) The word "walk" should be used after the auxiliary "can".
9. (B) The word "confined" means restricted. Roosevelt was restricted; he didn't restrict. Thus, passive form should be used- in this case, "was confined".
10. (C) The word "become" should be used since the past tense has been defined already by the word "did".

## Exercise 5

**Directions: Choose the one underlined portion of each sentence that must be changed in order for the sentence to be correct.**

1. What (A) a strong defense is important to any country (B), it cannot be more important (C) than the livelihood of its (D) citizens
2. "Order is Heaven's (A) first law," made by (B) the poet Alexander Pope (C), is painted on the (D) ceiling of the Library of Congress in Washington. D.C.
3. As a result (A) of the Women's Movement, women now holds (B) positions that were once restricted to (C) men. (D)
4. Whether or not (A) a divorced person (B) is entitled to share of (C) his or her spouse's pension has to be decided (D) by the court.
5. Some people believe (A) that printing does as much harm like (B) good, since it brings out (C) falsehood as much as (D) truth.
6. Comets can burst into (A) fragments that (B) fly upon (C) in fiery orbits of their (D) own.
7. If the information in a report does (A) not make sense, it (B) may be necessary to check (C) the statistical. (D)
8. Toledo, locating (A) in the (B) center of Spain, is encircled (C) by the (D) Tagus River.
9. In (A) some cultures, openness and directness seem (B) rude, childish (C), and destructive (D) naïve.
10. Surgical (A) apparatus has to (B) be capable of (C) great precise. (D)
11. Each chapter contains (A) a few appendix (B), which (C) give additional details as (D) supplements to the text.
12. The dove nurtured her young (A) until them (B) were old enough (C) to hunt for themselves. (D)
13. When a person from a contact culture moves in closer (A), a person from a noncontact (B) culture may feel the needy (C) to back off. (D)
14. As they grow older, children (A) in many cultures taught (B) not to (C) rely on their (D) parents.
15. Too many (A) polished (B) rice in one's diet could cause (C) beriberi, a (D) painful nerve disease.
16. Drivers have the responsibility not endangering (A) the lives (B) of people and of (C) animals on (D) the road.
17. The cabin is certainly (A) not luxuriously (B), but it (C) is very practical (D) and comfortable.
18. Jogging nor (A) dieting (B) carried (C) to extremes (D), can be harmful.
19. The letter that (A) was sent (B) by special delivery (C) must be importance. (D)
20. What (A) happens during a person's formulate years may affect (B) the rest of that (C) person's life. (D)
21. The gerund (A) in English is normally formed (B) by adding "ing" to (C) the basically (D) form of the verb.

22. The camera must be focused (A) good (B), otherwise (C) the picture will be blurred (D).
23. People tend to (A) become irritate (B) and short-tempered (C) whenever they get overtired (D).
24. A mule is a (A) animal that (B) is neither a horse nor a donkey (C), but (D) a combination of the two.
25. People living (A) in cities are (B) often sophisticated (C) than people in rural areas. (D)
26. Disneyworld was built (A) on 27,400 acres (B) of in part (C) swamp land in central (D) Florida.
27. Soaring medicinally (A, B) costs have a direct (C) influence on the cost of other merchandise (D).
28. In addition to save (A) on gas (B), the modern car is designed (C) to save on (D) maintenance and repair expenses.
29. Edward Hall, a professor of anthropology, first commented on (A) people's strong feelings (B) about (C) personnel (D) space.
30. Education (A) trains (B) a student to see things as it is (C), to disentangle a skein (D) of thought.
31. Before the middle (A) of the eighteenth century, there were (B) none (C) public libraries (D) in the United States.
32. The nucleus (A) of an ordinary comet is (B) a mile but (C) two in (D) diameter.
33. George Gershwin believed that (A) music should express (B) the thoughts and feelings of their own time (C) in history. (D)
34. Some senior citizens have to cope with (A) arthritis and other (B) physical difficulties (C) of aged (D) in addition to psychological and social problems.
35. It has been estimated that in a few years (A), twelve percents (B) of Canadians (C) will be senior citizens (D).
36. Many museum exhibits (A) encourage you to investigate further (B) through (C) microscopes. Magnifiers and even telescoping. (D)
37. Workers who repair (A) the road surface (B) wear specially (C) jackets for (D) easy identification.
38. One of the most important discovery (A) of the nineteenth century was (B) a method of using (C) natural gas for cooking and heating. (D)
39. The Netherlands, a country with much of (A) the land lying (B) lower than sea level, have (C) a system of ditches and canals for controlling (D) water.
40. Davy Crockett, a famed (A) American pioneer, was known for (B) his hunting, trapping, tell stories (C), and quick wit. (D)
41. The movement of (A) ocean waves can be compared (B) to the waves caused by (C) the wind in a field or (D) grass.
42. Milk, often considered a nearly perfect (A) food, contains (B) fat, (C) sweet, (D) and protein.

43. Only after they themselves become parents, do people realize the difficulties of raised children.
A B C D

44. Aviators, fishing, and sailors are among those who rely on weather predictions.
A B C D

45. Mohandas K. Gandhi, who was called Mahatma, lived a noble life of fasting and poverty in order t
A B
work for peaceful and independence.
C D

46. Soybean, which sometimes grow seven feet tall, have thick, woody stems.
A B C D

47. When settling the old west in pioneer times. American families building their homes from split logs
A B C D

48. A Venus Flytrap is a small plant that have leaves that snap together like traps.
A B C D

49. The last of the Mohicans are a famous book about frontier life by the American author Jame
A B C D
Fenimore Cooper.

50. The Treaty of Chent, signed in 1814, ends the last war between England and the United State.
A B C D

## Exercise 6

**Directions: Choose the one word or phrase that best complete it sentence.**

1. Even though woodpeckers ___ as nuisance to many people, they are actually helpful, since they feed on harmful insects.
A) are seen B) which are seen C) being seen D) to be seen

2. The first clock made nearly a thousand years ago, had neither a face nor hands, __ that rang each hour.
A) it had bells B) rather than bells C) though bells D) but it had bells

3. ___ on the floor of the ocean is a big farming industry.
A) Oysters raising B) Oysters are raised C) The raising of oysters D) The oysters raised

4. A barbershop ___ a red and white striped pole
A) what symbolizes B) is symbolizes by C) is symbolized to D) was symbolized

5. ___ as beasts of burden by the Indians in the Andes Mountains.
A) Using Llamas B) Llamas are used C) Llamas use D) There are Llamas

6. The moon, ___ no air around it, grows extremely hot in the daytime and extremely cold at nigh
A) which has B) has C) having had D) what has

7. Even though they are not liquid, cottage cheese, sour cream, and yogurt are sold ___ liquid measurements.
A) to B) for C) over D) by

8. To plant rice, farmers, ___ set young plants in the mud.
A) they wade with bare feet in the water
B) water wading in their bare feet
C) wading in the water in their bare feet,
D) whose bare feet wading in the water

9. ____ farmers cut holes in the bark of maple trees.
A) Maple syrup is collected
B) To collect maple syrup
C) The collection of maple syrup
D) When collect maple syrup

10. The boll weevil, an insect ___ cotton plants, is native to Central America.
A) destroys B) unlike C) has destroyed D) that destroys

11. ___ humans, toads have tongues fastened at the front of their mouths, which allow them to catch insects.
A) Not the same B) Unlike C) Except for D) Dislike
12. ___ on a hot fire is a delicacy in many parts of the world.
A) Lamb roasted B) Roasted C) Lambs roast D) Lambs
13. __ determines a good meal varies from country to country.
A) which B) Why C) What D) How
14. __ the pecan is the second most popular nut in the United States.
A) The rich food B) Food is rich C) To be rich D) A rich food,
15. More ivory is obtained from elephants in Africa ___ elephants in Asia
A) rather than B) more than C) than from D) as well as
16. Deep in to Rio Bee area of Mexico's Yucatan Peninsula,_____
A) does a 1,250-year-old pyramid lie B) a 1,250-year-old pyramid lie
C) lies a 1,250-year-old pyramid D) is a 1,250-year-old pyramid lying
17. The architecture and pottery uncovered in – revealed Middle Eastern cultural relationships
A) this area has B) the areas has C) area have D) this area have
18. The Pacific Crest Trail is America's ____
A) longest footpath B) the long footpath
C) footpath the longest one D) the longest footpath
19. ____ almost every major city in the world.
A) Air pollution that now afflicts
B) Not only does air pollution now afflict
C) Air pollution now afflicts
D) Air pollution what now afflicts
20. Today, "carpet" refers to floor coverings that reach from wall to wall, ____ "rug" refers to a piece of material that covers only one section of the floor.
A) therefore B) whereas C) in as much as D) among
21. The triple function of Bodian Castle's moat was to be defensive, decorative, and ___.
A) to double the impression of impregnability
B) to be double the impression of impregnability
C) double the impression of impregnability
D) for doubling the impression of impregnability
22. __ is that a chicken stands up to lay its eggs.
A) Many people don't realize
B) What many people don't realize
C) It is that many people don't realize
D) Because many people don't realize
23. The tiger heard the splashing, rolled into ambush position, and crouched down in the grass
A) readied itself to attack
B) made itself ready for the attack
C) to ready itself and attacked
D) to ready itself for the attack
24. ___ before the stork chick moves even six inches in the nest.
A) Just over five months is
B) It takes just over five months
C) When just five months are over
D) That it takes just over five months
25. Thor Heyerdahi ___ from Peru in a frail balsa craft, attempted to prove his theory of South American migration to Polynesia.
A) set sail B) has set sail C) he set sail D) setting sail
26. Napleon III eventually landed in England ___.
A) not only as a dethroned exile
B) but only as a dethroned exile
C) but a dethroned exile
D) but being only a dethroned exile

27. Jacob Lawrence is considered by many critics ___.
    A) to be the foremost African-American artist
    B) the foremost African-American artist is
    C) foremast African-American artist
    D) is the foremost African-American artist
28. Braille is a system of raised dots developed for blind people ___ with their fingers
    A) they read B) who read C) who reading D) read
29. ___ of the seals, the monk seals are considered to be the most primitive.
    A) The 1 species B) 1 species are C) There are 1 species D) Of the 1 species
30. Traditional sailors ___ many of the same dangers as their predecessors.
    A) face is B) is facing C) face D) are faced

## Exercise 7

**Directions :** Choose the best alternative to complete the sentence correctly.

1. The principal reason for our failure was quite apparent to those whom we had brought into the venture.
   (A) to those whom we had brought
   (B) to them whom we had brought
   (C) to the ones whom we had brought
   (D) to those who we had brought
   (E) to those who we had brung
2. Although he was the most friendly of all present and different from the others, he hadn't hardly any friends except me.
   (A) different from the others, he hadn't hardly any friends except me
   (B) different than the others, he had hardly any friends except me.
   (C) different from the others, he had hardly any friends except I
   (D) different than the others, he hadn't hardly any friends except I
   (E) different from the others, he hardly had any friends except I
3. It was us who had left before he arrived.
   (A) us who had left before he arrived.
   (B) we who had left before he arrived.
   (C) we who had went before he arrived
   (D) us who had went before he arrived
   (E) we who had left before the time he had arrived.
4. He is sort of person who I feel would be capable of making these kind of statements.
   (A) sort of person who I feel would be capable of making these kind of
   (B) sort of a person who I feel would be capable of making these kind of
   (C) sort of person who I feel would be capable of making these kinds of
   (D) sort of person whom I feel would be capable of making these kinds of
   (E) sort of person whom I feel would be capable of making this kind of
5. Due to the continual rain, a smaller number of spectators witnessed the game than had been expected.
   (A) Due to the continual rain, a smaller number
   (B) Due to the continuous rain, a smaller number
   (C) Due to the continual rain, a lesser number
   (D) Because of the rain that kept falling now and then, a smaller number
   (E) Because of the continual rain, a smaller number.
6. Beside me, there were many persons who were altogether aggravated by his manners.
   (A) Beside me, there were many persons who were altogether aggravated
   (B) Beside me, there were many persons who were al together

(C) Besides me, there were many persons who were altogether aggravated
(D) Besides me, there were many persons who were altogether irritated.
(E) Beside me, there were many persons who were all together irritated.

7. The owner, <u>who was a kind man, spoke to the boy</u> and he was very rude.
(A) who was a kind man, spoke to the boy and he
(B) was a kind man and he spoke to the boy and he
(C) spoke to the boy kindly and the boy
(D) a kind man, spoke to the boy who
(E) who was kind man spoke to the boy and he

8. Because we cooperated <u>together, we divided up the work on the report which had been assigned</u>.
(A) together, we divided up the work on the report which had been assigned
(B) together, we divided the work on the report which had been assigned.
(C) we divided up the wok on the report which was assigned
(D) we divided the work on the assigned report
(E) we divided up the work on the assigned report.

9. The senator <u>rose up to say, in his opinion, he thought the bill should be referred back</u> to committee.
(A) rose up to say that, in his opinion, he thought the bill should be referred back.
(B) rose up to say that he thought the bil should be referred back
(C) rose up to say that he thought the bill should be referred
(D) rose up to say that, in his opinion, the bill should be referred
(E) rose to say that he thought the bill should be referred

10. I don't know <u>as I concur with your decision to try and</u> run for office.
(A) as I concur with your decision to try and
(B) that I concur in your decision to try to
(C) as I concur in your decision to try and
(D) that I concur with your decision to try to
(E) as I concur with your decision to try, to

11. Jones, the president of the union and <u>who is also a member of the community group,</u> will be in charge of the negotiations.
(A) who is also a member of the community group
(B) since he is a member of the community group
(C) a member of the community group
(D) also being a member of the community group
(E) in addition, who is a member of the community group

12. The instructor told the student <u>to hold the club lightly, keeping his eye on the ball and drawing the club back quickly, but too much force should not be used</u> on the downward stroke.
(A) to hold the club lightly, keeping his eye on the ball and drawing the club back quickly, but too much force should not be used
(B) to hold the club lightly, keep his eye on the ball, and drawing the club back quickly, and too much force should not be used
(C) to hold the club lightly, keep his eye on the ball, draw the club back quickly, and not use too much force
(D) to hold the club lightly, keep his eye on the ball, draw the club back quickly and too much force should not be used
(E) he should hold the club lightly, keeping his eye on the ball, drawing the club back quickly, and not using too much force.

13. The <u>horse, ridden by the experienced jockey with the broken leg, had</u> to be destroyed.

(A) horse, ridden by the experienced jockey with the broken leg, had
(B) horse ridden by the experienced jockey with the broken leg had
(C) horse with the broken leg ridden by the experienced, jockey had
(D) horse with the broken leg ridden by the experienced jockey, had
(E) horse with the broken leg, ridden by the experienced jockey, had

14. Our guest let us know that he would be arriving next week in his last letter.
(A) that he would be arriving next week in his last letter
(B) that he was arriving next week in his last letter
(C) that he will arrive next week in his last letter
(D) in his last letter that he would be arriving next week
(E) in his last letter that he was arriving next week

15. Whoever objects to me going to the convention ought to state his position promptly.
(A) Whoever objects to me
(B) Whomever objects to me
(C) Whomever objects to my
(D) Whoever objects to my
(E) Whoever has an objection to me

16. The reason that the number of accidents this year is greater than that of last year is because Americans are now speeding at a higher rate.
(A) is greater than that of last year is because
(B) is greater than last year is because
(C) is greater than last year is that
(D) is greater than that of last year is that
(E) is greater than the number of accidents last year is because

17. Julio found the new job more preferable to the one he had left so he decided to continue on for a while
(A) more preferable to the one he had left so he decided to continue on
(B) preferable to the one he had left so he decided to continue on
(C) more preferable to the one he had left so he decided to continue
(D) preferable to the one he had left so he decided to continue
(E) more preferable than the one he had left so he decided to continue

18. Since we are living in New York for five years, we are reluctant to move to another city.
(A) Since we are living
(B) Being that we are living
(C) Being that we have been
(D) Since we have been living
(E) Since we were living

19. As a child, my parents took me to Chicago to visit my grandfather.
(A) As a child, my parents took me Chicago to visit my grandfather
(B) My parents took me to Chicago to visit my grandfather as a child
(C) My parents took me, as a child, to Chicago to visit my grandfather
(D) A child, my parents took me to Chicago to visit my grandfather
(E) When I was a child, my parents took me to Chicago to visit my grandfather

20. He said that, if he were elected president and that if funds were available, that he would create a national theater.
(A) he were elected president and that if funds were available, that
(B) elected president, and funds were available, that
(C) he were elected president and funds were available, that
(D) he were elected president and funds were available
(E) elected president, and funds were available.

## Exercise 8

**15 Improving sentences**

1. A) She soundly feel asleep after having finished the novel
   B) She decided to sleep after having finished the novel
   C) She went on to her sleep after having finished the novel
   D) She fell to sleep after having finished the novel
   E) She fell fast asleep after having finished the novel
2. A) With the exception of Samantha and I, everyone in the class finished the assignment before the bell rang.
   B) With the exception of Samantha and me, everyone in the class finished the assignment before the bell rang.
   C) With the exception of Samantha and me, everyone in the class had finished the assignment before the bell rang.
   D) With the exception of Samantha and I, everyone in the class had finished the assignment before the bell rang.
   E) With the exception of I and Samantha, everyone in the class had finished the assignment before the bell rang.
3. A) Miami's daytime attire is less formal than New York
   B) Miami's daytime attire is less formal then that in New York
   C) Miami's daytime attire is less formal than that in New York
   D) Miami's daytime attire is less formal than in New York
   E) Miami's daytime attire is less formal than the daytime attire we see in New York
4. A) I want the best price I can get for my car
   B) I want the most highest price I can get for my car
   C) I want the price which is the best I can get for my car
   D) I want the most best price I can get for my car
   E) I want the premium price I can get for my car
5. A) Jane's body movements are like those of a dancer
   B) Jane's body movements are the same as a dancer
   C) Jane's body movements are like a dancer
   D) Jane's body movements are a dancer's
   E) Jane's body movements are like those of a dancer's
6. A) Inflation in the United States has not and, we hope, never will reach a rate of 20 percent a year.
   B) Inflation in the United States has not reached and, we hope, never will a rate of 20 percent a year.
   C) Inflation in the United States has not and hopefully never will reach a rate of 20 percent a year.
   D) Inflation in the United States has not reached and, we hope, never will reach a rate of 20 percent a year.
   E) Inflation in the United States has not reached and hopefully never will a rate of 20 percent a year.
7. (A) Does anyone know to who this book belongs?
   (B) Does anyone know to whom this book belongs to?
   (C) Does anyone know to whom this book belongs?
   (D) Does anyone know who this book belongs to?
   (E) Does anyone know to whom this belongs?

8. (A) The wife of the new leader is tough, single-minded, and tries to be independent.
(B) The wife of the new leader is tough, single-minded, and acting independent.
(C) The wife of the new leader is tough, single-minded, and independent.
(D) The wife of the new leader is tough, single-minded, and an independent person.
(E) The wife of the new leader is tough, single-minded, and an independent.
9. (A) The speaker was praised for his organization, choice of subject, and because he was brief.
(B) The speaker was praised for his organization, his choice of subject and the speech having brevity.
(C) The speaker was praised on account of his organization and his choice of subject and the brevity of his speech.
(D) The speaker was praised for the organization of his speech, for his choice of subject, and because he was brief.
(E) The speaker was praised for his organization, his choice of subject, and his brevity.
10. (A) The old sea captain told my wife and me many interesting yarns about his many voyages.
(B) The old sea captain told me and my wife many interesting yarns about his many voyages.
(C) The old sea captain told my wife and I many interesting yarns about his many voyages.
(D) The old sea captain told I and my wife many interesting yarns about his many voyages.
(E) The old sea captain told my wife along with me many interesting yarns about his many voyages.
11. (A) In spite of Tom wanting to study, his sister made him wash the dishes.
(B) In spite of the fact that Tom wanted to study, his sister made him wash the dishes.
(C) In spite of Tom's need to study, his sister made him wash the dishes.
(D) In spite of Tom's wanting to study, his sister made him wash the dishes.
(E) In spite of Tom studying, his sister made him wash the dishes.
12. (A) Barbara cannot help but think that she will win a college scholarship.
(B) Barbara cannot help but to think that she will win a college scholarship.
(C) Barbara cannot help not to think that she will win a college scholarship.
(D) Barbara can help but think that she will win a college scholarship.
(E) Barbara cannot but help thinking that she will win a college scholarship.
13. (A) He never has and he never will keep his words.
(B) He has never yet and never will keep his words.
(C) He has not ever and he will not keep his words.
(D) He never has or will keep his words.
(E) He never has kept and he never will keep his words.
14. (A) When used undiluted, you can irritate your skin with liquid bleach.
(B) When used undiluted, liquid bleach can irritate your skin.
(C) When used undiluted, bleach, it being liquid, could irritate your skin.
(D) When used undiluted, you could be irritating your skin with liquid bleach.
(E) When used undiluted, then liquid bleach could be irritating to your skin.
15. (A) Of the three Fates, the weavers Clotho, Lachesis, and Atropos, the latter was most frightening, for she cut the "thread" of life, thus determining the individual's moment of death.
(B) Of the three Fates, the weavers Clotho, Lachesis, and Atropos, the latter was more frightening, for she cut the "thread" of life, thus determining the individual's moment of death.
(C) Of the three Fates, the weavers Clotho, Lachesis, and Atropos, the latter is most frightening, for she cut the "thread" of life, thus determining the individual's moment of death.
(D) Of the three Fates, the weavers Clotho, Lachesis, and Atropos, the last was most frightening, for she cut the "thread" of life, thus determining the individual's moment of death.
(E) Of the three Fates, the weavers Clotho, Lachesis, and Atropos, the last are more frightening, for she cut the "thread" of life, thus determining the individual's moment of death.

# Answer Keys

## Exercise 5

| | | | | | | |
|---|---|---|---|---|---|---|
| 1. A | 2. B | 3. B | 4. C | 5. B | 6. C | 7. D |
| 8. A | 9. D | 10. D | 11.B | 12. B | 13. C | 14. B |
| 15. A | 16.A | 17. B | 18. A | 19. D | 20. B | 21. D |
| 22. B | 23. B | 24. A | 25. C | 26.C | 27. B | 28. A |
| 29. D | 30. C | 31. C | 32. C | 33. C | 34. D | 35. B |
| 36. D | 37. C | 38. A | 39. C | 40. C | 41. D | 42. A |
| 43. D | 44. B | 45. C | 46. C | 47. C | 48. B | 49. A |
| 50. B | | | | | | |

## Exercise 6

| | | | | | | |
|---|---|---|---|---|---|---|
| 1. A | 2. D | 3. C | 4. B | 5. B | 6. A | 7. D |
| 8. C | 9. B | 10. D | 11. B | 12. A | 13. C | 14. D |
| 15. C | 16. C | 17. D | 18. A | 19. C | 20. B | 21. A |
| 22. B | 23. D | 24. B | 25. D | 26. B | 27. A | 28. B |
| 29. D | 30. C | | | | | |

## Exercise 7

| | | | | | | |
|---|---|---|---|---|---|---|
| 1. A | 2. E | 3. B | 4. C | 5. B | 6. D | 7. D |
| 8. D | 9. E | 10. D | 11. C | 12. C | 13. E | 14. D |
| 15. D | 16. D | 17. D | 18. D | 19. E | 20. D | |

## Exercise8

| | | | | | | |
|---|---|---|---|---|---|---|
| 1. E | 2. C | 3. C | 4. A | 5. A | 6. D | 7. C |
| 8. C | 9. E | 10. A | 11. D | 12. A | 13. E | 14. B |
| 15. D | | | | | | |

# READING COMPREHENSION

IBA ভর্তি পরীক্ষার Reading Comprehension অত্যন্ত গুরুত্বপূর্ণ একটি part. কমপক্ষে পাঁচটি question এই বিষয়ের উপর থাকবে। তবে স্কুল কলেজে আমাদেরকে Comprehension পড়ে question এর answer লিখতে হত।এক্ষেত্রে আমরা হয়তো একটু সুবিধা পাব। আমাদেরকে উত্তর লেখার বদলে MCQ পদ্ধতিতে Answer করতে হবে। তবে BBA '94-95' এর পরীক্ষায় Written English section এ comprehension ছিল। তবে সেটা নিয়ে খুব একটা চিন্তা করার কিছু নেই। SSC এবং HSC পরীক্ষার practice ই ওটার জন্য যথেষ্ট। শুধুমাত্র লেখার standard ভাল রাখতে হবে। যাই হোক, আমরা এখন MCQ পদ্ধতির Comprehension নিয়ে আলোচনা করব।

**TYPES OF READING COMPREHENSION QUESTION:** মূলতঃ ৪ ধরণের Reading Comprehension Questions করা হয়ে থাকে।

**1. MAIN IDEA QUESTIONS:**

এ ধরণের প্রশ্নগুলোতে প্রদত্ত passage এর মূল বিষয় (content) বা মূল ভাব (Theme) বের করতে বলা হয়। Questions গুলো থাকে এভাবে-

Which of the following is the main idea of the passage?
Which of the following best describes the theme/content of the passage?
The passage is primarily concerned with -----
The author's primary purpose in this passage is to ---

**HOW TO SOLVE IT:** যখন main idea বের করতে হবে, be sure to check the opening and summary sentences of the passage. প্রথম ও শেষ sentence পড়লেই যে main idea পাওয়া যাবে, এমন কোন নিশ্চয়তা নেই। Main idea টি stated না হয়ে implied ও হতে পারে। If you can't find the main idea, ask yourself three questions –

I) Who or what is this passage about?

II) What aspect of this subject is the author talking about?
(অর্থাৎ, বিষয়টির কোন দৃষ্টিকোণ লেখক বিবেচনা করছেন?)

III) What is the author trying to get across about this aspect of the subject? (Subject এর কোন দৃষ্টিকোণটিকে বেশি গুরুত্ব দেয়া হয়েছে বের করুন। Either the subject is doing something or something is being done to it.)

**2) SPECIFIC DETAIL QUESTIONS:**

Passage-এ নির্দিষ্টভাবে বর্ণনা করা হয়েছে এমন বিষয়বস্তু নিয়ে এধরণের question করা হয়। Questionsএর forms হতে পারে এরকম-

According to the author ----
The passage supplies information that would answer which of the following questions?
The author states which of the following?
Which of the following statement is best supported by the passage?

**HOW TO SOLVE IT :** এ ধরণের questions answer করার সময় আমাদের main attention থাকতে হবে passage এ কি কি জিনিস explicitly (স্পষ্টভাবে) বলা আছে তা বের করার উপর। কখনও এমন কোন বিষয়ের উপর গুরুত্ব দেয়া যাবে না যেটা আপনি সত্যি বলে জানেন কিন্তু passage এ যার উলেখ নেই।

এ ধরণের Question এ প্রায়ই একটা particular phrase অথবা line সম্বন্ধে question করা হয়। In such cases, use the following techniques:

i) Look for key words (nouns or verbs) in the answer choices.

ii) Run your eyes down the passage, looking for those key words or their synonyms. (This is SCANNING. It is what you do when you look up someone's number in the phone directory)

iii) When you find a key word or its synonym, reread the sentence to make sure that the test makers haven't used the original wording to mislead (বিভ্রান্ত) you.

**3) INFERENCE QUESTIONS:** এ ধরণের questions এ passage এ specifically বলা নেই অথচ আপনি logically conclude করতে পারেন এরকম বক্তব্য দেয়া থাকে। অর্থাৎ, এখানে answer টি stated নয়, implied Questions গুলো করা হতে পারে এভাবে -

It can be inferred from the passage that .....
The passage suggests that .....
The author implies that .....
Which of the following statements about ..... can be inferred from the passage?

**HOW TO SOLVE IT:** Inference questions এ আপনার নিজস্ব judgment প্রয়োজন। You must not take anything directly stated by the author as an inference. বরং আপনি কিছু clues খুঁজে বের করার চেষ্টা করবেন। আপনি আপনার *answer* হিসেবে এমন একটা *statement* খোঁজার চেষ্টা করবেন যেটা প্রশ্নকর্তা কর্তৃক প্রদত্ত *information* এর একটি *logical development.*

**4) TONE QUESTIONS:** এ ধরণের questions এ author এর মনোভাব বা তার লেখার সুর অথবা কোন বিষয়ের প্রতি তার দৃষ্টিভঙ্গী প্রসঙ্গে জানতে চাওয়া হয়। Questions করা হতে পারে এভাবে-

*Which of the following best describes the author's tone in the passage?*
*The author's attitude towards the problem can best be described as....*
*The author regards the idea that.....*
*The author's tone in the passage is that of a person attempting to.....*

***HOW TO SOLVE IT:*** Tone/Attitude questions solve করার সময় লক্ষ্য করুন লেখক কি ধরণের connotations passage এ ব্যবহার করেছেন। positive connotation নাকি fetid, ruffled, stingy প্রভৃতি negative connotations. এগুলো ভালভাবে observe করলেই আপনি বুঝতে পারবেন লেখকের mood কি – cheerful, frustrated, critical, angry, gloomy etc.

**5) WORD/PHRASE (VOCABULARY) QUESTIONS:** এই ধরণের questions এ passage এ ব্যবহৃত কোন word বা phrase এর meaning determine করতে বলা হয়। Questions বিভিন্নভাবে থাকতে পারে-

*The term ..... refers to .....*
*The phrase ..... is used in the passage to mean that .....*
*The author uses the phrase ..... to describe .....*
*As it is used in the passage, the term ..... can be best described as .....*

***HOW TO SOLVE IT:*** এ ধরণের questions solve করতে হলে প্রথমেই general vocabulary বাড়াতে হবে। বেশিরভাগ ক্ষেত্রেই meaning জানা না থাকলেও প্রদত্ত word বা phrase এর অর্থ passage এর context থেকে বোঝা যায়। Though the purpose of this kind of question is to determine how well you can extract meaning from the text, not how extensive your vocabulary is; তারপরও vocabulary ভালো হলে এক্ষেত্রে আপনার লাভ বাড়বে বৈ কমবে না।

## Practice Exercises

**Passage 1-**

The Alaska pipeline starts at the frozen edge of the Arctic Ocean. It stretches southward across the largest and northernmost state in the United States, ending at a remote ice-free seaport village nearly 800 miles from where it begins. It is massive in size and extremely complicated to operate.

The steel pipe crosses windswept plains and endless miles of delicate tundra that tops the frozen ground. It weaves through crooked canyons, climbs sheer mountains, plunges over rocky crags, makes its way through thick forests, and passes over or under hundreds of rivers and streams. The pipe is 4 feet in diameter, and up to 2 million barrels (or 84 million gallons) of crude oil can be pumped through it daily. Resting on H-shaped steel racks called "bents," long sections of the pipeline follow a zigzag course high above the frozen earth. Other long sections drop out of sight beneath spongy or rocky ground and return to the surface later on.

The pattern of the pipeline's up-and-down route is determined by the often harsh demands of the arctic and subarctic climate, the tortuous lay of the land, and the varied compositions of soil, rock, or permafrost (permanently frozen ground). A little more than half of the pipeline is elevated above the ground. The remainder is buried anywhere from 3 to 12 feet, depending largely upon the type of terrain and the properties of the soil. One of the largest in the world, the pipeline cost approximately $8 billion and is by far the biggest and most expensive construction project ever undertaken by private industry. In fact, no single business could raise that much money, so 8 major oil companies formed a consortium in order to share the costs. Each company controlled oil rights to particular shares of land in the oil fields and paid into the pipeline-construction fund according to the size of its holdings.

Today, despite enormous problems of climate, supply shortages, equipment breakdowns, labor disagreements, treacherous terrain, a certain amount of mismanagement, and even theft, the Alaska pipeline has been completed and is operating.

1. The passage primarily discusses the pipeline's
   A. operating costs B. employees C. consumers D. construction
2. The word "it" in line 4 refers to
   A. pipeline B. ocean C. state D. village
3. According to the passage, 84 million gallons of oil can travel through the pipeline each
   A. day B. eek C. month D. year
4. The phrase "Resting on" in line 13 is closest in meaning to
   A. Consisting of B. Supported by C. Passing under D. Protected with
5. The author mentions all of the following as important in determining the pipeline's route EXCEPT the
   A. climate B. lay of the land itself
   C. local vegetation D. kind of soil and rock
6. The word "undertaken" in line 26 is closest in meaning to
   A. removed B. selected C. transported D. attempted
7. How many companies shared the costs of constructing the pipeline?
   A. 3 B. 4 C. 8 D. 12
8. Which of the following determined what percentage of the construction costs each member of the consortium would pay?
   A. How much oil field land each company owned
   B. How long each company had owned land in the oil fields
   C. How many people worked for each company
   D. How many oil wells were located on the company's land

**Passage 2**

Most people can remember a phone number for up to thirty seconds. When this short amount of time **elapses**, however, the numbers are erased from the memory. How did the information get there in the first place? Information that makes its way to the short term memory (STM) does so via the sensory storage area. The brain has a filter which only allows stimuli that is of immediate interest to pass on to the STM, also known as the working memory.

There is much debate about the capacity and duration of the short term memory. The most accepted theory comes from George A. Miller, a cognitive psychologist who suggested that humans can remember approximately seven chunks of information. A chunk is defined as a meaningful unit of information, such as a word or name rather than just a letter or number. Modern theorists suggest that one can increase the capacity of the short term memory by chunking, or classifying similar information together. By organizing information, one can optimize the STM, and improve the chances of a memory being passed on to long term storage.

When making a conscious effort to memorize something, such as information for an exam, many people engage in "rote rehearsal". By repeating something over and over again, one is able to keep a memory alive. Unfortunately, this type of memory maintenance only succeeds if there are no interruptions. As soon as a person stops rehearsing the information, it has the tendency to disappear. When a pen and paper are not handy, people often attempt to remember a phone number by repeating it aloud. If the doorbell rings or the dog barks to come in before a person has the opportunity to make a phone call, he will likely forget the number instantly.* Therefore, rote rehearsal is not an efficient way to pass information from the short term to long term memory.* A better way is to practice "**elaborate** rehearsal". *This involves assigning semantic meaning to a piece of information so that it can be filed along with other pre-existing long term memories.*

Encoding information semantically also makes **it** more retrievable. Retrieving information can be done by recognition or recall. Humans can easily recall memories that are stored in the long term memory and used often; however, if a memory seems to be forgotten, it may eventually be retrieved by prompting. The more **cues** a person is given (such as pictures), the more likely a memory can be retrieved. This is why multiple choice tests are often used for subjects that require a lot of memorization.

1. According to the passage, how do memories get transferred to the STM?
   A. They revert from the long term memory.
   B. They are filtered from the sensory storage area.
   C. They get chunked when they enter the brain.
   D. They enter via the nervous system.
2. The word **elapses** in paragraph 1 is closest in meaning to:
   A. passes B. adds up C. appears D. continues
3. All of the following are mentioned as places in which memories are stored EXCEPT the:
   A. STM B. long term memory
   C. sensory storage area D. maintenance area
4. Why does the author mention a dog's bark?
   A. To give an example of a type of memory
   B. To provide a type of interruption
   C. To prove that dogs have better memories than humans
   D. To compare another sound that is loud like a doorbell
5. How do theorists believe a person can remember more information in a short time?
   A. By organizing it B. By repeating it
   C. By giving it a name D. By drawing it
6. The author believes that rote rotation is:
   A. the best way to remember something B. more efficient than chunking
   C. ineffective in the long run D. an unnecessary interruption

7. Which of the following is NOT supported by the passage?
   A. The working memory is the same as the short term memory.
   B. A memory is kept alive through constant repetition.
   C. Cues help people to recognize information.
   D. Multiple choice exams are the most difficult.
8. The word **it** in the last paragraph refers to:
   A. encoding B. STM C. semantics D. information

**Passage 3-**

Robert Capa is a name that has for many years been synonymous with war photography. Born in Hungary in 1913 as Friedmann Endre Ernő, Capa was forced to leave his native country after his involvement in anti government protests. Capa had originally wanted to become a writer, but after his arrival in Berlin had first found work as a photographer. He tried to find work as a freelance journalist and it was here that he changed his name to Robert Capa, mainly because he thought it would sound more American.

In 1936, after the breakout of the Spanish Civil war, Capa went to Spain and it was here over the next three years that he built his reputation as a war photographer. It was here too in 1936 that he took one of his most famous pictures, *The Death of a Loyalist Soldier*. One of Capa's most famous quotes was 'If your pictures aren't good enough, you're not close enough.' And he took his attitude of getting close to the action to an extreme. His photograph, *The Death of a Loyalist Soldier* is a prime example of this as Capa captures the very moment the soldier falls. However, many have questioned the authenticity of this photograph, claiming that it was staged.

When World war II broke out, Capa was in New York, but he was soon back in Europe covering the war for Life magazine. Some of his most famous work was created on 6th June 1944 when he swam ashore with the first assault on Omaha Beach in the D-Day invasion of Normandy. Capa, armed only with two cameras, took more than one hundred photographs in the first hour of the landing, but a mistake destroyed all but eight frames. It was the images from these frames however that inspired the visual style of Steven Spielberg's Oscar winning movie 'Saving Private Ryan'. When Life magazine published the photographs, they claimed that they were slightly out of focus, and Capa later used this as the title of his autobiographical account of the war.

Capa's private life was no less dramatic. He was friend to many of Hollywood's directors, actors and actresses. In 1943 he fell in love with the wife of actor John Austin. His affair with her lasted until the end of the war and became the subject of his war memoirs. He was at one time lover to actress Ingrid Bergman. Their relationship finally ended in 1946 when he refused to settle in Hollywood and went off to Turkey.

Capa went on to document many other wars. He never attempted to glamorise war though, but to record the horror. He once said, "The desire of any war photographer is to be put out of business."

Capa died as he had lived. After promising not to photograph any more wars, he accepted an assignment to go to Indochina to cover the first Indochina war. On May 25th 1954 Capa was accompanying a French regiment when he left his jeep to take some photographs of the advance and stepped on a land mine. He was taken to a nearby hospital, still clutching his camera, but was pronounced dead on arrival. He left behind him a testament to the horrors of war and a standard for photojournalism that few others have been able to reach.

1. Why did Capa change his name?
   A. To hide his identity B. Because he had been involved in protests
   C. To sound more American D. Because he had to leave Hungary
2. Capa originally wanted to be
   A. A photojournalist B. A writer C. American D. A protestor

3. Capa went to Spain to
   A. fight in the civil war. B. build his reputation.
   C. have a holiday. D. take photographs.
4. Capa's famous picture *Death of a Loyalist Soldier*
   A. was taken by someone else. B. was definitely genuine.
   C. wasn't even taken in Spain. D. cannot be proven genuine or staged.
5. When World War II broke out Capa
   A. went to New York. B. swam ashore on Omaha Beach.
   C. went to Europe. D. went to Normandy.
6. Capa's private life was
   A. less dramatic than his professional life. B. spent mostly in Hollywood.
   C. very glamorous. D. spent in Turkey.
7. Capa wanted his work to
   A. be very famous. B. show how glamorous war can be.
   C. show the true horror of war. D. make lots of money.

**Passage 4**

It has been proved beyond doubt that using seat belts in automobiles and wearing helmets while riding motorcycles can save lives. 2 The federal government has passed laws requiring the installation of seat belts in all new cars. 3 Still, there are people who argue that government has no right to interfere with individual comfort and freedom by mandating the installation and use of these safety devices. 4 In many states, laws prohibit motorcyclists from riding without helmets. 5 What these people fail to realize is that, although wearing a seat belt may be somewhat uncomfortable or confining, it is not as uncomfortable as broken bones nor as confining as a wheelchair or a coffin. 6 Motorcyclists who refuse to wear helmets may enjoy a degree of pleasure in feeling the free wind blow through their hair; but, if thrown in an accident, their heads can be as easily squashed as "free and natural" cantaloupes. 7 These safety devices may limit pleasure and freedom in small ways because they greatly increase the opportunity to live pleasant and free lives in more important ways.

1. What should be done with sentence four?
   (A) It should be placed before sentence one.
   (B) It should be attached to sentence three with and
   (C) Nothing should be done with it.
   (D) It should be placed after sentence two.
   (E) It should be attached to sentence five with a semicolon

2. In sentence three, mandating should be
   (A) omitted
   (B) left as it is
   (C) changed to prohibiting
   (D) placed before individual
   (E) changed to issuing directions that are in favor of

3. In sentence six, what change is needed?
   (A) These riders are should be inserted before thrown.
   (B) Cantaloupes should be changed to balloons.
   (C) They should be substituted for their heads.
   (D) Commas should be placed around who refuse to wear helmets.
   (E) Degree should be changed to measure.

4. Sentence seven would be improved by
   (A) turning it into two sentences, the first to end after small ways
   (B) putting a comma after devices
   (C) beginning the sentence with while
   (D) omitting in more important ways
   (E) changing because to but

5. Which would get the author's point across more effectively?
   (A) Inserting a sentence that would describe statistics about the danger of not wearing seatbelts or helmets.
   (B) Describing the mechanics of how a seat belt works and how a helmet protects the head.
   (C) Describing the governmental agency that enforced the laws.
   (D) Pinpointing the states that enforce the helmet law.
   (E) Citing the safest cars and motorcycles.

6. To begin the author's paragraph,
   (A) Sentence 2 should be placed first.
   (B) Sentence 4 should be placed first.
   (C) Sentence 6 should be placed first.
   (D) Sentence 7 should be placed first, deleting the first word, "These," in that sentence.
   (E) Sentence 1 should remain as the introductory sentence.

## ANSWER KEY

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1.D | 2.A | 3.A | 4.B | 5.C | 6.D | 7.C | 8.A |
| 1.B | 2.A | 3.D | 4.B | 5.A | 6.C | 7.D | 8.D |
| 1.C | 2.B | 3.D | 4.D | 5.C | 6.C | 8.D | |
| 1.D | 2.B | 3.A | 4.E | 5.A | 6.E | | |

# Chapter 3
# Mathematics

Cracking the Math Section

Algebra

Geometry

Arithmetic

# CRACKING THE MATH SECTION

IBA Admission Test-এ ৩০টি Standard Multiple Choice Problem এর একটি Math Section. এর উদ্দেশ্য Candidate দের Mathematical Reasoning এবং Quantitative Aptitude assess করা। Section টিতে Junior এবং High School পর্যায়ের difficulty level এর Arithmetic, Algebra এবং Geometry থাকবে, কোন Trigonometry বা High Tech Algebra বা High Tech Geometry থাকবে না।

**IBA Admission Test-এর Composition বিগত বছরগুলোতে অনেকটা এরকম ছিলঃ**

| Problem Type | 01-02 | 02-03 | 03-04 | 04-05 | 05-06 | 06-07 | 07-08 | 08-09 | 09-10 | 10-11 | 11-12 | 12-13 | 13-14 | 14-15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Numbers, Sets | 1 | | | 2 | 4 | 3 | 4 | 2 | 3 | 3 | 3 | 0 | 1 | 1 |
| Factor, Multiple, Fraction | 2 | 1 | 3 | 1 | | 1 | 1 | 2 | 2 | | | 2 | 3 | 3 |
| Algebraic Expressions, Functions, Factorization | 1 | 1 | 1 | | | 1 | 1 | 5 | 6 | 2 | 3 | 4 | 4 | 5 |
| Equations, Inequality Exponents | 10 | 3 | 5 | 1 | 11 | 3 | 10 | 7 | 3 | 6 | 6 | 3 | 2 | 3 |
| Unitary System, Ratio, Proportion | 3 | 7 | 4 | 7 | 3 | 6 | 3 | 5 | 3 | 3 | 6 | 3 | 4 | 3 |
| Percent, Profit-loss, Discount, Interest | 3 | 3 | 4 | 6 | | 4 | 5 | 2 | 6 | 7 | 6 | 5 | 3 | 4 |
| Speed, Time, Distance | 2 | 3 | 4 | 3 | | | | | 1 | 1 | | 4 | 3 | 2 |
| Average, Mean, Median | | | 1 | 2 | 4 | 1 | | | 1 | 2 | 1 | 3 | 2 | 2 |
| Angle, Triangle | 3 | 8 | 2 | 5 | 4 | 3 | 3 | 2 | 2 | 1 | 3 | 1 | 1 | 1 |
| Quadrilateral, Polygon | 2 | 1 | 2 | 1 | 2 | 3 | 1 | 3 | 1 | 2 | 1 | 1 | 0 | 1 |
| Circle | 2 | 2 | 4 | 1 | 1 | 2 | 1 | | 1 | | 1 | 1 | 2 | 1 |
| Solid | | 1 | | | | 1 | 1 | | 1 | 1 | | 0 | 0 | 0 |
| Solution, Mixture | | | | 1 | | | | 1 | | 2 | | 1 | 2 | 0 |
| Co-ordinate Geometry | | 1 | | | 1 | 2 | | 1 | | | | 2 | 0 | 0 |
| Data suffiency | | | | | | | | | | | | 0 | 3 | 4 |
| **Total** | **30** | **30** | **30** | **30** | **30** | **30** | **30** | **30** | **30** | **30** | **30** | **30** | **30** | **30** |

উপরের table থেকে IBA Admission Test-এর গতিপ্রকৃতি অনুমান করা যায়। Table থেকে particular কোন Chapter এর উপর emphasis দিতে হবে বোঝা যাচ্ছে। তবে best preparation এর জন্য প্রাথমিকভাবে এই section এর প্রত্যেকটি Chapter-ই আপনাদের equally concentrate করা উচিত।

আপনাদের নীচের কিছু basic game plan মনে রাখতে হবে।

1. **Time Limitation:** Admission test এর total duration 120 minutes এবং এই সময়ের মধ্যে ৪টি section complete করতে হবে। যদিও section গুলোর মাঝে কোন time bar নেই তবুও আপনাদের মনে রাখতে হবে এই section এর জন্য আপনারা around 30 minutes পাবেন। প্রতিটি problem এর জন্য problem গুলোর difficulty level consider করে time allocate করতে হবে।

2. **Point Deduction:** একটি right answer এর জন্য আপনি 1 point পাবেন। একটি wrong answer এর জন্য score 0·25 কমে যাবে। কোন question attempt না করলে তার জন্য কোন negative marking নেই। অর্থাৎ কেউ যদি 28টি problem attempt করে 24টি answer correct করতে পারে সে 23 point (24 – 4x .25) পাবে।

3. **Eliminating and Guessing:** Test এ প্রতিটি problem এর জন্য ৫টি answer choice থাকবে। luck neutral থাকলে dumb guessing এর জন্য ultimately '0' পাবেন। কিন্তু বুদ্ধি করে কিছু choice eliminate করতে পারলে gainer হবার probability বেড়ে যাবে।

4. **Minimum Margin:** Pass করতে হলে section টিতে 60% অর্থাৎ negative marking এর পর আপনাকে 18 পেতে হবে। তবে আপনার desired success এর জন্য target এতটা low হলে চলবে না।

5. **Picking up a Number:** প্রতিটি problem তার normal sequence অনুযায়ী solve করা যায়। কখনো কখনো problem solve করতে হলে variable pick করতে হয়। তবে variable pick না করে percent এর problem এ 100 এবং fraction related problem -এ Least Common Denominator (হরগুলোর ল.সা.গু) pick করলে time save করা যায়।

6. **Back solving:** লক্ষ্য করবেন answer choice গুলো মানের ক্রমানুসারে arrange করা থাকে। মধ্যম মানটি বেছে নিন। Problem এর সাথে মিলিয়ে দেখুন। এখন আপনি বুঝতে পারছেন number টি আরো বড় না ছোট হওয়া দরকার। যদি সংখ্যাটি বড় হওয়ার দরকার হয় তাহলে ছোট মান দুটি eliminate করেন।

বাকি answer choice দুটির একটি যদি আপনার probem solve করে তাহলে সেটি answer না হলে অন্যটি। এভাবে 5টি answer choice এর দুটি try করেই আপনি right answer টি pick করতে পারেন।

নীচের example টি খুবই appropriate এবং আমরা student দের সাধারণত এই example টিই দিয়ে থাকি।

**Example :** Nafis invested a part of taka 2000 at 5% rate of interest and rest at 4%. If he earns Tk. 95 as interest payment year, how much of the amount was invested at 5% rate of interest?

(A) 500 (B) 1000 (C) 1200 (D) 1500 (E) 2000

Solution: একটি variable (x) ধরে problem টি solve করা যায় ঃ

$$\left[\frac{5x}{100}+\frac{4(2000-x)}{100}=95\right]$$

or, 5x + 8000 – 4x = 9500

or, x = 1500

অথবা আমরা first এ 1200 pick করি। Return হবে 12 x 5 + 8 x 4 = 92 অতএব answer হবে D অথবা E| Tk. 2000 যদি 5% interest এ invest করা হতো return হতো Tk. 100। অতএব right answer হবে D.

7. **Calculator and Draft Paper:** Real exam-এ আপনারা Calculator কিংবা draft paper use করতে পারবেন না। Practice-এর সময় calculator use করার প্রশ্নই আসে না এবং rough work booklet -এ করা উচিত। মনে রাখবেন, booklet এর writing section ছাড়া অন্য section গুলোর পরিচ্ছন্নতা examiner দের উপর কোন positive impression create করে না।

# Algebra Review

Number set, Number line, Positive or negative, odd or even, Prime and composite, Zero, One, Absolute value, Approximation, Standard terms and symbols, Divisibilities, Consecutive numbers

Set, Venn Diagrams, Functions, Symbol Problems, Factorization, Algebraic Expressions

Factors, Multiples, L.C.M, H.C.F, Decimals and Fractions

Equation, Inequality, Exponents, Progression

**Chapter Outiline: Number set, Number line, Positive or negative, Odd or even, Prime and composite, Zero, One, Absolute value, Approximation, Standard terms and symbols, Divisibilities, Consecutive numbers.**

IBA admission test -এর Short Math Section এ fundamental math এবং mathematical logic এর গুরুত্ব সবচেয়ে বেশি। Elementary concept গুলো clear না করে অন্যান্য topic গুলোতে concentrate করতে গেলে অনেক Problem face করতে হবে। Sequentially continue করলে math vocabulary related problem সহজেই over come করা যায়।

## Elementary Topics:

**Counting Numbers:** 1, 2, 3, 4 ..... ('O' is not a counting number)

**Whole Numbers:** 0,1,2,3 ..... ('O' is a whole number)

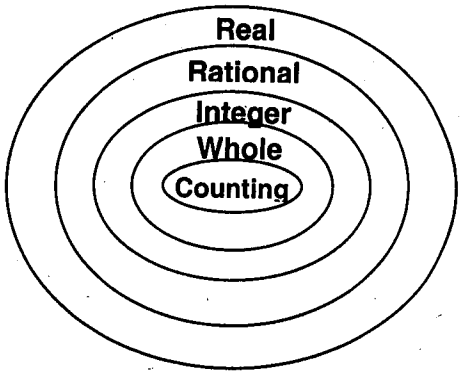
**Integers:** Integer (পূর্ণ সংখ্যা) হচ্ছে এমন কিছু number যেগুলোকে fraction (ভগ্নাংশ) বা decimal (দশমিক ভগ্নাংশ) ব্যবহার না করে লেখা যায়। যেমন ঃ -3, -2, -1, 0, 1, 2, 3.

**Rational Numbers:** এমন সব number যেগুলোকে fraction অর্থাৎ a/b আকারে লেখা সম্ভব। যেমন ঃ

$$1\frac{1}{2},\quad -2,\quad \left(\frac{-4}{2}\right),\quad \frac{23}{7}.$$

**Irrational Numbers:** এমন কিছু number যেগুলোকে fraction বা দুটি integer a ও b এর Ratio (অনুপাত) হিসাবে লেখা যায়না। যেমন, $\pi$ কে exactly 3.14 বলা যায় না। $\sqrt{2}$ এর মান লিখে শেষ করা যায় না বলে 1.41 ধরে নেয়া হয়।

**Real Numbers:** এ পর্যন্ত যতগুলো number set নিয়ে আলোচনা করা হলো সেগুলোকে এক সাথে করলে যে number set পাওয়া যাবে তা হচ্ছে real number এর set. এই set এর প্রত্যেকটি element (সদস্য) real number.




**Imaginary:** Positive বা Negative কে square (বর্গ) করলে positive number পাওয়া যায়। Negative সংখ্যার কোন root (বর্গমুল) নেই। যেমন ঃ $x = \pm 3$ হলে, $x^2=9$ বা $x^2=9$ হলে $x = \pm 3$.

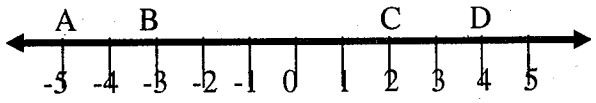
**Digits :** Decimal system- এ 0, 1, 2, ..... 9 এই দশটি Digit এর সাহায্যে সংখ্যা express এবং calculate করা হয়। 1 2 3 4 5 একটি five digit integer এখানে

5 is the units digit  4 is the tens digits  3 is the hundreds digit
2 is the thousands digit  1 is the ten-thousands digits

প্রতিটি digit এর সাথে স্থানীয় মান গুণ করে - গুণফল গুলো যোগ করলে number টি পাওয়া যাবে।

$1 \times 10000 + 2 \times 1000 + 3 \times 100 + 4 \times 10 + 5 \times 1 = 12345$

**Number Line :** Numbering system এর Linear representation হচ্ছে Number Line.একটি axis (অক্ষ) এর মাঝে O এবং 1, 2, 3 ..... ইত্যাদির মাধ্যমে '0' থেকে অন্যান্য Point গুলোর distance count করা হয়। (+) এবং (-) এর সাহায্যে যথাক্রমে '0' এর ডান এবং বাম দিক নির্দেশ করা হয়। Number Line এ সাধারণত integral value গুলো দেখানো হয়।




Number Line দুই দিকে অসীম (Positive and negative infinity) পর্যন্ত বিস্তৃত। প্রতিটি integral value এর মাঝে অসীম সংখ্যক fraction বা ভগ্নাংশ আছে। Number Line এর right side এর point, left side এর point এর চেয়ে বড়। অর্থাৎ '0' এর ডান দিকে দূরবর্তী সংখ্যা বড় এবং বাম দিকে '0' এর কাছের সংখ্যা দূরের সংখ্যার চেয়ে বড়। Diagram এ A <B <C <D

Number Line যে কোন দুটি Point এর distance সহজেই বের করা যায় এবং তাকে positive value হিসেবে count করা হয়।

**Positive or Negative:** Number Line এ '0' ডান দিকের point গুলোকে positive এবং বাম দিকের point গুলোকে Negative number বলে। অর্থাৎ positive number '0' অপেক্ষা বড় এবং negative number 0 থেকে ছোট। Always remember what happens when you multiply positive and negative numbers:

| | |
|---|---|
| Pos x Pos = Pos | 2 x 2 = 4 |
| Neg x Neg = Pos | -2 x -2 = 4 |
| Pos x Neg = Neg | 2 x -2 = -4 |

**Odd or Even:** 'A number is evenly divisible by 2' এর meaning হচ্ছে সংখ্যাটি 2 দিয়ে নিঃশেষে বিভাজ্য অর্থাৎ কোন remainder (ভাগ শেষ) থাকে না। এমন সংখ্যাকে even number (জোড় সংখ্যা) বলে। যেমন ঃ -4, -2, 0, 2, 4

2 দিয়ে নিঃশেষে বিভাজ্য নয় এমন সব সংখ্যাকে odd number (বিজোড় সংখ্যা) বলে। যেমন ঃ -3, -1, 1, 3 | Fraction কখনো even বা odd নয়। কোন Integer এর Unit digit even হলে Integer even এবং odd হলে Integer টি odd.

Always remember:

| | | |
|---|---|---|
| even + even = even | even x even = even | odd + odd = even |
| odd x odd = odd | even + odd = odd | even x odd = even |

**Prime Numbers:** Prime number বা মৌলিক সংখ্যাকে ১ এবং ঐ সংখ্যা ছাড়া অন্য কোন সংখ্যা দিয়ে নিঃশেষে ভাগ করা যায় না। Prime number is not evenly divisible by any other prime number. 30-র ছোট Prime number গুলো হচ্ছে- 2, 3, 5, 7, 11, 13, 17, 19, 23, 29 you should work-out and memorize prime numbers at least upto 150.

Negative numbers are not prime numbers.

0 is not a prime number.

1 is not a prime number.

2. is the only even prime number. It is the smallest prime number.

**Prime Number নির্ণয়ের একটি সহজ পদ্ধতি ঃ** কোন number prime কিনা তা নির্ণয়ের জন্য প্রথমে number টির approximate root (বর্গমূল) নির্ণয় করতে হবে। তারপর root এর চেয়ে ছোট বা সমান সব prime number দিয়ে number টিকে ভাগ করতে হবে। কোন ক্ষেত্রে Quotient যদি integer হয় তবে number টি prime হবে না। number টি যদি root এর চেয়ে ছোট সব prime number দিয়ে ভাগ করলে কোন ক্ষেত্রেই evenly divisible না হয় তবে number টি prime.

Example : Is the number 191 prime?

$\sqrt{191} \sim 14$, 14 এর ছোট Prime number গুলো হচ্ছে 2, 3, 5 এবং 13। এদের কোনটি দিয়েই 191 evenly divisible না। $\therefore$ 191 একটি prime number.

**Composite Numbers:** Composite number 1 এবং ঐ number ছাড়াও এক বা একাধিক number দিয়ে evenly divisible. যেমন ঃ 4, 6, 8, 9, 12.

**Zero :** Zero (O) একটি Integer. Zero একটি even number. Zero positive কিংবা negative কোনটিই নয়। Zero Prime number নয়, And, zero is not a composite number.

**One :** One (1) একটি positive integer. এটি একটি odd number. One prime কিংবা composite কোনটিই নয়।

**Absolute Value :** Absolute Value বা পরম মান হচ্ছে + or - চিহ্ন বর্জিত সংখ্যা। x এর absolute value কে |x| আকারে লেখা হয়। In terms of number line, O থেকে কোন সংখ্যার distance (always positive) এই সংখ্যার absolute value যেমন ঃ $|\pm 5| = 5$.

**Approximations:** Approximation বা আসন্ন মান বের করার পদ্ধতি আমরা rough check করতে ব্যবহার করি। বাংলাদেশের population 119,080,050 না বলে 120 million বলা more logical. এটি approximation এর একটি simple example. Approximation significant figures অথবা Decimal places এর উপর ভিত্তি করে করা হয়।

**Significant Figures :** Number এর left side এর non-zero digit কে 1st significant figure, 2nd digit কে 2nd significant figure অথবা 1st place to be accurate, 2nd place to be accutrate, অথবা 1st place বা 3rd place of accuracy ইত্যাদি ভাবে express করা হয়। Directed place-এ accuracy-র জন্য তার right side-এর place এর digit 5 এর কম হলে তাকে eliminate করা হয়। কিন্তু 5 এর সমান বা বেশি হলে উল্লেখিত Place এ 1 যোগ করা হয়।

যেমন ঃ

34,597 = 30,000 Correct to 1 s.f.
= 35,000 Correct to 2 s.f
= 34,600 Correct to 3 s.f
= 34,600 Correct to 4 s.f

**Decimal Places:** Decimal বা দশমিকের পরের place গুলোকে যথাক্রমে 1 decimal place, 2 decimal place ইত্যাদি এবং digit গুলোকে tenth, hundredth ইত্যাদি digit বলা হয়। এক্ষেত্রেও round-up একইভাবে করা হয়। যেমন ঃ

0.01245 = 0.01 Correct to 2 decimal places.
= 0.012 Correct to 3 decimal places.
= 0.0124 Correct to 4 decimal place.

কোন decimal number কে integral value তে convert করতে হলে দশমিকের পরে 5 এর বেশি number থাকলে units digit এর সাথে 1 add করতে হয় এবং এর কম থাকলে দশমিকের পরে সংখ্যাগুলো বাদ দিতে হয়। যেমন- 5.52 ~ 6 এবং 102.49 ~ 102.

**Consecutive Numbers:** Consecutive numbers বা ধারাবাহিক সংখ্যা হচ্ছে একই বৈশিষ্ট্যের পাশাপাশি কিছু সংখ্যা। যেমনঃ

Consecutive positive number : 2, 3, 4, 5

Consecutive negative number : -99, -98, -97

Consecutive even numbers : 6, 8, 10

Consecutive odd numbers : 5,7, 9

Consecutive prime numbers : 2, 3, 5, 7

Consecutive integers : 2, 3, 4; -4, -3, -2; -1, 0, 1

**Standard Symbols:** কিছু standard symbol এবং symbol গুলোর meaning আপনাদের মনে করিয়ে দেই-

| Symbol | Meaning |
|---|---|
| = | is equal to (সমান) |
| ≠ | is not equal to (অসমান) |
| < | L.H.S. is less than R.H.S (ছোট) |
| > | L.H.S. is greater than R.H.S (বড়) |
| ≤ | L.H.S is less than or equal to R.H.S. (ছোট বা সমান) |
| ≥ | L.H.S is greater than or equal to R.H.S (বড় বা সমান) |
| \|x\| | absolute value of x (পরম মান) |

L.H.S. left hand side of an equation or inequality (বামপথ)

R.H.S. right hand side of an equation or inequality (ডানপথ)

| | |
|---|---|
| ≈ | is congruent to (সর্বসম) |
| ~ | is similar to (অনুরূপ) |
| ⊥ | is perpendicular to (লম্ব) |
| \|\| | is parallel to (সমান্তরাল) |
| ± | Plus or minus ((যোগ বা বিয়োগ) |

**Standards Terms:** Here are some standard terms with their meanings :

| ***Term*** | ***Meaning*** |
|---|---|
| Sum (যোগফল) | the result of addition (যোজন) |
| Difference (বিয়োগফল) | the result of subtraction (বিয়োজন) |
| Product (গুণফল) | the result of multiplication (গুণ) |
| Quotient (ভাগফল) | the result of division (ভাগ) |

**In division:** Dividend = Quotient x Divisor + Remainder

অর্থাৎ ভাজ্য = ভাগফল X ভাজক + ভাগশেষ

অথবা, $\frac{Dividend}{Divisor} = Quotient + \frac{Remainder}{Divisor}$

অথবা, (ভাজ্য ÷ ভাজক) = ভাগফল + (ভাগশেষ ÷ ভাজক)

**Divisibility :**

i) একটি integer 2 দিয়ে divisible যদি integer এর units digit even or 0 হয়। যেমন ঃ 598 integer টি 2 দিয়ে divisible.

ii) একটি integer 3 দিয়ে divisible যদি integer এর digit গুলোর sum 3 দিয়ে divisible. যেমন ঃ 2,145 integer টি 3 দিয়ে divisible কেননা 2 + 1 + 4 + 5 = 12 এবং 12 integer টি 3 দিয়ে divisible.

iii) একটি integer 4 দিয়ে divisible যদি integer টির units এবং tens digit নিয়ে যে সংখ্যা তা 4 দিয়ে divisible হয়। যেমন ঃ 440 integer টি 4 দিয়ে divisible কেননা 40 integer টি 4 দিয়ে divisible.

iv) একটি integer 5 দিয়ে divisible যদি তার units digit 0 বা 5 হয়। যেমন ঃ 1115

v) একটি integer 6 দিয়ে divisible যদি integer টি 2 ও 3 দুটো দিয়ে divisible হয়।

vi) একটি integer 8 দিয়ে divisible যদি ডান দিকের তিনটি digit এর integerটি 8 দিয়ে divisible হয়।
যেমন ঃ 44,816 integerটি 8 দিয়ে divisible
কেননা 816 integer টি 9 দিয়ে divisible.

vii) একটি integer 9 দিয়ে divisible যদি sum of the digits 9 দিয়ে divisible হয়।
যেমন ঃ 12,339 integer টি 9 দিয়ে divisible কেননা 1 + 2 + 3 + 3 + 9 = 18 integer টি 9 দিয়ে divisible.

viii) একটি integer 10 দিয়ে divisible যদি এর units digit 0 হয়।

ix) একটি integer 11 দিয়ে divisible যদি ডান দিক থেকে odd numbered place গুলোর sum of the digit এবং even numbered place গুলোর sum of the digit এর difference O বা 11 হয়।
যেমন ঃ 411,213 integer টি 11 দিয়ে divisible কেননা (1+2+3)-(4+1+1) = 0
Divisor এর divisibility rule মানে না এমন কোন Dividend নেই যা evenly divisible.
Divisibility র এই সব rule এর উপর ভিত্তি করে কোন integer বড় অন্য কোন divisor দিয়ে divisible কিনা তা নির্ণয় করতে হবে।

**Review Excercise – 1:**

1. If a number is divisible by 102, then it is also divisible by:
(A) 23 (B) 11 (C) 103 (D) 5 (E) 2

2. Which of the following numbers is divisible by 36?
(A) 35,924 (B) 64,530 (C) 74,098 (D) 152,640 (E) 192,042

3. How many prime numbers are there between 45 and 72?
(A) 4 (B) 5 (C) 6 (D) 7 (E) 8

4. If w, x, y and z are all integers greater than 2, which of the following is the greatest?
(A) x + yz + w (B) x + y (z + w) (C) (x + y) (z + w) (D) (x + y) z + w (E) x + (yz + w)

5. Which of the following factions is not equal to $\frac{40}{50}$?

(A) $\frac{4}{5}$ (B) $\frac{12}{15}$ (C) $\frac{20}{25}$ (D) $\frac{24}{35}$ (E) $\frac{48}{60}$.

6. $\frac{1.04}{0.079} =$

(A) $\frac{10.04}{0.0079}$ (B) $\frac{104}{0.79}$ (C) $\frac{10.4}{0.79}$ (D) $\frac{0.104}{0.79}$ (E) $\frac{104}{0.0079}$

7. How many odd integers are between $\frac{10}{3}$ and $\frac{62}{3}$?

(A) 18 (B) 10 (C) 9 (D) 8 (E) 7

8. If t is any integer, which of the following represents an odd number?

(A) 2t (B) 2t + 3 (C) 3t (D) 2t+2 (E) t+1

9. What is the product of 23 and 79 to one place of accuracy?

(A) 1600 (B) 1817 (C) 1000 (D) 1800 (E) 2000

10. The number 89.999 rounded of to the nearest tenth is equal to which of the following?

(A) 90.0(B) 89.0(C) 89.4 (D) 89.99 (E) 89.9

11. The sum of five odd numbers is always:

(A) even (B) divisible by 3 (C) divisible by 5

(D) a prime number (E) none of the above

12. Which of the following numbers is divisible by 11?

(A) 30,217 (B) 44,221 (C) 59,403 (D) 60,411 (E) none of the above.

13. Which of the following numbers is a prime?

(A) 147 (B) 149(C) 153 (D) 155 (E) 161

14. The sum of an odd and an even number in always.

(A) a perfect square (B) negative (C) Even

(D) odd (E) Prime.

15. Which of the following number is divisible by 24?

(A) 13,444 (B) 15,746

(C) 15,466 (D) 16,012

(E) None of the above.

16. Which of the following is the greatest integer less than 630,000 that can be written using all of the digits from 1 to 6?

(A) 629,999 (B) 654,321 (C) 624,531 (D) 62,555 (E) 625,431

17. If the sum of three different prime numbers is an even number, what is the smallest of the three?

(A) 1 (B) 2 (C) 3

(D) 7 (E) Cannot be determined.

18. On a number line, point B is at a distance of 5 from point C and point D is at a distance of 7 from point C. What is the distance from point B to point D?

(A) 2 (B) 5

(C) 7 (D) 12 (E) Can not be determined.

19. If a and b are integers and the sum of ab and b is odd, which of the following could be true?

I. a and b are both odd II. a is even and b is odd.

III. a is odd and b is even.

(A) I only (B) II only (C) III only

(D) I and II (E) I and III.

20. Which of the following is the best approximation of the product (1.005) (20.0025) (0.0102)?

(A) 0.02 (B) 0.2 (C) 2.0 (D) 20 (E) 200.

21. The sum of four consecutive odd integers must be :

(A) even, but not necessarily divisible by 4

(B) divisible by 4, but not necessarily by 8

(C) divisible by 8, but not necessarily by 16

(D) divisible by 16

(E) none of the above.

22. Six consecutive integers are given. The sum of the first three is 27. What is the sum of the last three?

(A) 29 (B) 30 (C) 32

(D) 33 (E) 36

23. Of the following, the closest approximation to $\left(\frac{198.27(0.5012)}{2.02}\right)$ is

(A) 25 (B) 50

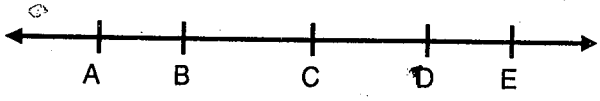
(C) 75 (D) 100

(E) 500.

24. By how much does r–s exceed s–r?

(A) $\frac{r-s}{s-r}$ (B) 2 (r-s) (C) 2 (s–r) (D) r–s (E) –1

25.




In the diagram above, AD=BE=6 and CD=3 (BC). If AE=8, then BC=

(A) 6 (B) 4 (C) 3 (D) 2 (E) 1

**Answer to Review Exercise-1**

| | | | | |
|---|---|---|---|---|
| 1. (E) | 6. (C) | 11. (E) | 16. (E) | 21. (C) |
| 2. (D) | 7. (D) | 12. (A) | 17. (B) | 22. (E) |
| 3. (C) | 8. (B) | 13. (B) | 18. (E) | 23. (B) |
| 4. (C) | 9. (E) | 14. (D) | 19. (B) | 24. (B) |
| 5. (D) | 10. (A) | 15. (E) | 20. (B) | 25. (E) |

# Chapter Outline: Factors, Multiples, L.C.M, H.C.F, Decimals and Fractions.

**Factors:** কোন একটি number যে সব number দিয়ে evenly divisible সে সব number কে প্রথমোক্ত number টির factor বা গুণনীয়ক বলে।

Example : 1, 2, 4, 8 সংখ্যাগুলি হলো 16 এর factor.

আবার, 1, 2, 3, 4, 6, 8, 12 হচ্ছে 24 এর factor.

**Common Factors:** উপরের example এ দেখা যাচ্ছে 1, 2, 4, 8 factor গুলো 16 এবং 24 এর common factor.

**H.C.F (Highest Common factor):** Common factor গুলোর মধ্যে যে factor টির মান সবচেয়ে বেশি তাকে H.C.F বা গ.সা. গু বলে। 16 এবং 24 এর H.C.F হলো 8.

কিছু সংখ্যার H.C.F বের করতে হলে সংখ্যাগুলোকে factorize করতে হয় অর্থাৎ সর্বনিম্ন মানের factor গুলোর গুণফল হিসাবে প্রকাশ করতে হয়, অতঃপর common factor গুলোকে গুণ করলে H.C.F পাওয়া যায়।

Example: Find the H.C.F of 18, 24 and 32.

18=1 x 2 x 3 x 3, 24 = 1 x 2 x 2 x 2 x 3, 32 = 1 x 2 x 2 x 2 x 2 x 2

H.C.F=1x2=2

N.B: 1 সব number এরই factor। অতএব, কিছু সংখ্যার যদি কোন common factor না থাকে তবে 1 হবে সংখ্যাগুলোর H.C.F। H.C.F কে Highest common divisorও বলা যায়।

**Multiples:** কোন একটি number দিয়ে যেসব number নিঃশেষে ভাগ করা যায়, সে সব number কে multiple বা গুণিতক বলা হয়।

Example: 12, 24, 36, 48, 60, 72 ... ইত্যাদি 12 এর কিছু multiple

এবং 18, 36, 54, 72 ইত্যাদি 18 এর কিছু multiple

**Common Multiple:** একাধিক number এর multiple গুলোর মধ্যে যেগুলো common তাদেরকে প্রথমোক্ত number গুলোর common multiple বলে।

Example: 36, 72, 108 ইত্যাদি 12 ও 18 এর কিছু common multiple.

**L.C.M. (Least Common Multiple):** Common multiple গুলোর মধ্যে সবচেয়ে ছোটটিকে ল.সা.গু বা L.C.M বলে। 12 এবং 18 এর L.C.M 36.

কিছু সংখ্যার L.C.M বের করতে হলে সংখ্যাগুলোকে Factorize করে, common ও uncommon factor গুলোকে গুণ করলে L.C.M পাওয়া যায়।

Example: Find the L.C.M of 18, 24 and 30

18 = 2 x 3 x 3, 24 = 2 x 2 x 2 x 3, 30 = 2 x 3 x 5

L.C.M # 2 x 2 x 2 x 3 x 3 x 5 = 360

**Further Discusion on H.C.F and L.C.M :**

1. দুটি সংখ্যার L.C.M ও H.C.F এর গুণফল সংখ্যা দুটির গুণফলের সমান।
2. কিছু সংখ্যার L.C.M বের করার ক্ষেত্রে কোন সংখ্যা যদি অন্য সংখ্যার factor হয় তাহলে তা eliminate করা যায়।

Example: Find the L.C.M of 9,15,18,25

এক্ষেত্রে 9, 18 এর factor এবং 15 এর 3 ও 5, 18 ও 25 এর factor, 18 ও 25 এর L.C.M বের করলে উত্তর পাওয়া যাবে।

3. কিছু সংখ্যার H.C.F বের করার ক্ষেত্রে একটি সংখ্যা অপর একটি সংখ্যার factor হলে, factor টি রেখে অপর সংখ্যা উপেক্ষা করা যায়।

   Example: Find the H.C.F of 9,18 and 21

   এক্ষেত্রে 18 উপেক্ষা করে 9 ও 21 এবং H.C.F বের করলেই উত্তর পাওয়া যাবে।

4. যদি এমন কোন number নির্ণয় করতে বলা হয় যা কিছু number দিয়ে divisible তা হলে number গুলোর L.C.M বের করতে হবে।

   Example: find the number which is divisible by 2, 3, 5 and 7

   Ans.: 210.

5. যদি সমান কোন number বের করতে বলা হয় যা কিছু সংখ্যা দিয়ে ভাগ করলে প্রত্যেক ক্ষেত্রে একই remainder থাকে তবে L.C.M এর সাথে remainder যোগ করতে হবে।

   Example: আগের Ans. এর সাথে 1 যোগ করে দিলে প্রত্যেক ক্ষেত্রে 1 remainder থাকবে।

6. প্রদত্ত number গুলোর সম ব্যবধানের কিছু remainder অবশিষ্ট থাকলে L.C.M থেকে ব্যবধান বিয়োগ করতে হবে।

   Example: 210 থেকে 1 বিয়োগ করলে অর্থাৎ 209 কে 2, 3, 5, 7 দিয়ে ভাগ করলে যথাক্রমে 1, 2, 4, ও 6 অবশিষ্ট থাকবে (এক্ষেত্রে ব্যবধান 1)।

7. কোন সংখ্যা যা দ্বারা কিছু সংখ্যা divisible বের করতে বললে H.C.F বের কতে হবে।

8. Fraction এর comparison বা addition বা Subtraction এর ক্ষেত্রে fraction গুলো একই denominator বিশিষ্ট (সমহর বিশিষ্ট) করতে হয়, সেক্ষেত্রে L.C.M ব্যবহার করে Least Common denominator (L.C.D) নির্ণয় করা হয়।

**Fractions:** A fraction (ভগ্নাংশ) is an indicated division. $\frac{1}{2}$ এর meaning হচ্ছে $1 \div 2$ । একটি fraction এর top number টিকে numerator (লব) এবং bottom number টিকে denominator (হর) বলে। কোন fraction এর numerator যদি denominator এর বড় হয় তবে faction টিকে improper fraction বলে। (e.g. $\frac{13}{7}$)

**Mixed Number:** Mixed number একটি improper fraction indicate করে যেখানে fraction টিকে একটি integer ও proper fraction এর sum হিসেবে দেখানো হয়। সহজেই mixed number কে fraction এ convert করা যায়।

Example: $3\frac{1}{3} = 3 + \frac{1}{4} = \frac{3\times4+1}{4} = \frac{13}{4}$

**Equivalent Fractions:** কোন fraction এর numerator ও denominator কে 0 ছাড়া অন্য কোন কিছু দিয়ে multiply করলে একই মানের একটি fraction বা equivalent fraction পাওয়া যায়।

Example: $\frac{a}{b}=\frac{a\times c}{b\times c}=\frac{ac}{bc} if c\neq 0$

**Signs of Fractions:** Fraction এর sign, denominator এর sign এবং numerator এর sign এই তিনটির যে কোন দুটি sign change করা হলে fraction এর sign change হয় না।

Example: $\frac{a}{b}=+\frac{+a}{+b}=+\frac{-a}{-b}=-\frac{-a}{b}=-\frac{a}{-b}$

$$-\frac{a}{b}=-\frac{+a}{+b}=+\frac{-a}{+b}=+\frac{+a}{-b}=-\frac{-a}{-b}$$

**Comparison, Addition and Subtraction of Fractions:** কখনও কখনও fraction এর comparison করতে বলা হয় এবং মানের Ascending (increasing) order অথবা descending (decreasing) order-এ সাজাতে বলা হয়। এছাড়াও fraction এর addition বা subtraction –এর জন্য একটি common procedure follow করা হয়।

i) প্রথমে fraction গুলোর denominator গুলোর L.C.M অর্থাৎ L.C.D বা least common denominator নির্ণয় করা হয়।

ii) Fraction গুলোর equivalent fraction এমন ভাবে নির্ণয় করা হয় যেন সেগুলোর denominator L.C.D এর সমান হয়।

iii) এরপর নির্দেশিত Operation Complete করা হয়।

Example-1: Which one is greater $\frac{4}{5}$ or $\frac{5}{7}$

i) 5 ও 7 এর L.C.M অর্থাৎ fraction গুলোর L.C.D = 35

ii) $\frac{4}{5}=\frac{4\times 7}{5\times 7}=\frac{28}{35}; \frac{5}{7}=\frac{5\times 5}{7\times 5}=\frac{25}{35}$

iii) $\frac{28}{35}>\frac{25}{35} \therefore \frac{4}{5}>\frac{5}{7}$

একই ভাবে, $\frac{4}{5}-\frac{5}{7}=\frac{28}{35}-\frac{25}{35}=\frac{3}{35}$

এবং $\frac{4}{5}+\frac{5}{7}=\frac{53}{35}$

**Multiplication:** একাধিক fraction এর multiplication-এ numerator গুলোর Product কে denominator গুলোর product দিয়ে ভাগ করলে fraction এর product পাওয়া যায়। Multiplication-এ numerator এবং denominator এর common factor গুলো eliminate করা যায়।

Example: $\frac{ab}{c}\times\frac{d}{c}=\frac{abd}{ce}$

**Division:** Fraction এর division এর ক্ষেত্রে divisor কে invert করে অর্থাৎ reciprocal fraction (e.g $\frac{b}{a}$ is reciprocal of $\frac{a}{b}$) এর সাথে dividend কে multiply করতে হয়।

Example: $\frac{x+y}{x^2-xy} \div \frac{1}{x^2-y^2} = \frac{x+y}{x(x-y)} \times \frac{(x+y)(x-y)}{1} = \frac{(x+y)^2}{x}$

L.C.M and H.C.F of fractions :

$$\text{L.C.M of Fractions} = \frac{\text{L.C.M of numerators}}{\text{H.C.F of denominators}}$$

$$\text{H.C.F of Fractions} = \frac{\text{H.C.F of numerators}}{\text{L.C.M of denominators}}$$

**Reducing Fractions:** Fractions এর numerator এবং denominator কে factor এর গুণফল হিসাবে express করে Cross out করলে fraction এর reduced form পাওয়া যায় ঃ

$$\frac{16}{20} = \frac{2 \times 2 \times 2 \times 2}{2 \times 2 \times 5} = \frac{4}{5}$$

**Further discussion on Fractions:**

i) Positive Fraction এর numerator বাড়লে বা denominator কমলে বা দুটি একসাথে হলে fraction বড় হয় এবং বিপরীত ঘটনার ক্ষেত্রে ছোট হয়। Negative fraction এর ক্ষেত্রে ফলাফল positive fraction এর বিপরীত;

ii) Proper Fraction এর numerator বাড়লে বা denominator কে একই পরিমানে বাড়ালে বা কমালে fraction এর মান যথাক্রমে বাড়ে এবং কমে ঃ $\frac{1}{2} < \frac{99}{100}$

iii) Fraction এর denominator কখন 0 নয় কেননা, $\frac{x}{0}$ expression টি mathematically define করা সম্ভব না।

**Decimals:** Decimal এবং fraction একই term express করার দুটি ভিন্ন পদ্ধতি। প্রত্যেকটি fraction কে সহজেই decimal-এ এবং decimal কে fraction-এ convert করা যায়।

**Conversion:**

i) Fraction কে decimal-এ convert করতে হলে numerator কে denominator দিয়ে ভাগ করতে হয়:

$$\frac{3}{4} = 3 \div 4 = 0.75$$

ii) Decimal কে fraction এ convert করতে হলে দশমিকের জন্য 1 এবং 1 এর ডানে দশমিকের ডান দিকে পদসংখ্যার সমান সংখ্যক 0 নিয়ে denominator এবং দশমিক eliminate করে সংখ্যাটিকে numerator count করে fraction গঠন করা হয়।

$$.75 = \frac{75}{100} = \frac{3 \times 25}{4 \times 25} = \frac{3}{4}$$

**Operation of decimals:** decimal এর comparison, addition এবং subtraction integer-এর addition বা subtraction এর procedure-এই করা যায়। একটি column-এ সাজিয়ে নিলে যোগ বা বিয়োগ করা সহজ হয়।

**Multiplying Decimals:** সাধারণভাবে গুণ করার পর tricky part হচ্ছে decimal point বসানো। যে সব সংখ্যা গুণ করা হচ্ছে তাদের decimal point এর পর মোট যতগুলো সংখ্যা আছে solution -এ decimal point এরপর ঠিক ততগুলো সংখ্যা থাকবে ঃ

$$\begin{array}{r} 3.451 \\ \times\ 8.9 \\ \hline 30.7139 \end{array}$$

যদি 5 এবং কোন even number যে সংখ্যাগুলো গুণ করা হচ্ছে তাদের ডানে থাকে তাহলে solution এর ডান দিকে 0 থাকবে, ডানে অন্য কোন digit না থাকলে decimal এর পর 0 থাকা না থাকা একই কথা। এক্ষেত্রে 0 বাদ দিলে solution এর decimal point এরপর সংখ্যা একটি কমে যাবে ঃ

$$\begin{array}{r} .125 \\ \times\ .2 \\ \hline .0250 \end{array} \text{ or } 0.025$$

**Dividing Decimals:** ভাগ করার আগে dividend এবং divisor কে fraction এ convert করতে হবে ঃ

$$\frac{.25}{.05} = \frac{25}{100} \div \frac{5}{100} = \frac{25 \times 100}{100 \times 5} = 5$$

N.B: 10 বা 100 বা 1000 দিয়ে গুন করলে decimal point যথাক্রমে 1 বা 2 বা 3 place ডানে এবং ভাগ করলে বামে সরে যাবে ঃ $\frac{250.3}{10} = 25.03$

## Review Exercise – 2

1. Which of the following fractions is closest to $\frac{1}{4}$?

   (A) $\frac{1}{5}$ (B) $\frac{3}{10}$ (C) $\frac{3}{20}$ (D) $\frac{7}{20}$ (E) $\frac{4}{15}$

2. 2 pints = 1 quart; 4 quarts = 1 gallon. What part of a gallon is 6 pints?

   (A) $\frac{1}{6}$ (B) $\frac{2}{3}$ (C) $\frac{3}{4}$ (D) $\frac{4}{3}$ (E) $\frac{3}{2}$

3. A paints $\frac{1}{4}$ of barn and B paints $\frac{1}{8}$ of the remainder. What fraction of the barn is left unpainted?

   (A) $\frac{1}{32}$ (B) $\frac{11}{32}$ (C) $\frac{21}{32}$ (D) $\frac{29}{32}$ (E) $\frac{23}{32}$

4. When the price of an article is reduced by $\frac{2}{7}$ of its former value, the number of articles sold is increased to $\frac{21}{10}$ of the original amount. The daily receipts are what fraction of the former?

   (A) $\frac{3}{5}$ (B) $1\frac{1}{2}$ (C) $1\frac{2}{3}$ (D) $2\frac{2}{5}$ (E) $2\frac{1}{2}$

5. Suzan is 4 times as old as Paul and $1\frac{1}{2}$ times as old as Mary. What fraction of Paul's age is Mary?

   (A) $\frac{3}{8}$ (B) $2\frac{2}{3}$ (C) $3\frac{3}{4}$ (D) 6 (E) $6\frac{1}{2}$

6. A base ball term won w games and lost 1 game. What fractional part of its games did it win?

   (A) $\frac{1}{w}$ (B) $\frac{w-1}{w}$ (C) $\frac{w}{1}$ (D) $\frac{w+1}{w}$ (E) $\frac{w}{w+1}$

7. Which of the following is less than $\frac{1}{6}$?

   (A) 0.1667 (B) $\frac{3}{18}$ (C) 0.167 (D) 0.1665 (E) $\frac{8}{47}$

8. Which of the following lists three fractions in ascending order?

   (A) $\frac{9}{36}, \frac{1}{4}, \frac{3}{10}$ (B) $\frac{1}{4}, \frac{9}{26}, \frac{3}{10}$ (C) $\frac{1}{4}, \frac{3}{10}, \frac{9}{26}$

   (D) $\frac{9}{26}, \frac{3}{10}, \frac{1}{4}$ (E) $\frac{3}{10}, \frac{9}{26}, \frac{1}{4}$

9. For which of the following expressions would the value be greater if 160 were replaced by 120?

I. $1000 - 160$ II. $\frac{160}{1+160}$ III. $\frac{1}{1-\frac{1}{160}}$

(A) None (B) I only (C) III only (D) I and II (E) I and III

10. What is the greatest integer that will divide evenly into both 36 and 54?

(A) 6 (B) 12 (C) 18 (D) 24 (E) 36

11. What is the smallest integer greater than 1 that leaves a remainder 1 when divide by 6, 8 and 10?

(A) 61 (B) 49 (C) 81 (D) 119 (E) 121

12. In the repeating decimal 0.097531097531 ..... what is the $44^{th}$ digit to the right of the decimal point?

(A) 1 (B) 0 (C) 9 (D) 7 (E) 5

13. A wire is cut into three equal parts. The resulting segments are then cut into 4, 6 and 8 equal parts respectively. If each of the resulting segments has an integer length, what is the minimum length of the wire?

(A) 24 (B) 48 (C) 72 (D) 96 (E) 144

14. In a certain class, $\frac{1}{2}$ of the male students and $\frac{2}{3}$ of the female students speak French. If there are $\frac{3}{4}$ as many girls as boys, what fraction of the entire class speaks French?

(A) $\frac{4}{7}$ (B) $\frac{3}{4}$ (C) $\frac{1}{4}$ (D) $\frac{2}{3}$ (E) $\frac{4}{5}$

15. What is the smallest positive integer that is evenly divisible by both 21 and 9?

(A) 189 (B) 126 (C) 63 (D) 42 (E) 21

16. Filling each of five cars with the same amount of fuel empties three-forth of a gasoline storage tank. What part of the total capacity did each vehicle receive?

(A) $\frac{1}{5}$ (B) $\frac{1}{10}$ (C) $\frac{2}{15}$ (D) $\frac{3}{20}$ (E) $\frac{4}{15}$

17. A gasoline tank that is $\frac{1}{2}$ full has 8 gallons removed. The tank is then $\frac{1}{10}$ full. What is the capacity, in gallons, of the tank?

(A) 2.5 (B) 6.4 (C) 15.8 (D) 20 (E) 40

18. A motion was adopted by a vote of 5 to 3. What part of the total vote was against the motion?

(A) $\frac{3}{8}$ (B) $\frac{3}{5}$ (C) $\frac{5}{8}$ (D) $\frac{5}{3}$ (E) $\frac{8}{5}$

19. Mr. Ted owned $\frac{5}{8}$ of an interest in a house. He sold $\frac{1}{5}$ of his interest for $ 1,000. What was the total value of the house?

(A) $ 3000 (B) $4000 (C) $6000 (D) $8000 (E) $600000

20. Which of the following fractions is the greatest?

(A) $\frac{403}{134}$ (B) $\frac{79}{26}$ (C) $\frac{527}{176}$ (D) $\frac{221}{73}$ (D) $\frac{99}{34}$

21. What is the product of the following fractions? $\frac{1}{2},\frac{2}{3},\frac{3}{5},\frac{1}{7},\frac{1}{4}$

(A) $\frac{215}{44{,}100}$ (B) $\frac{1}{140}$ (C) $\frac{1}{196}$ (D) $\frac{25}{158}$ (E) $\frac{3}{427}$

22. By how many sixteenths is $\frac{1}{3}$ of $\frac{3}{4}$ more than $\frac{1}{4}$ of $\frac{3}{4}$?

(A) 1 (B) 2 (C) $2\frac{1}{2}$ (D) 3 (E) 4

23. A group of three friends ate dinner at a restaurnat. When they settled the check, Peter paid $\frac{4}{5}$ as much as John paid, and John paid $\frac{1}{3}$ as much as Ralph paid. What fractions of the check did John pay?

(A) $\frac{15}{24}$ (B) $\frac{12}{31}$ (C) $\frac{5}{21}$ (D) $\frac{5}{24}$ (E) $\frac{1}{24}$

24. In a graduating class with same number of boys and of girls, $\frac{1}{8}$ of the girls and $\frac{5}{6}$ of the boys are honors students. What part of the class consists of boys who are not honors students?

(A) $\frac{1}{12}$ (B) $\frac{1}{6}$ (C) $\frac{7}{48}$ (D) $\frac{13}{48}$ (E) $\frac{35}{48}$

25. What part of a quarter is 2 pennies, 2 nickles and 1 dime?

(A) $\frac{1}{88}$ (B) $\frac{1}{5}$ (C) $\frac{3}{25}$ (D) $\frac{17}{25}$ (E) $\frac{22}{25}$

**Answer Keys :**

| | | | | |
|---|---|---|---|---|
| 1. E | 6. E | 11. E | 16. D | 21. B |
| 2. C | 7. D | 12. C | 17. D | 22. A |
| 3. C | 8. C | 13. C | 18. A | 23. D |
| 4. B | 9. E | 14. A | 19. D | 24. A |
| 5. B | 10. C | 15. C | 20. B | 25. E |

## Chapter Outline: Set, Venn Diagrams, Functions, Symbol Problems, Factorization, Algebraic Expressions

**Set:** A set is a well-defined class of objects, so that we can tell without ambiguties whether any one object does or does not belong to that class, অর্থাৎ, বিভিন্ন বস্তুর সুনির্ধারিত সংগ্রহকে সেট বলা হয়। এখানে সুনির্ধারিত বলতে এই বোঝায় যে, কোন বস্তুটি বিবেচনাধীন সংগ্রহের অন্তর্ভূক্ত আর কোনটি নয় তা সুনির্দিষ্টভাবে বলা যায়।

A, B, C, X, Y, Z ইত্যাদি Capital Letter দিয়ে set এর নামকরণ করা হয়, অন্তর্ভূক্ত বস্তুসমূহকে set এর উপাদান (element) বা সদস্য (member) বলা হয়। a যদি A set এর element হয় তাহলে $a \in A$ এবং না হলে $a \notin A$ লেখা হয়।

একটি set বিভিন্নভাবে define করা যায়। যেমন ঃ

i. A = 6 থেকে ছোট সকল ধনাত্মক পূর্ণ সংখ্যার সেট

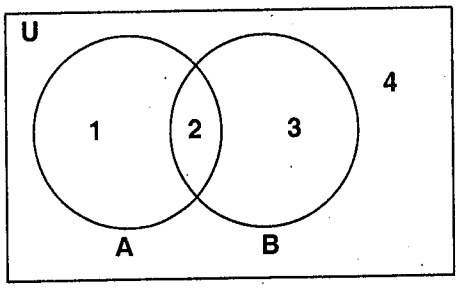
ii. A = {1, 2, 3, 4, 5, 6}

iii. A={x: x is an integer so that 0<x<6}

IBA এর admission test এ set theory সম্পর্কিত problem থাকে না। তবে বিভিন্ন set এর relation দেখানোর একটি পদ্ধতি "Venn Diagram" বা 'ভেনচিত্র' সম্পর্কে ধারণা, কিছু math এবং analytical ability related problem solve করতে সাহায্য করে।

**Venn Diagram:** বিবেচনাধীন সব বস্তুকে rectangle এবং set গুলো oval অথবা Circle-এ রেখে বিভিন্ন set এর relation দেখানো যায়,

**Relationship of two sets →**




এখানে U = Universal set বা বিবেচনাধীন সকল বস্তু
A = set A
B = set B
1 = only set A
2 = A ∩ B বা A and B (AB) অর্থাৎ A ও B এর common element
3 = only set B
4 = Neither set A nor set B (A′B′)
1,2,3 = A ∪ B বা A or B অর্থাৎ A ও B এর common এবং uncommon element

**Common এবং Uncommon element**

U = 1+2+3+4
= {A+B-AB} + A′B′

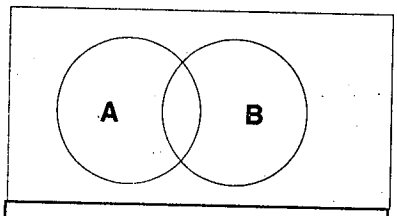
Example: All the 120 pupils in a certain school learn French or Spanish or both. 75 learn Franch and 60 learn Spanish. How many learn both?

U = A+B-AB+AB

∴ 120 = 75 + 60 – AB + 0

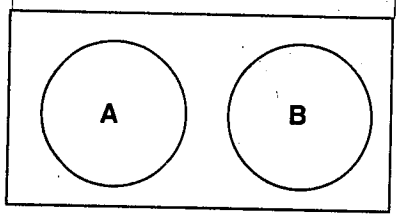
**Three Types of venn Diagram for Two Sets:**

(i)



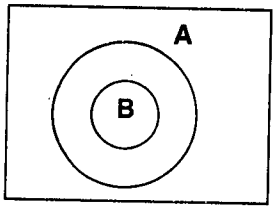

A and B have some common elements

ii)



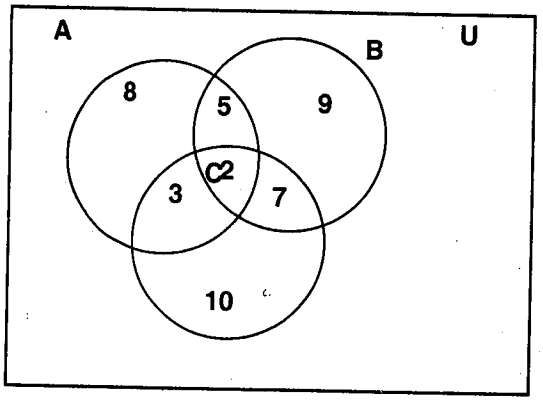

No common element for A and B

iii)




All the element of set B are in set A.

**Relationship of Three Sets:**




A = {2, 3, 5, 8}
B = {2, 5, 7, 9}
C = {2, 3, 7, 10}

A, B ও C এর element গুলো বিবেচনা করলে দুটি set এর relation থেকে সহজেই তিনটি set এর relation পাওয়া যায়। এখানে,

U = {A + B + C – AB – BC – CA + ABC} + ABC

Example: Of 250 students surveyed in Mentors' 118 had applied for IBA, 98 for DU, 94 for JU, 42 had applied for IBA and D.U, 24 for DU and JU, 34 for JU and IBA, while 8 had applied for all three. How many students applied for other institutions?

$250 = \{118 + 98 + 94 - 42 - 24 - 34 + 8\} + A'B'C'$

$250 = 218 + A'B'C'$

$A'B'C' = 32.$

**Factorization:** সাধারণ এর মতো algebraic expression এর factorization এর অর্থ হচ্ছে expression টিকে factor গুলোর multiple হিসাবে প্রকাশ করা।

ab + ac = a (b+c) একটি সাধারণ উদাহরণ।

Algebraic expression এর মান নির্ণয় বা equation solve করতে factorization সম্পর্কে idea প্রয়োজন হয়। IBA admission test- এ এছাড়া factorization এর importance খুব কম। সাধারণভাবে তিনটি step-এ factorization সম্পূর্ণ করা যায়।

Step 1: প্রথমে obvious common factor থাকলে তা common নিতে হবে।

Step 2: Formula middle-term-break পদ্ধতি ব্যবহার করে binomial বা trinomial (Two or three termed expression) টিকে factorize করতে হবে।

Step 3 : লক্ষ্য রাখতে হবে কোন factor কে further factorize করা যায় কি না।

**Middle-term Break:** $x^2 + ax + b$ বা $ax^2 + bx + c$ এই ধরনের trinomial কে middle-term break করা হয়। Middle-term break-এ expression টিকে $x^2 + (p+q)x + pq$ আকারে এনে $(x + p)(x + q)$ আকারে factorize করা হয়।

Example 1: $ax^2 + 9ax + 20a = a(x^2 + 9x + 20)$

এখানে, $p + q = 9$ এবং $pq = 20$

$p, q = 5, 4$

$a(x^2 + 9x + 20) = a(x + 5)(x + 4)$

Example 2: $6x^2 + 11x - 10$

যেখানে x এর coefficient 1 নয় সেখানে, $p+q = 11$ এবং $pq = (-10)(6)$ আকারে solve করতে হবে। p ও q এর গুণফল -60 অতএব একটি negative এবং যোগফল +11 অতএব ছোটটি negative $p, q = 15, -4$

$$6x^2 + 11x - 10$$
$$= 6x^2 + 15x - 4x - 10$$
$$= 3x(2x + 5) - 2(2x + 5)$$
$$= (2x + 5)(3x - 2)$$

**Some Important Formulae and Expressions:**

$a^2 - b^2 = (a + b)(a - b)$ $\qquad$ $(a + b)^2 = a^2 + 2ab + b^2$

$(a - b)^2 = a^2 - 2ab + b^2$ $\qquad$ $(a + b)^2 = (a - b)^2 + 4ab$

$(a - b)^2 = (a+b)^2 + 4ab$

$$a^2 + b^2 = (a+b)^2 - 2ab = (a-b)^2 + 2ab = \frac{1}{2}\{(a+b)^2 + (a-b)^2\}$$

$$ab = \left(\frac{a+b}{2}\right)^2 - \left(\frac{a-b}{2}\right)^2$$

$(a+b)^3 = a^3 + 3a^2b + 3ab^2 + b^3 = a^3 + b^3 + 3ab(a+b)$

$(a-b)^3 = a^3 - 3a^2b + 3ab^2 + b^3 = a^3 - b^3 + 3ab(a-b)$

$a^3 + b^3 = (a+b)^3 - 3ab(a+b) = (a+b)(a^2 - ab + b^2)$

$a^3 - b^3 = (a+b)^3 + 3ab(a-b) = (a-b)(a^2 + ab + b^2)$

$(a+b+c)^2 = a^2 + b^2 + c^2 + 2(ab+bc+ca)$

$a^3 + b^3 + c^3 - 3abc = (a+b+c)(a^2 + b^2 + c^2 - ab - bc - ca)$

$$= \frac{1}{2}(a+b+c)\{(a-b)^2 + (b-c)^2 + (c-a)^2\}$$

**Functions:** Relationship among dependent variable, independent variable and constants, choose a number, double it, then subtract. 3. আমরা যদি 5 choose করি তাহলে result হবে 7; যদি -1 choose করি result হবে –5.

এখানে result এবং number input যে কোন সংখ্যা হতে পারে, এদের মান সুনির্দিষ্ট নয়, এই রকম সংখ্যাকে variable বলা হয়। x, y, z, p, q, r ইত্যাদি variable কে denote করে, x variable টির মান এর উপর ভিত্তি করে y variable টির মান নির্ণয় করা হলে x কে independent এবং y কে dependent variable বলা হয়।

Function হচ্ছে independent এবং dependent variable এর relationship, f (x), g (y) বা h (z) ইত্যাদি দিয়ে function denote করা হয়।

এই relationship-এর operation এ কিছু মান ব্যবহার করা হলে তাদের constant বলা হয়; a, b, c ইত্যাদি দিয়ে constant denote করা হয়। উপরের order of operation এভাবে লেখা যায়,

$y = f(x) = 2x - 3$

এখানে, y dependent variable

x independent variable

2 ও 3 Constant

y, x এর একটি function

Example: let $f(x) = x^2+2$ and $g(y) = y-2$. What is the value of f [g(5)]

Solution: Now $g(5) = 5-2 = 3$. $f[g(5)] = f(3) = 3^2+2 = 11$.

Symbol Problems: কিছু কিছু Problem এ f (x), g (y), h (z) ইত্যাদি common sign ব্যবহার না করে (x), x, $x বা x*y বা x@y ইত্যাদি বিভিন্ন symbol ব্যবহার করা হয়। Confused হবার কিছু নেই, এগুলোও function এর মতই simple order of operation. Sequence অনুযায়ী x অথবা x ও y এর মান বসিয়ে সহজেই problem solve করা যায়।

Example-1: Let $x*y = \frac{x+y}{x-y}$ if x = 3 and y = 2

Find the value of x*y

Solution: $3*2 = \frac{3+2}{3-2} = 5$

Example –2: If x can be expressed as $y^2$, where

y is a positive integer.let $*x* = \frac{Y^3}{2}$

if *x*=4.What is the value fo *4x*?

Solution : $y^2=x \therefore y=\sqrt{x}$

আবার, $*x* = \frac{Y^3}{2} = \frac{(\sqrt{x})3}{2}$

এখন, *x*=4

$\frac{(\sqrt{x})^3}{2} = 4$ or $\sqrt{x} = 2$ or $x = 4$

$*4x* = *16* = \frac{(\sqrt{16})3}{2} = \frac{64}{2} = 32$

**Review Exercise-3:**

1. What is the value of the expression $\frac{a+b}{a-b}$ when $a=\frac{2}{3}$ and $b=\frac{5}{7}$?

A) –29 (B) $-\frac{14}{15}$ (C) $-2\frac{1}{3}$ (D) –1 (E) +29

2. If x**y=x+xy+y for all numbers x and y,what is the value of z if 8**z=3 ?

A) –5 (B) $-\frac{5}{9}$ (C) $\frac{3}{8}$ (D) $\frac{5}{9}$ (E) 5

3. What is the value of (a+b)(a+b) if ab=6 and $a^2+b^2=13$ ?

A) 6 (B) 13 (C) 25 (D) 36 (E) 78

4. If x= -2, y=3,and a=-1, what is the value of $\frac{3y^2 - x^2}{\frac{1}{2}a^3}$?

A) 0 (B) 1 (C) 8 (D) –8 (E) –46

5. For any number w, let #w# be denoted by the equation #w# = -1[$w^2$ (w-1)]. What is the value of # -1 #?

A) -2 (B) -1 (C) 0 (D) 1 (E) 2

6. It abc ≠ 0, then $\frac{a^2bc + ab^2c + abc^2}{abc}$ =

(A) a+b+c (B) a+b+abc (C) $a^3b^3c^3$ (D) 3abc (E) 2abc.

7. If x...y = $(x-y)^2$ for all integers, which at the following must be true?

(i) x...y = y...x

(ii) x...y = x...(-y)

(iii) x...(-y) = -x...y

(A) I only (B) II only (C)I and II (D)II and III (E)I and III

8. If the numerical value of $(m+n)^2$ and $(m-n)^2$ are equal, than which of the following must be true?

i. m + n = 0 ii. m – n = 0 iii. mn = 0

(A) I only (B) II only (C) III only (D) I and II only

9. It n > 4, which of the following is equivalent to $\frac{n-4\sqrt{n}+4}{\sqrt{n}-2}$?

(A) $\sqrt{n}$ (B) $2\sqrt{n}$ (C) $\sqrt{n}+2$ (D) $\sqrt{n}-2$ (E) $n+\sqrt{n}$

10. If $x^2 + 2x – 15 = (x+r)(x + s)$ for all values of x, one possible value of for r-s is

(A) 8 (B) 2 (C) -2 (D) -3 (E) -5

11. For all real numbers x and y, it x * y = x(x – y), then x * (x * y) =

(A) $x^2 – xy$ (B) $x^2 – 2xy$ (C) $x^3 – x^2 – xy$

(D) $x^3 – (xy)^2$ (E) $x^2 – x^3 + x^2y$

12. For all numbers, x # y = xy + y. It 3 # 2 = 7 # k, then k =

(A) 1 (B) 2 (C) 3 (D) 4 (E) $\frac{2}{7}$

13. In the formula V = $\pi r^2 h$, what is the value of r in terms of v and h?

(A) $\sqrt{v}\,/\,\pi h$ (B) $\pi(\sqrt{v}/\sqrt{h})$ (C) $\sqrt{\pi}\sqrt{h}$

(D) $\pi h / \sqrt{v}$ (E) $\sqrt{v} / \sqrt{(\pi h)}$

14. What is the largest possible value of the following expression :

$(x + 2)(3 – x)(2 + x)^2(2x – 6)(2x + 4)$

(A) - 56 (B) -24 (C) 0 (D) 12

(E) cannot be determined

15. Out of 7500 candidates, 75% offered English and 45% offered Maths. How many offered both?

(A) 1000 (B) 1750 (C) 2000 (D) 1500 (E) 2500

16. At City High School, the marching band has 48 members and the orchestra has 36 members. It a total of 12 members belong to only one of the two groups and all students belong to at least one group, how many students belong to both groups?
(A) 12 (B) 18 (C) 36 (D) 48 (E) 72.

17. In a survey it has found that 65% of the people polled watched the news on television, 40% read in a newspaper and 25% read a newspaper and watched the news on television. What percent of the people surveyed neither watched the news on television nor read a newspaper?
(A) 10% (B) 15% (C) 20% (D) 25% (E) 30%

18. If # x = $x^2$ – x for all whole numbers, then # ( # 3) =
(A) 2 (B) 30 (C) 58 (D) 2 (E) 121

19. It @ x denotes the greatest integer that is less than or equal to x, then @(- 0.1) + @ (0.1) =
(A) -2 (B) -1 (C) 0 (D) 1 (E) 2

20. The sum of two positive numbers is 12 and their product is 32. What is the sum of their reciprocals?
(A) $\frac{3}{8}$ (B) $\frac{8}{3}$ (C) 4 (D) $\frac{2}{9}$ (E) $\frac{3}{29}$

21. $\frac{4}{n}, \frac{5}{n}$ and $\frac{7}{n}$ are fractions in simplest reduced form. Which of the following could be the value of n?
(A) 24 (B) 25 (C) 26 (D) 27 (E) 28

22. In a group of 15, 7 have studied Latin, 8 have studied Greek, and 3 have not studied either. How many of these have studied both?
(A) 0 (B) 2 (C) 3 (D) 5 (E) 7

23. If $y^2$ + cy - 35 = 0 and –7 is one solution of the equation, what is the value of c?
(A) 1 (B) 2 (C) 3 (D) 5 (E) Cannot be determined.

24. For 2 ≠ x ≠ 0. let (x) be defined (x) = $\frac{x}{x+\frac{1}{x}}$

What is the value of $\left(\frac{1}{2}\right)$?

(A) $\frac{1}{5}$ (B) $\frac{1}{2}$ (C) 2 (D) $2\frac{1}{2}$ (E) 5

25. $\frac{ca^2 - cb^2}{-a-b}$ is equivalent to cb plus.
(A) ac (B) -ca (C) 1 (D) -1 (E) c

**Answer keys:**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. | A | 6. | A | 11. | E | 16. | C | 21. | D |
| 2. | B | 7. | E | 12. | A | 17. | C | 22. | C |
| 3. | C | 8. | C | 13. | E | 18. | B | 23. | B |
| 4. | E | 9. | D | 14. | C | 19. | B | 24. | A |
| 5. | E | 10. | A | 15. | D | 20. | A | 25. | B |

## Chapter Outline: Equation, Inequality, Exponents, Progression

**Equation:** Equation একটি expression যার meaning হচ্ছে equal sign-এর L.H.S এবং R.H.S সমান। Solution হচ্ছে equation-এ ব্যবহৃত variable টির বা variable গুলোর এক বা একাধিক মান যার জন্য equation টি প্রযোজ্য। Equation related তিন ধরনের Problem IBA Admission test-এ আসতে পারে।

**Type 1: Univariable with power 1:** এখানে একটি variable থাকবে যার Power হচ্ছে 1, variable টির মান নির্ণয় করতে হবে ঃ

Step 1: Equation-এ fraction থাকলে equation টি fraction এর denominator বা fraction গুলোর best common denominator দিয়ে গুণ করতে হবে,

Step 2: Variable বিশিষ্ট রাশিগুলো একদিকে এবং variable ছাড়া রাশিগুলো অন্যদিকে নিয়ে আসা বিয়োগ করতে হবে।

Step 3: x কে coefficient মুক্ত করলে x এর মান পাওয়া যাবে।

Step 4: x এর নির্ণীত মানের জন্য equation ঠিক আছে কিনা অর্থাৎ শুদ্ধি পরীক্ষা করে দেখতে হবে।

Example: $\frac{x}{2}+\frac{x}{3}+\frac{x}{4}=13$

$\Rightarrow 6x + 4x + 3x = 13 \times 12$

$\Rightarrow 13x = 13 \times 12$

$\Rightarrow x = 12$

$x = 12$ হলে $f(12) = 13$ $\therefore$ মানটি প্রযোজ্য।

**Type 2: Univariable with power more than 1:** পূর্বের পদ্ধতি ব্যবহার করে equation-কে fraction মুক্ত করতে হবে। অতঃপর term গুলো L.H.S এ এনে R.H.S = 0 করতে হবে। L.H.S কে Factorize করে প্রত্যেকটি factor এর মান 0 ধরে Variable এর বিভিন্ন মান নির্ণয় করতে হবে। শুদ্ধি পরীক্ষা করতে হবে।

Example: $x^2 + 5x = -6$

$\Rightarrow x^2 + 5x + 6 = 0$
$\Rightarrow (x + 2)(x + 3) = 0.$
$\therefore x = -2$ or $-3$
$x = -2$ or $x = -3$ হলে L. H. S = R. H. S
$ax^2 + bx + c = 0$ আকারের equation factorize করা সম্ভব না হলে,
$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ এই সূত্রটি ব্যবহার করতে হবে।

**Type 3: Equation with two variables:** দুটি variable solve করতে দুটি equation প্রয়োজন হয়। দুটি পদ্ধতিতে সহজেই solution বের করা যায়।

**Example:** $2x + y = 8$ .....(i)

$3x - 2y = 5$.....(ii)

**System - 1**

$4x + 2y = 16$ [(i) x 2]

$$\frac{+3x-2y=5}{7x=21}$$

or, x = 3
∴ 2 x 3+y=8
∴ y = 2
∴ (x, y) = (3,2)

**System 2 :**

2x + y = 8.....(i)
or, y = 8 – 2x.....(iii)
(ii) এ y = 8 – 2x বসিয়ে পাই-
3x – 2(8 – 2x) = 5
or, x = 21
or, x = 3
(iii) এ x = 3 বসিয়ে পাই-
y = 2
∴ (x,y) = (3,2)

**Inequality:** Equation এ যেমন = sign ব্যবহার করে L.H.S এবং R.H.S সমান বলা হয়, Inequality তে >, <, ≥ এবং ≤ sign ব্যবহার করে L.H.S কে R.H.S এর চেয়ে যথাক্রমে greater, less, greater or equal এবং less or equal বলা হয়। এক্ষেত্রে solve করে variable এর একটি particular value অথবা variable এর value-র একটি range পাওয়া যায়।

Equation solve করার basic পদ্ধতিতেই inequality solve করা যায়; শুধুমাত্র negative কোন value দিয়ে inequality কে multiply বা divide করলে sign change করতে হয়।

**Basic Rules for Inequality:** if x > y

(i) x ± a > y ± a

(ii) cx > cy (when C is positive)

(iii) $^{x}/_{c} > {}^{y}/_{c}$ (when C is positive)

(iv) cx < cy (when C is negative)

(v) $\frac{x}{c} < \frac{y}{c}$ (when C is negative)

(vi) $\frac{1}{x} < \frac{1}{y}$

(vii) – x < –y [multiplied by -1]

if x > y and a > b.

(viii) x + a > y + b

Example 1: 4(2 – x) < 3(3 – 2x)

or, 8 – 4x < 9 – 6x

or, 8 – 4x + 6x < 9 – 6x + 6x (উভয় পক্ষে 6x যোগ করে)
or, 8 + 2x – 8 < 9 – 8
or, 2x < 1
or, $x < {}^{1}/_{2}$

**Example 2:** 2(x – 3) < (x – 1)3
or, 2x – 6 < 3x – 3
or, 2x – 6 – 3x < 3x – 3 – 3x (উভয় পক্ষ থেকে 3x বিয়োগ করে)

or, $-x-6+6<-3+6$ (উভয় পক্ষে 6 যোগ করে)
or, $-x<3$
or, $x>-3$

**Exponents:** $16 = 2\times2\times2\times2$. এখানে 16 চারটি 2 দিয়ে গুণফল। কথাটি mathematically, $16 = 2^4$ রূপে express করা যায়। এখানে 2 হচ্ছে base এবং 4 হচ্ছে 2 এর Power বা exponent.

**Multiplication with Exponents**

$2^2\times2^4=2^{2+4}=2^6$

Expand করলে দেখা যায়,

$2^2\times2^4=2\times2\times2\times2\times2\times2=2^6$

**N.B** $2^2+2^4\neq2^6$

**Division with Exponents:**

$2^6\div2^2=2^{6-2}=2^4$

Expand করলে দেখা যায়,

$$2^6\div2^2=\frac{2\times2\times2\times2\times2\times2}{2\times2}=2^4$$

**N.B.** $2^6-2^2\neq2^4$

**Exponents inside and outside the Parentheses:**

$(4^3)^2=4^{3\times2}=4^6$

Expand করলে দেখা যায়

$(4^3)^2=4^3\times4^3=4^6$

**Particular Behavior of Exponents**

| | | | |
|---|---|---|---|
| i) | For $x>1$ | $x^3>x^2>x$ | [e.g.$8>4>2$] |
| ii) | For $x=1$ | $x=x^2=x^3$ | [$1=1^2=1^3$] |
| iii) | For $0<x<1$ | $x>x^2>x^3$ | [$5>25>125$] |
| iv) | For $-1<x<0$ | $x^2>x^3>x$ | [$25>-125>-5$] |
| v) | For $x<-1$ | $x^2>x>x^3$ | [$4>-2>-8$] |

এখানে $x^2$, x এর square (বর্গ) এবং $x^3$, x এর cube (ঘন)।

**Negative Exponents:** Negative exponent এর মান positive exponent এর reciprocal.

For example, $2^{-3}=\frac{1}{2^3}=\frac{1}{8}=0.125$

**Square Roots:** $\sqrt{}$ sign এর মান হচ্ছে একটি সংখ্যার square root বা বর্গমূল। $\sqrt{2}$ হচ্ছে এমন একটি সংখ্যা যাকে square করলে 2 হবে, $\sqrt{}$ sign কে $\frac{1}{2}$ Power হিসাবেও লেখা হয়।

$\therefore \sqrt{2}=x^{1/2}$

N. B. $x^2=25$ হলে, $x=\sqrt{25}=\pm5$

কিন্তু, $\sqrt{25}$ এর মান বের করতে হলে, $\sqrt{25}=5$ ধরতে হবে।

**Other Roots:** অন্যান্য root কে এভাবে লেখা যায়,

$\sqrt[n]{x}$ অর্থ হচ্ছে x এর n তম মূল।

**Rules for exponents:**

(i) $x^0 = 1$

(ii) $x^p \cdot x^q = x^{p+q}$

(iii) $x^p \div x^q = x^{p-q}$

(iv) $x^{-p} = \frac{1}{x^p}$ ($x \neq O$, x is positive integer)

(v) $(x^p)^q = x^{pq}$

(vi) $(xy)^p = x^p y^p$

(vii) $\left(\frac{x}{y}\right)^p = \frac{x^p}{y^p}$

(viii) if $x^p = x^q$, p = q

(ix) if $x^p = y^p$ and P is odd x = y

(x) if $x^p = y^p$ and P is even $\pm x = \pm y$

| $\sqrt{x}$ | 1 | 1.414 | 1.732 | 2 | 2.236 | 2.449 | 2.6746 | 2.828 | 3 | 3.162 |
|---|---|---|---|---|---|---|---|---|---|---|
| x | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| $x^2$ | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 | 81 | 100 |
| $x^3$ | 1 | 8 | 27 | 64 | 125 | 216 | 343 | 512 | 729 | 1000 |
| | | | | | | | | | | |
| $\sqrt{x}$ | 3.317 | 3.464 | 3.606 | 3.742 | 3.873 | 4 | 4.123 | 4.243 | 4.359 | 4.472 |
| x | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| $x^2$ | 121 | 144 | 169 | 196 | 225 | 256 | 289 | 324 | 361 | 400 |
| $x^3$ | 1331 | 1728 | 2197 | 2744 | 3375 | 4096 | 4913 | 5832 | 6859 | 8000 |

N.B $\sqrt{5}, \sqrt{6}, \sqrt{7}, \sqrt{8}$ এর মান $\sqrt{4}$ =2 থেকে $\sqrt{9}$ =3 এর মাঝে প্রায় 2.2, 2.4, 2.6, 2.8 এভাবে বিভক্ত।

**Progression**: Progression দুই ধরনের ঃ

(i) Arithmetic Progression

(ii) Geometric Progression

**(i) Arithmetic Progression:** গাণিতিক প্রগমনে পাশাপাশি যে কোন দুটি term এর difference সমান।

(i) 5, 8, 11, 14 ..... common difference +3

(ii) 3 – 1, -5, -9 ..... common difference –4

(iii) –2, $-\frac{3}{4}+\frac{1}{2}$ ..... common difference $1\frac{1}{4}$

(iv) a, a + d, a + 2d ..... common difference d.

$n^{th}$ term (A.P) = a + (n – 1) d

এখানে, a = 1st term

d = Common difference

n = number of terms.

Sum (A.P) = $\frac{n}{2}$ {2a + (n – 1)d}

এখানে, 1 = last term.

Sum of first n positive integers = $\frac{n(n+1)}{2}$

**Geometric Progression:** এক্ষেত্রে পাশাপাশি দুটি term এর ratio সমান

(i) 3, 6, 12, 24 ..... common ratio + 2

(ii) 8, 4, 2, 1, $\frac{1}{2}$ ..... common ratio + $\frac{1}{2}$

(iii) 2, -10, +50 ..... common ratio – 5

(iv) a, ar, $ar^2$, $ar^3$ ..... common ratio r.

$n^{th}$ term (G.P) = $ar^{n-1}$

sum (G.P) = $\frac{a(1-r^n)}{1-r}$ {when r < 1}

= $\frac{a(r^n-1)}{r-1}$ {when r > 1}

IBA admission test এ Geometric Progression খুব একটা important নয়।

**Review Exercise – 4:**

1. It $\frac{5v+4x}{3}=7$ then x =

(A) $\frac{7-5v}{12}$ (B) $\frac{21-5v}{4}$ (C) $\frac{21-15v}{4}$

(D) $\frac{5v-21}{4}$ (E) $\frac{21}{5v}$

2. If $F=\frac{am_1m_2}{r^2}$, then $m_1$ =?

(A) $\frac{Fm_2}{r^2}$ (B) $\frac{Fa}{m_2r^2}$ (C) $\frac{Fam_2}{r^2}$ (D) $Fam_2r^2$

(E) $\frac{Fr^2}{am_2}$

3. If $\frac{a}{b}$ = c and $\frac{x}{a}=c$, then a =

(A) x + b (B) ± xb (C) $\pm\sqrt{xb}$ (D) $\pm\sqrt{x+b}$ (E) $(x+b)^2$

4. If the taxi fare is C Cents for the first quarter-mile and S cent for each additional quarter-mile, what is the charge, in cents, for a trip of x miles, where x is greater than 1?

(A) C + S (4x – 1) (B) C + S (x – 1) (C) C + S (x – 1)

(D) Sx (E) (C – 1) S + x

5. If the taxi fare is **c** cents for the first quarter mile and **s** cents for each additional mile, what is the charge, in cents, for a trip of X miles, where X is greater than 1?

(A) c + 4s ( x – ¼) (B) c - s ( x-1) (C) c + s (x+1) (D) sx (E) (c-1) s+x

6. $\frac{3.6x^4y}{0.9xy^4}$ =

(A) $\frac{0.4x^3}{y^4}$ (B) $\frac{0.04x}{y^3}$ (C) $\frac{4x^3}{y^3}$ (D) $\frac{4y^3}{x^3}$ (E) $\frac{4x^4}{y^3}$

7. Point B is on the line segment AC, and point E is on the line segment DF. If AB>DE and BC = EF, then,

(A) AC < DF (B) AC = DF (C) AC > DF (D) DF > AC (E) EF > DF

8. If $x^2y^2 + x^3y^4 = (3xy)^2$, then $xy^2$ =

(A) $1\frac{1}{2}$ (B) 4 (C) 8 (D) 16 (E) 64

9. Which of the following is not equal to 0.0675?

(A) $67.5 \times 10^{-3}$ (B) $6.75 \times 10^{-2}$ (C) $0.675 \times 10^{-1}$

(D) $0.00675 \times 10^{2}$ (E) $0.0000675 \times 10^{3}$

10. Which of the following is equal $8^5$?

I. $2^5 \times 4^5$ II. $2^{15}$ III. $2^5 \times 2^{10}$

(A) 11 only (B) I and II only (C) I and II only

(D) II and III only (E) I, II and III only.

11. If $x^a + x^b = 1$ and $x \neq \pm 1$, then a + b =

(A) x (B) –1 (C) 0 (D) 1 (E) can not be determined

12. If a > b > c, which of the following cannot be true?

(A) b + c < a (B) 2a > b + c (C) 2c > a + b

(D) ab > bc (E) a + b > 2b + c

13. If 2 < r < 8 and 1 < s < $^5/_2$, which of the following expresses all possible values for rs?

(A) 1<rs<5 (B) 2<rs<20 (C) $\frac{5}{2}$<rs<8

(D) $\frac{5}{2}$<rs<20 (E) 5<rs<10

14. If a, b and c are consecutive non-positive integers and a<b<c. Which of the following must be true?

I. -a<-c II. abc < 0 III. abc is even

(A) None (B) II only (C) III only

(D) II and III only (E) I, II and III

15. If –1<x<y<0, then which of the following has the greatest value?

(A) y – x (B) x + y (C) x – y (D) 2x – y (E) 2y – x

16. If $t^2$-1/t-1 = 2, what value (S) may 't' have?

(A) I only (B) –1 only (C) 1 or –1 (D) no values

(E) an infinite number of values

17. For what value(s) of r is $(r^2+5r+6) / (r+2)$ equal to 0?

(A) –2 only (B) –3 only (C) 3 only (D) –2 or –3 (E) 2 or 3

18. $\frac{\sqrt{3}+\sqrt{2}}{\sqrt{3}-\sqrt{2}}$ = ?

(A) $5+2\sqrt{6}$ (B) $\frac{5+2\sqrt{6}}{5}$ (C) $5-2\sqrt{6}$ (D) $\frac{5-2\sqrt{6}}{5}$ (E) None

19. What values may z have if 2z + 4 is greater than z-6?

(A) any values greater than –10 (B) any values greater than –2

(C) any values less than 2 (D) any values less than 10

(E) none of these.

20. If 3<x<7 and 6>x>2, which of the following best describes x?

(A) 2<x<6 (B) 2<x<7 (C) 3<x<6 (D) 3<x<7

(E) no value of x can satisfy both of these conditions.

21. Which of the following equations have (has) only one integer solution?

I. $x + 9x = 0$ II. $x^2 + 9x = 0$ III. $x^3 + 9x = 0$

(A) I only (B) ii only (C) III only (D) I and III only (E) I, II and III

22. If 1/3 of a number is 3 more than 1/4 of the number, then what is the number?

(A) 18 (B) 24 (C) 30 (D) 36 (E) 48

23. If $x^2 - 9 < 0$, which of the following is true?

(A) $x < -3$ (B) $x > 3$ (C) $x > 9$

(D) $x < -3$ or $x > 3$ (E) $-3 < x < 3$

24. Which of the following is the next number in the series: 3, 6, 4, 9, 5, 12, 6 .....?

(A) 7 (B) 9 (C) 12 (D) 15 (E) 24

25. What is the sum of first 10 positive integers?

(A) 50 (B) 55 (C) 60 (D) 70 (E) 75

**Answer keys:**

| | | | | |
|---|---|---|---|---|
| 1. B | 6. C | 11. E | 16. D | 21. D |
| 2. E | 7. C | 12. C | 17. B | 22. D |
| 3. C | 8. C | 13. B | 18. A | 23. E |
| 4. A | 9. D | 14. D | 19. A | 24. D |
| 5. A | 10. E | 15. A | 20. C | 25. B |

# Geometry Review

**Angles, Triangles, Area, Congruency, Similarity**

**Quadrilaterals, Polygon**

**Circles**

**Solid Geometry**

**Coordinate Geometry**

## Chapter Outline: Angles, Triangles, Area, Congruency, Similarity

IBA Admission Test-এ Basic Geometric Concept test করা হয়।

Basic geometric terms, figures এবং কিছু theorem জানলে এবং কিছু short-cut পদ্ধতি আয়ত্ত করতে পারলে problem গুলো allocated time এর চেয়ে কম সময়ে করা সম্ভব।

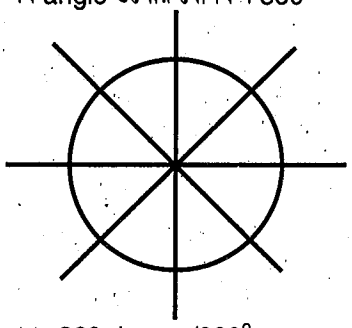
**Angles:** Angle এর শীর্ষবিন্দুকে vertex এবং দুই বাহুকে leg বলে। $\angle$ sign দিয়ে angle indicate করা হয়।

মনে রাখতে হবে,

i. Circle তার center-এ $360^\circ$ angle ধারণ করে।

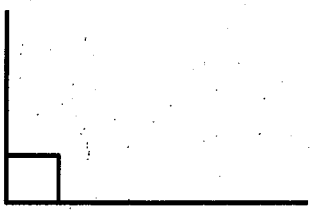
ii. দুটি line intersect করলে যে চারটি angle পাওয়া যায় তাদের সমষ্টি $360^\circ$

iii. একটি বিন্দুর চারদিকে সৃষ্ট সব angle গুলোর যোগফল $360^\circ$



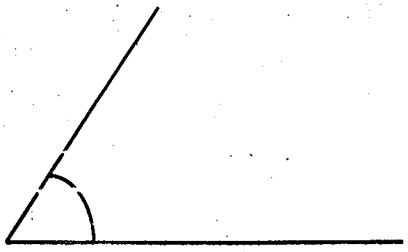
360 degree/$360^\circ$

**Right Angle:** $90^\circ$ angle কে right angle (সমকোণ) বলা হয় এবং vertex এ একটি ছোট box দিয়ে right angle indicate করা হয়।

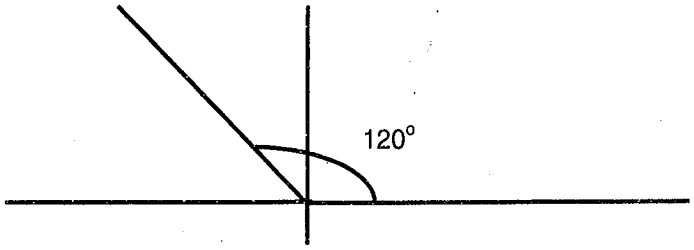


দুটি line point of intersection-এ $90^\circ$ angle সৃষ্টি করলে তাদের পরস্পরকে পরস্পরের উপর perpendicular বা লম্ব বলা হয় এবং $\perp$ sign ব্যবহার করে তাদের চিহ্নিত করা হয়। একটি angle দৃশ্যত $90^\circ$ হলে তাকে right angle ধরে problem solve করা চলবে না। $\perp$ বা $\sqsubset$ sign অথবা $90^\circ$ বা right angle উল্লেখ থাকতে হবে।

**Acute Angle:** Acute angle (সুক্ষ্ম কোণ) $0^\circ$ থেকে বড় কিন্তু $90^\circ$ থেকে ছোট একটি angle.



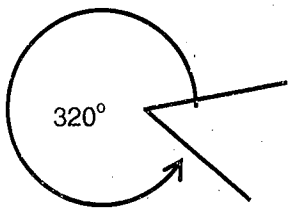
**Obtuse Angle:** Obtuse angle (স্থূল কোণ) $90^{\circ}$ থেকে বড় কিন্তু $180^{\circ}$ থেকে ছোট।



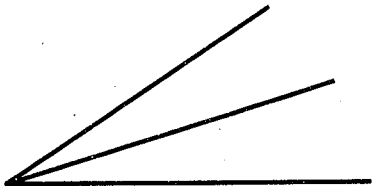

**Straight angle:** সকল কোণ বা straight angle হচ্ছে $180^{\circ}$ বা একটি line এর উপরের angle.

$180^{\circ}$

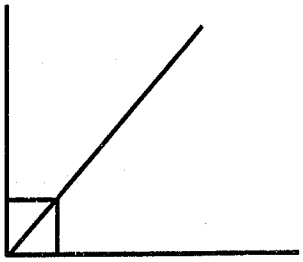
**Reflex angle:** $180^{\circ}$ থেকে বড় কিন্তু $360^{\circ}$ থেকে ছোট angle কে reflex angle বা প্রবৃদ্ধ কোণ বলা হয়।



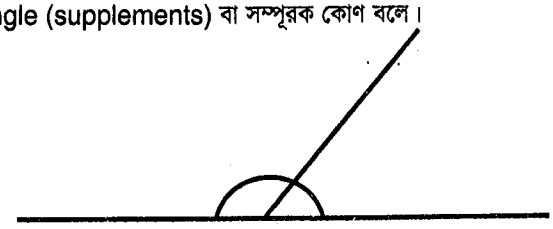

**Adjacent Angles:** Adjacent angle বা সন্নিহিত কোণ হচ্ছে common vertex এবং একটি common leg বিশিষ্ট দুটি angle.



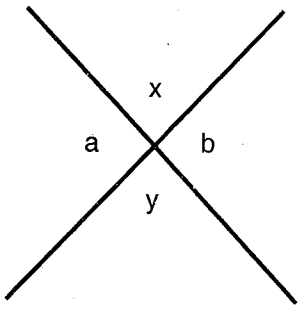
**Complementary Angles:** দুটি adjacent angle এর যোগফল $90^{\circ}$ হলে তারা পরস্পরের complementary angle (complements) বা পূরক কোণ।



**Supplementary Angles:** দুটি adjacent angle এর সমষ্টি $180^{\circ}$ হলে তাদের পরস্পরকে পরস্পরের supplementary angle (supplements) বা সম্পূরক কোণ বলে।

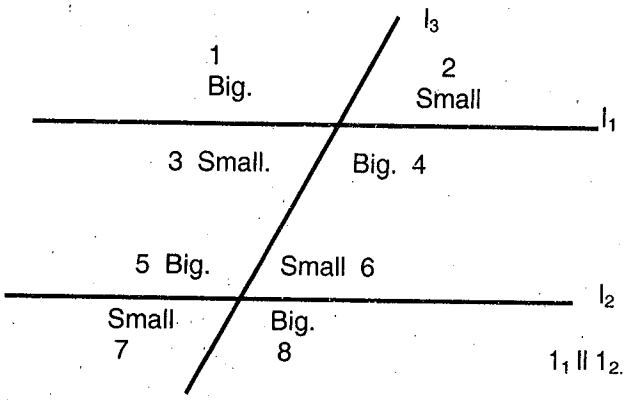


**Vertical Angle:** দুটি line এর point of intersection-এ দুই pair vertical angle (বিপ্রতীপ কোণ) পাওয়া যায়।




$x = y$ $\quad a+b+x+y = 360^0$
$a = b$

**Fred's Theorem:** $1_1$ এবং $1_2$ Parallel হলে ($1_1 \parallel 1_2$) এবং $1_3$ (transversal বা ছেদক) তাদের intersect করলে যে ৪ টি angle সৃষ্টি হয় তাদের relation খুব সহজে express করা যায়।




এখানে, সবগুলো Big angle সমান এবং সবগুলো Small angle সমান।

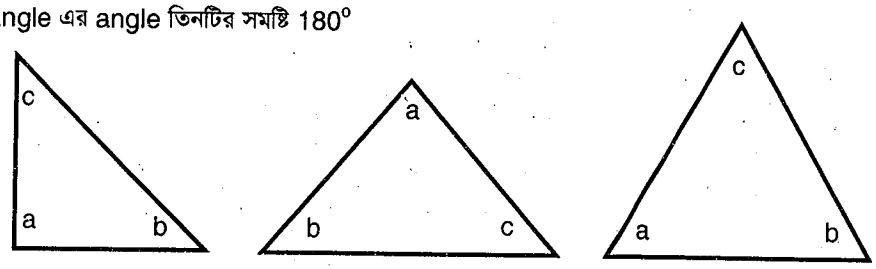
1=4,2=3,5=8,6=7 (Vertical angles)

1=5,2=6;3=7,4=8 (Vorresponding angles)

3=6,4=5 (Alternate angles)

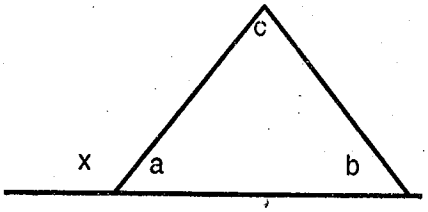
**Triangles:** মনে রাখতে হবে,

i. Triangle এর angle তিনটির সমষ্টি $180^o$



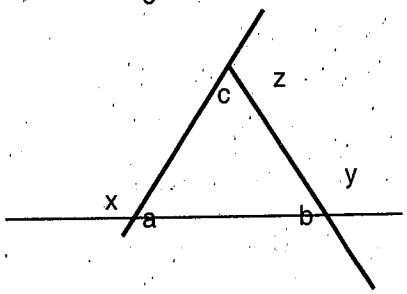

ii. Triangle এর যে কোন দুটি side এর সমষ্টি $3_{rd}$ side এর চেয়ে বড় (side length limitation)

iii.Exterior angle, দূরবর্তী interior angle দুটির সমষ্টির সমান।




$x = b + c$

iv. তিনটি vertex-এ তিনটি exterior angle এর সমষ্টি $360^\circ$

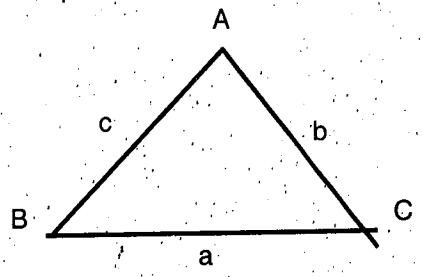



$x + y + z = 2(a + b + c) = 360^\circ$

v. $\Delta$-sign দ্বারা triangle indicate করা হয়।

**Angle-Side relationship :**

i.Triangle এর angle গুলোকে capital letter এ এবং angle গুলোর বিপরীত বাহু গুলোকে তার small letter এ লেখা হয়।



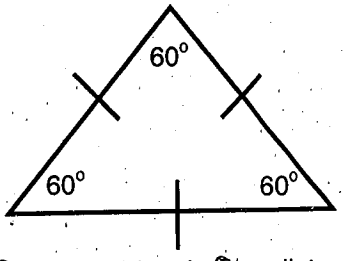

ii. বৃহত্তর কোণের বিপরীত বাহু ক্ষুদ্রতর কোণের বিপরীত বাহু অপেক্ষা বৃহত্তর।

If, $\angle A > \angle B, a > b$

iii.বৃহত্তর বাহুর বিপরীত কোণ ক্ষুদ্রতর বাহুর বিপরীত কোণ অপেক্ষা বৃহত্তর।

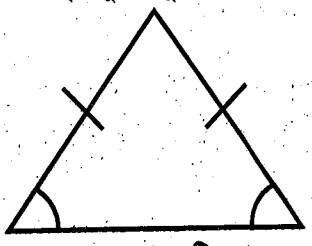
If $a > b$, $\angle A > \angle B$.

**Equilateral Triangles:** Equilateral triangle বা সমবাহু ত্রিভুজের side এবং angle তিনটি সমান ঃ



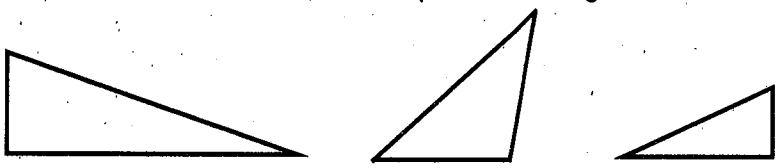

N.B. angle তিনটি বা side তিনটি সমান হলে triangle টি equilateral.

**Isosceles Triangles:** Isosceles বা সমদ্বিবাহু ত্রিভুজের দুটি side এবং দুটি angle সমান।



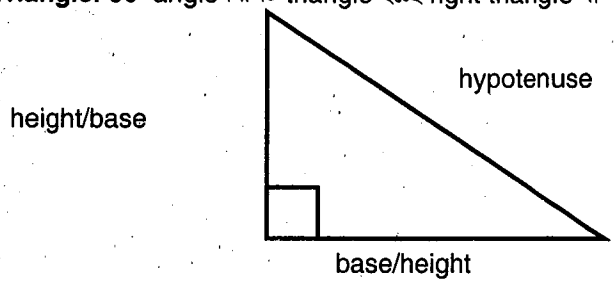
N.B. Triangle এর equal দুটি side এর opposite angle দুটি সমান এবং equal দুটি angle এর opposite side দুটি সমান।

**Scalene Triangles:** Scalene বা বিষম বাহু ত্রিভুজে কোন equal side বা angle নেই।



N.B. In a scalene (or in any triangle) largest angle is opposite the longest side.

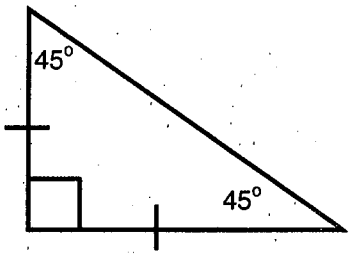
**Right Triangle:** $90^\circ$ angle বিশিষ্ট triangle হচ্ছে right triangle বা সমকোণী ত্রিভুজ ঃ




N.B. i. Hypotenuse বা অতিভুজ right triangle এ বৃহত্তম side.

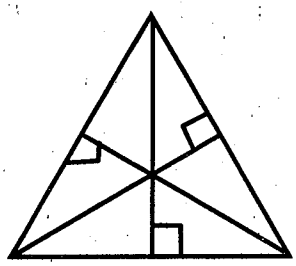
ii. একটি triangle- এ একাধিক right angle বা obtuse angle থাকা সম্ভব নয়।

**Isosceles Right Triangle:** এই right triangle-এ base এবং side সমান।

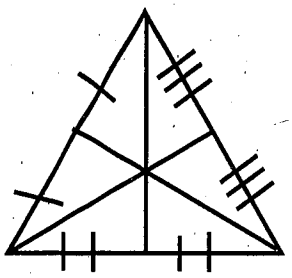



N.B. i. একটি angle $90^\circ$ Isosceles বলে অন্য কোণ দুটি সমান।

**Height and Median:** Height হচ্ছে vertex থেকে opposite side এর উপর লম্ব এবং median হচ্ছে vertex এবং opposite side এর mid-point সংযোগকারী রেখা।

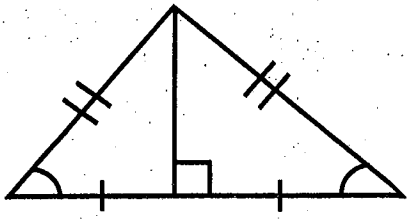


Height



Median

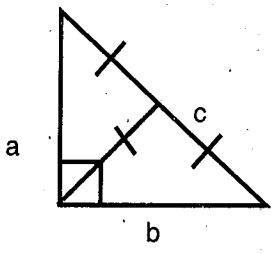
N.B. i. Isosceles এবং equilateral triangle-এ height এবং median একই line (Isosceles এ base-এর উপর)

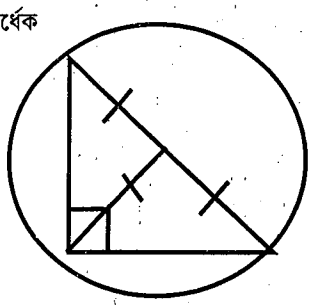


Isosceles.

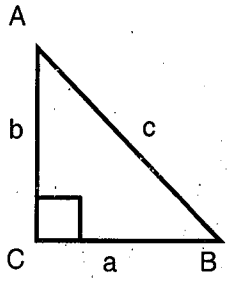
ii. Median triangle কে সমান দুটি ক্ষেত্রে বিভক্ত করে।

iii. সমকোণী শীর্ষ থেকে median hypotenuse এর অর্ধেক



**Pythagorean Theorem:** পিথাগোরাসের উপপাদ্য অনুযায়ী right triangle ABC- এ hypotenuse হলে, $c^2 = a^2 + b^2$.




এই equation ব্যবহার করে দুটি side এর মান জানা থাকলে 3rd side বের করা যায়।

**Example**: Right triangle ABC-এ c hypotenuse,

$a = 10.\ b = 10\sqrt{3}$ হলে $c = ?$

$c^2 = a^2 + b^2$

$= 102 + (10\sqrt{3})^2$

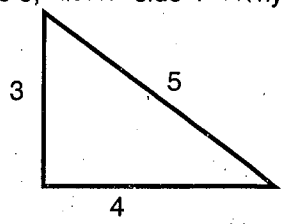
$= 100 + 100 \times 3$

$= 400$

$\therefore c = 20$

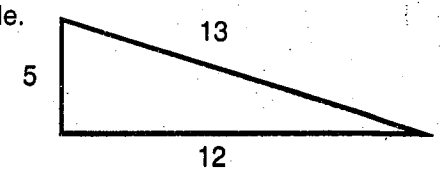
**Pythagorean Triples:** Right triangle-এ side গুলোর length $c^2 = a^2 + b^2$ শর্ত পূরণ করে যে কোন রকম হতে পারে তবে কিছু ratio আছে যেগুলো মনে রাখতে পারলে কম সময়ে 3rd side নির্ণয় করা যায়।

i. 3 : 4 : 5, এই অনুপাতে একটি side 3, আরেকটি side 4 এবং hypotenuse 5 হবে।




N. B. যেহেতু এটি একটি ratio, side গুলো 3 : 4 : 5 যে কোন multiple হতে পারে (6 : 8 : 10 বা 30 : 40 : 50 ইত্যাদি)

ii. 5 : 12 : 13 এই অনুপাত অনুযায়ী একটি side 5, আরেকটি side 12 এবং hypotense 13 কিংবা side গুলো 5 : 12 : 13 এর যে কোন multiple.



একইভাবে আরো কিছু অনুপাত পাওয়া যায় ঃ

7n : 24n : 25n

9n : 40n : 41n

11n : 60n : 61n

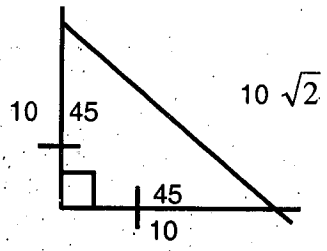
তবে এগুলো সাধারনত ব্যবহার করার প্রয়োজন হয় না।

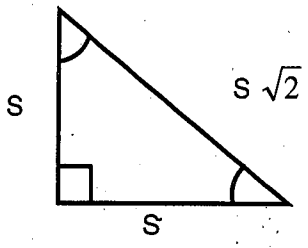
iii) 8 : 15 : 17: উপরের relation গুলোর বাইরে 8n : 15n : 17n আরেকটি common ratio.

**Example** : Right triangle-এ hypotenuse 51 এবং একটি side 24 হলে অপর side কত?

এক্ষেত্রে n = 3 ∴ অপর side 45

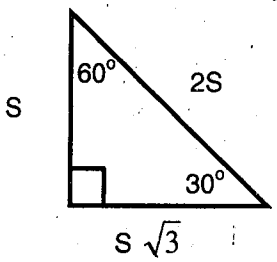
iv. S : S : $S\sqrt{2}$ ; যেখানে S একটি side এর মান। এই ratio টি মূলত Isosceless right triangle-এর জন্য প্রযোজ্য। অর্থাৎ angle গুলো $90^\circ$, $45^\circ$, $45^\circ$ হলে hypotenuse সমান side গুলোর $\sqrt{2}$ গুণ হবে।

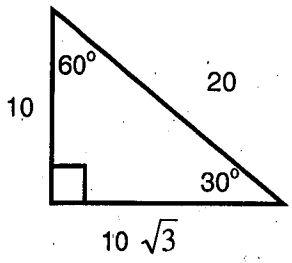



v. S : $S\sqrt{3}$ : 2S; S যেখানে $30^\circ$ এর opposite side.

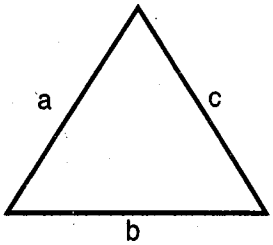
Right triangle-এ অন্য angle দুটি $30^0$ ও $60^0$ হলে এই ratio apply করা যায়। এক্ষেত্রে $60^0$ এর opposite side $30^0$ এর opposite side এর $\sqrt{3}$ গুণ এবং hypotenuse $30^0$ এর opposite side-এর 2- গুণ।




N.B. iv এবং v এই ratio দুটি খুবই important কেননা এই ratio দুটি মনে থাকলে Trigonometric relation avoid করা যাবে।

**Perimeter of a Triangle:** ত্রিভূজের তিন বাহুর সমষ্টি হচ্ছে perimeter বা পরিসীমা।

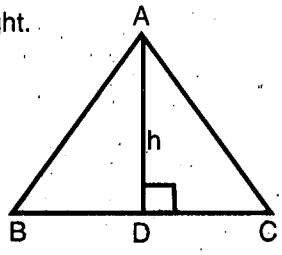


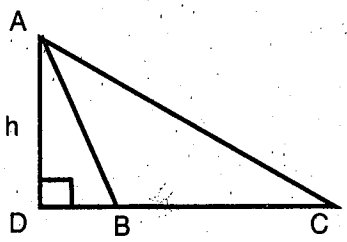

Equilateral triangle এর একটি side x হলে, P = 3x.

**Area of a triangle:**

i) Triangle এর একটি side কে base ধরে, বিপরীত vertex -থেকে তার উপর লম্ব h হলে।

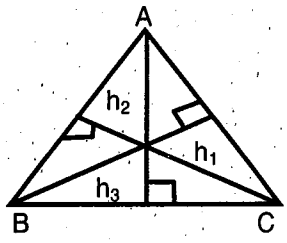
Area = $\frac{1}{2}$ × base × height.




Area of Δ ABC = $\frac{1}{2}$ BC × h

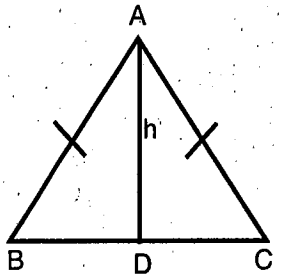
ABC এ B হতে AC এর উপর লম্ব $h_1$ এবং C হতে AB এর উপর $h_2$ এবং A থেকে BC-এর উপর লম্ব $h_3$ হলে




Area of Δ ABC = $\frac{1}{2}$ AC × $h_1$ = $\frac{1}{2}$ AB × $h_2$ = $\frac{1}{2}$ BC × $h_3$

ii) ABC-এ AB = BC হলে, অর্থাৎ ∈ ABC- isosceles হলে

D, BC,-এর মধ্যবিন্দু হবে।




Area of Δ ABC = $\frac{1}{2}$ BC × AD = BD × AD

AB (বা AC), AD ও BD ( বা BC) এ তিনটির দুটির মান জানা থাকলে Area নির্ণয় করা যাবে।

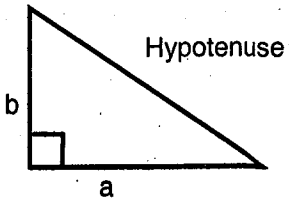
iii) equilateral triangle-এর একটি side X হলে

h = $\frac{\sqrt{3}}{2}$ x হবে এবং Area = $\frac{\sqrt{3}}{4}$ $x^2$ হবে।

Example: Equilateral triangle ABC- এর এক বাহু 2c.m হলে area = ?

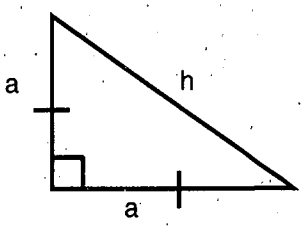
$$\text{Area} = \frac{\sqrt{3}}{4} 2^2 \text{cm}^2 = \sqrt{3}\ \text{cm}^2$$

iv) Right angle-এর ক্ষেত্রে Perpendicular side দুটি থেকে Area নির্ণয় করতে হবে।




$$\text{Area} = \frac{1}{2} a \times b$$

v) Isosceles right triangle- এর ক্ষেত্রে




$$\text{Area} = \frac{1}{2}a^2 = \frac{h^2}{4} \quad [2a^2 = h^2]$$

Example : Isosceles right triangle- এর hypotenuse 2 c.m হলে, Area = $\frac{2^2}{4}$ $cm^2 = 1\ cm^2$

vi) $\Delta$ ABC এর তিনটি বাহু a, b ও c হলে,

Area = $\sqrt{s(s-a)(s-b)(s-c)}$ যখন s = $\frac{a+b+c}{2}$

N.B. i) Median একটি triangle কে সমান area বিশিষ্ট দুটি triangle-এ বিভক্ত করে।

**Congruency of Triangles:**

দুটি triangle congruent হলে, এদের একটির Side গুলো অপরটি side এবং angle গুলো অপরটি একই রকম angle গুলোর সমান। এদের area সমান, একই রকম height গুলো সমান। $\cong$ Sign দিয়ে দুটি triangle congruent বোঝানো হয়। দুটি triangle সর্বসম বা congruent হবে যদি ঃ

i) একটির তিনটি side অপরটির তিনটি side এর সমান হয়।

ii) একটির যে কোন দুটি বাহু এবং অন্তর্ভূক্ত কোণ অপরটির দুটি বাহু এবং অন্তর্ভূক্ত কোণের সমান হয়।

iii) একটির দুটি কোণ এবং একটি বাহু অপরটির দুটি কোণ এবং অনুরূপ বাহু ( একই রকম কোণ সংলগ্ন) সমান হয়।

iv) দুটি right triangle এর hypotense দুটি এবং অপর একটি বাহু সমান হয়।

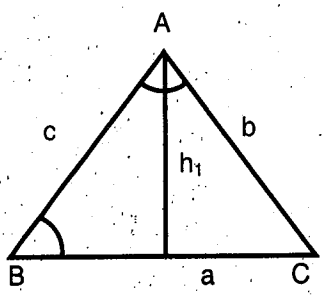
N.B. i) একটির তিনটি angle অপরটির তিনটি angle এর সমান হলে triangle দুটি similar, congruent নয়।

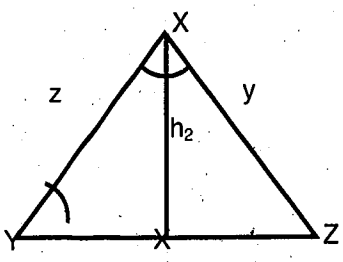
ii) একটি triangle এর দুটি angle অপরটির দুটি angle এর সমান হলে, স্বাভাবিকভাবেই 3rd angle দুটিও সমান।

iii) দুটি right triangle এর hypotenure সমান এবং একটি side সমান হলে 3rd side সমান হবে।

**Similar Triangles:**

একটি triangle এর দুটি angle অন্য একটি triangle এর দুটি angle এর সমান হলে, triangle দুটি similar.



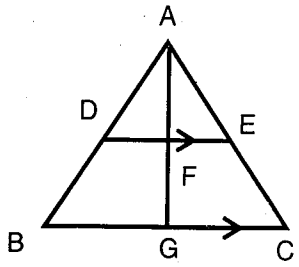




$\angle A = \angle X$, $\angle B = \angle Y$ হলে (স্বাভাবিকভাবেই $\angle C = \angle Z$)

i) $\frac{AB}{XY} = \frac{BC}{YZ} = \frac{CA}{ZX} = \frac{h_1}{h_2}$ বা,ii) $\frac{AB}{BC} = \frac{XY}{YZ}$

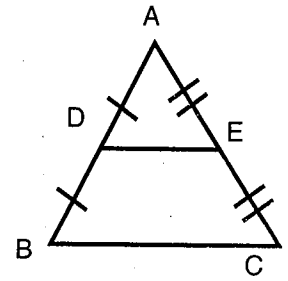
iii) $\frac{Area\Delta ABC}{Area\Delta XYZ} = \frac{AB^2}{XY^2} = \frac{BC^2}{YZ^2} = \frac{CA^2}{ZA^2} = \frac{b^2}{H^2}$

iv) Triangle এর একটি -side এর parallel কোন line দুটি similar figure তৈরী করে।




DE II BC হলে, ADE এবং Δ ABC similar আবার AF ⊥ DE হলে AG ⊥ BC এবং Δ AFE ও Δ AGC similar হবে।

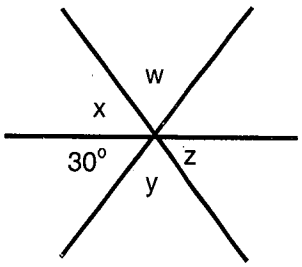
v) Triangle এর দুই বাহুর mid-points যোগ করলে তা 3rd side এর parallel এবং অর্ধেক হবে।




DE = $\frac{1}{2}$ BC এবং DE II BC এবং Δ ADE ও Δ ABC similar. এই hypothesis এর Opposite hypothesis ও সঠিক।

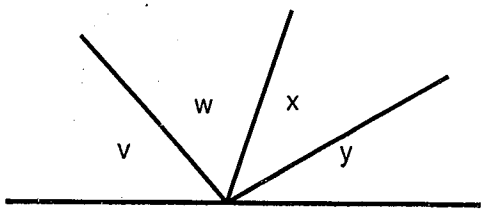
vi) AB এর মধ্যবিন্দু থেকে BC এবং parallel অংকন করলে, E, AC এর মধ্যবিন্দু।

**Review Exercise –1**



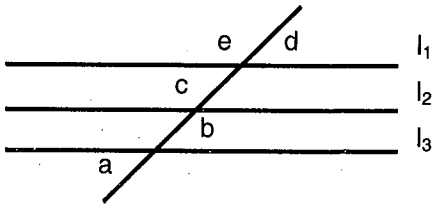

1. In the figure above, w + x + y + z =

(A) 330 º (B) 300º (C) 270º (D) 240º (E) 210º




2. In the figure above, v = 2w, w = 2x and x = $\frac{y}{3}$. What is the value of y?

(A) 18 (B) 36 (C) 45 (D) 54 (E) 60

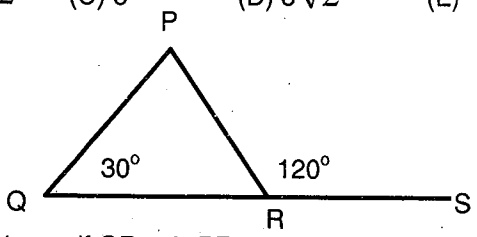



3. In the figure above, $l_1$ II $l_2$ and $l_2$ II $l_3$ What is the value of a + b +c + d+ e?
(A) 180 (B) 270 (C) 360 (D) 450 (E) cannot be determined.

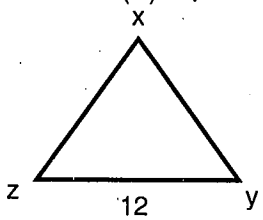
4. The angles of a triangle are in the ratio of 2:3:4. What is the degree measure of the largest angle?
(A) 40 (B) 80 (C) 90 (D) 120 (E) 130

5. What is the angle that is half of its own complement?
(A) 30 (B) 45 (C) 60 (D) 90 (E) 120

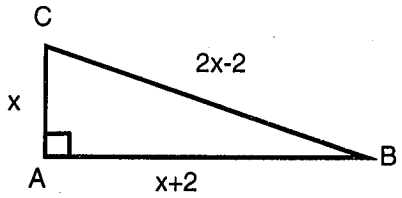
6. What is the length of the hypotenuse of an isosceles right triangle with an area of 32?
(A) 4 (B) $4\sqrt{2}$ (C) 8 (D) $8\sqrt{2}$ (E) $\sqrt{3}$



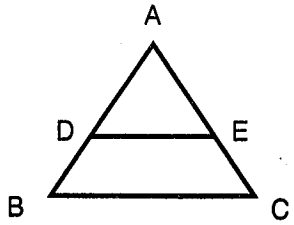

7. In Δ PQR shown above, if QR = 6, PR =
(A) 12 (B) $6\sqrt{3}$ (C) 6 (D) $3\sqrt{3}$ (E) 3



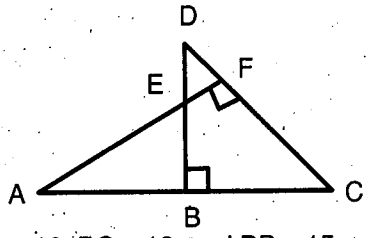

8. If ∠ xyz = ∠xzy and area of Δ xyz is 48. What is the perimeter of the figure above?
(A) 32 (B) 36 (C) 40 (D) 44 (E) 48




9. In the right triangle ABC above, x =? (A) 6 (B) 8 (C) $6\sqrt{2}$ (D) 10 (E) 13

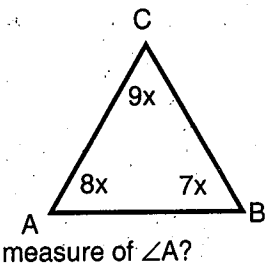



10. In the figure shown above DE is parallel to BC. If the area of triangle ADE is half that of trapezoid DECB, what is the ratio of AE to AC?
(A) 1:2 (B) $1:\sqrt{2}$ (C) 1:3 (D) $1:\sqrt{3}$ (E) $1:\sqrt{5}$



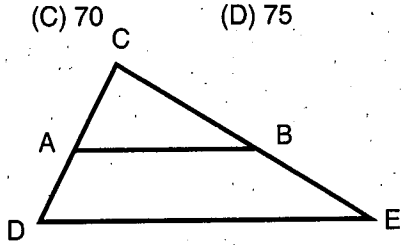

11. In the figure above, if AC = 12, DC = 18, and DB = 15, what is the length of AF?

(A) 8 (B) 9 (C) 10 (D) 12 (E) 18



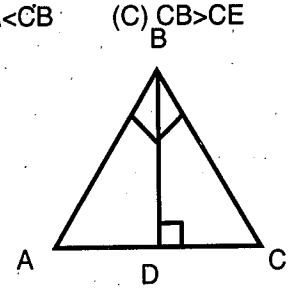

12. In the figure above, what is the measure of ∠A?

(A) 45 (B) 60 (C) 70 (D) 75 (E) 90



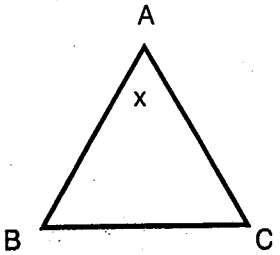

13. In the triangle CDE above, AD = BE and CD<CE. Which of the following is true?

(A) CA>CB (B) CA<CB (C) CB>CE (D) CD<CA (E) AB II DE



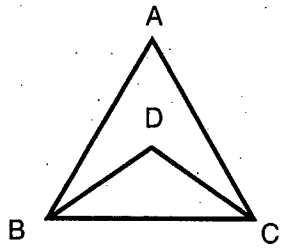

14. In triangle ABC above, ABC is a right angle, AB = BC and BD ⊥ AC. Which of the following, if any, is not a 45-degree angle?

(A) BAD (B) BCD (C) CBD (D) ABD (E) none of these.



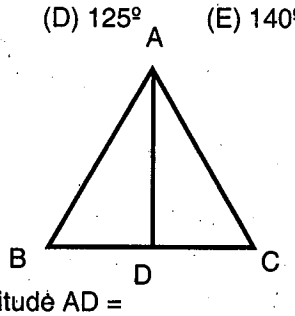

15. AB = AC, measure of ∠A = x°. Measure of ∠B =

(A) x - 180 (B) x-90 (C) 180-2x (D) 180-x (E) $90 - \frac{x}{2}$



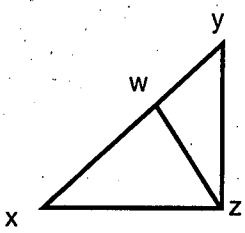

16. BD and CD are the bisectors of the angle B and angle C in isosceles triangle ABC. Angle A = 70º. Angle BDC =

(A) 55º (B) 70º (C) 110º (D) 125º (E) 140º



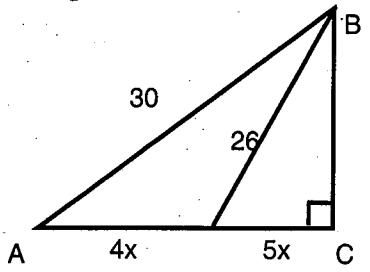

17. AB = AC = 5. BC = 6. Altitude AD =

(A) 3 (B) 4 (C) 5 (D) $5\sqrt{2}$ (E) $5\sqrt{3}$



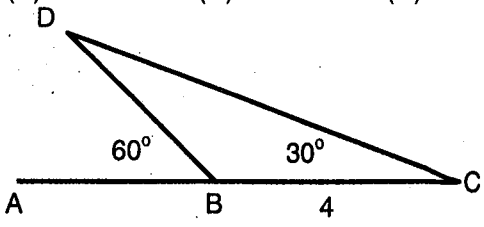

18. In the figure above, the ratio of the area of Δ wxz to the area of Δ wyz is 7 : 2. If xy = 21, wy =

(A) 7 (B) $\frac{14}{3}$ (C) 14 (D) $\frac{21}{2}$ (E) $\frac{21}{4}$




19. What is the length of BC in the figure above?

(A) 10 (B) 16 (C) 18 (D) 20 (E) 24




20. In the figure above, what is the length of BD?

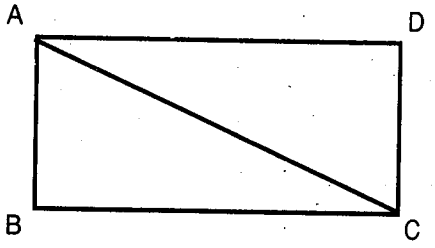
(A) $\sqrt{2}$ (B) 4 (C) $4\sqrt{2}$ (D) $4\sqrt{3}$ (E) 8

**Answer keys:**

| | | | |
|---|---|---|---|
| 1. B | 6. D | 11. C | 16. D |
| 2. D | 7. E | 12. B | 17. B |
| 3. E | 8. A | 13. B | 18. B |
| 4. B | 9. A | 14. E | 19. E |
| 5. A | 10. D | 15. E | 20. B |

## Chapter Outline: Quadrilaterals, Polygon

**Quadrilaterals:** Quadrilaterals বা চতুর্ভূজ চারটি side বিশিষ্ট ক্ষেত্র। Quadrilateral এ চারটি interior angle এর সমষ্টি $360^0$। বিপরীত দুইটি vertex যোগ করলে (diagonal বা কর্ণ) Quadrilateral দুটি triangle-এ বিভক্ত হয়।




এখানে $\angle A+\angle B+\angle C+\angle D = 360^0$। AC একটি diagonal, Quadrilateral ABCD এর Area $\Delta ABC$ এবং $\Delta$ ACD এর area-র যোগফল, Perimeter side চারটির যোগফল।

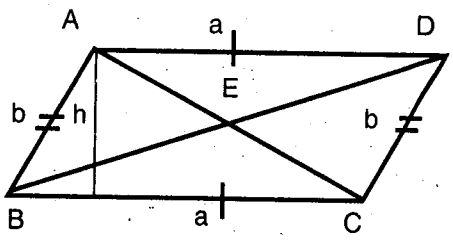
**Parallelogram:**

i) Quadrilateral এর Opposite বাহুগুলো সমান হলে, বা

ii) Opposite side গুলো সমান্তরাল হলে, বা

iii) দুটি opposite side সমান ও সমান্তরাল হলে Quadrilateral টি একটি parallelogram বা সামন্তরিক।

Parallelogram ABCD-এ



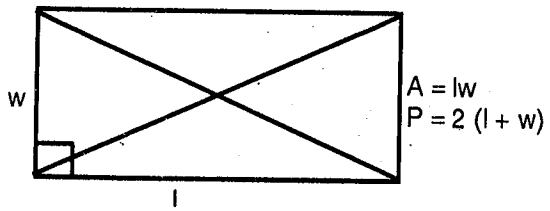

AB = CD, AB ।। CD, AD = BC, AD ।। BC, $\angle A = \angle C$, $\angle B = \angle D$

$\Delta AED \cong \Delta BCE$, $\Delta$ AEB $\cong \Delta$ DEC এবং $\Delta ABE$, $\Delta BCE$, $\Delta CDE$ এবং $\Delta$ ADE-এর area সমান। AC ও BD diagonal দুটি E বিন্দুতে সমদ্বিখন্ডিত হয়েছে।

Perimeter = 2 (a + b)

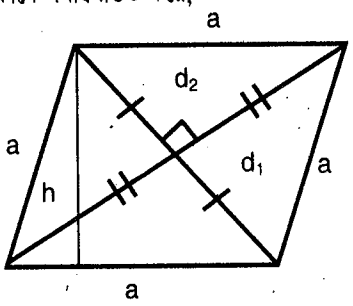
Area = BC x h

**Rectangle:** কোন Parallelogram এর angle গুলো $90^0$ হলে বা diagonal দুটি সমান হলে সেটি একটি rectangle বা আয়তক্ষেত্র।




N.B. সব rectangle-ই parallelogram কিন্তু সব parallelogram-ই rectangle নয়।

**Rhombus:** Rhombus অনেকটা Parallelogram এর মত। তবে rhombus-এর চারটি বাহু সমান। Rhombus এর diagonal দুটি পরস্পরকে সমকোণে সমদ্বিখন্ডিত করে,




$P = 4a$

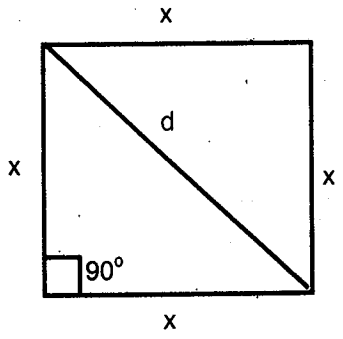
$A = a \times h$

$= \frac{1}{2} d_1 \times d_2$

N. B. $d_1$ ও $d_2$ not necessary equal.

সব rhombus-ই Parallelogram কিন্তু কোন Quadrilateral Parallelogram হলেই তা rhombus হবে না। Rhombus এর angle গুলো not necessarily equal to $90^0$.

**Square:** Rhombus এর angle গুলো $90^0$ হলে বা diagonal গুলো সমান হলে rhombus টি একটি square. Rectangle-এর বাহুগুলো সমান হলে বা diagonal দুটি লম্বভাবে ছেদ করলে rectangle টি একটি square বা বর্গক্ষেত্র।



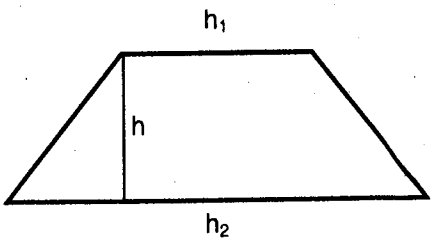

$A = x^2 = \frac{1}{2} d^2$

$P = 4x$

N. B. সব square-ই rhombus এবং rectangle এবং parallelogram কিন্তু কথাটি বিপরীতক্রমে not necessarily true.

$x^2 = \frac{1}{2} d^2$ অর্থাৎ square এর area, diagonal এর উপর অংকিত square এর area-র অর্ধেক।

**Trapezoid:** Trapezoid-এর দুটি Side parallel এবং অপরদুটি Side nonparallel.




$A = \frac{1}{2} (h_1 + h_2) \times h$

**Polygons:** Triangle হচ্ছে সবচেয়ে কমবাহু বিশিষ্ট Polygon. Triangle থেকে শুরু করে আরো বেশী সংখ্যক বাহুবিশিষ্ট যে কোন ক্ষেত্রকেই একনামে polygon বলা হয়। কোন Polygon এর side এর সংখ্যা n হলে,

Total interior angle = $180^0(n-2)$

**Some polygons**

| No. of sides | Name | Total interior angle = $180^0(n-2)$ |
|---|---|---|
| 3 | Triangle | $180^0$ |
| 4 | Quadrilateral | $360^0$ |
| 5 | Pentagon | $540^0$ |
| 6 | Hexagon | $720^0$ |
| 7 | Heptagon | $900^0$ |
| 8 | Octagon | $1080^0$ |
| 9 | Nonagon | $1260^0$ |
| 10 | Decagon | $1440^0$ |

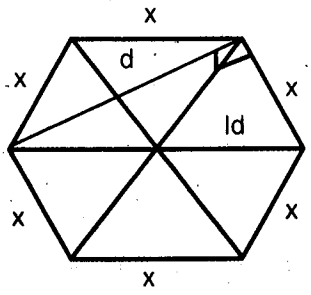
**Regular Polygon:** Polygon-এর side গুলো সমান হলে তাকে Regular Polygon বলে Regular Polygon-এর interior angle গুলো সমান। এক্ষেত্রে একটি

$$\text{Angle} = \frac{(n-2)180^0}{n}$$

Example: Regular decagon এর একটি angle = $\frac{1440^0}{10} = 144^0$

**Hexagon:** Hexagon এর 6 টি side। এর sum of the interior angles = $720^0$

Regular Hexagon এর একটি interior angle = $120^0$

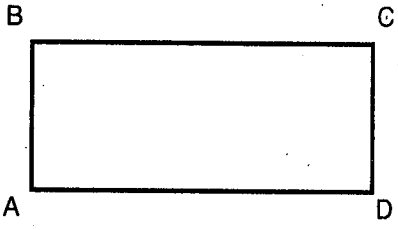



d = diagonal
ld = longest diagonal

Hexagon এর 9 টি diagonal, Regular Hexagon এর L.D = 2x Regular hexagon-এর তিনটি L.D. এরা Hexagon-কে 6 টি equilateral triangle –এ বিভক্ত করে।

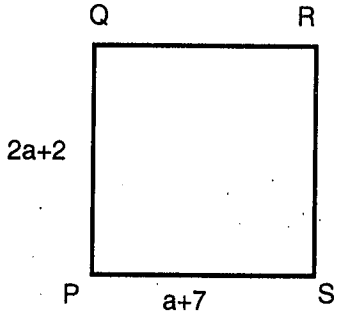
Area of a regular hexagon = $6\times\frac{\sqrt{3}}{4}x^2 = \frac{3\sqrt{3}}{2}x^2$

**Review Exercise 2:**



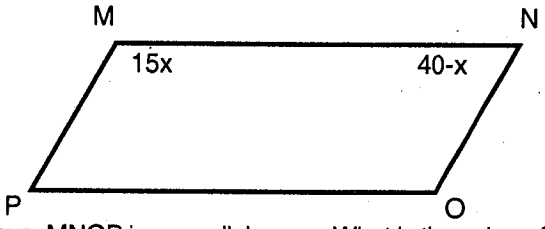

1. In the figure above, if the perimeter of rectangle ABCD is 56, and if the length of AD= 16, what is the area of ABCD?

(A) 64 (B) 90 (C) 106 (D) 180 (E) 192




2. In the figure above, if PQRS is a square. What is the value of a?

(A) $\frac{9}{5}$ (B) $\frac{9}{2}$ (C) 5 (D) 7 (E) 9




3. In the figure above, MNOP is a parallelogram. What is the value of x?

(A) 20 (B) 10 (C) 5 (D) $\frac{25}{7}$ (E) $\frac{5}{2}$

4. If the length of rectangle A is one-half the length of rectangle B, and the width of rectangle A is one-half the width of rectangle B, what is the ratio of the area of rectangle A to the area of rectangle B?

(A) 1 (B) $\frac{1}{2}$ (C) $\frac{1}{3}$ (D) $\frac{1}{4}$ (E) $\frac{1}{8}$

5. In quadrilateral DEFG, the degree measures of its four angles are in the ratio of 2 : 3 : 5 : 6. What is the difference in the degree measures between the largest and smallest angles?

(A) 135 (B) 112.5 (C) 90 (D) 67.5 (E) 45

6. In quadrilateral ABCD, $\angle A+\angle B+\angle C = 2\angle D$. What is the degree measure of $\angle D$?

(A) 135 (B) 120° (C) 90 (D) 67.5 (E) 45

7. The length of each side of square A is increased by 100 percent to make square B. Then each side of square is increased by 50 percent to make square C. By what percent is the area of square C greater than the sum of the areas of square A and B.

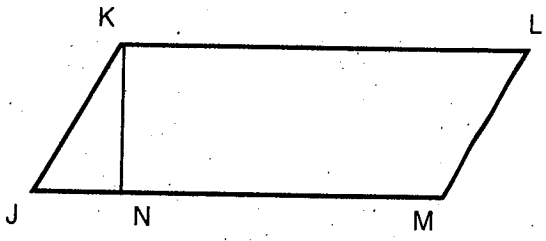
(A) 50% (B) 75% (C) 80% (D) 100 (E) 120%

8. What is the greatest number of rectangles with integer side lengths and perimeter 10 that can be cut from a piece of paper with width 24 and length 60?

(A) 144 (B) 180 (C) 240 (D) 360 (E) 480

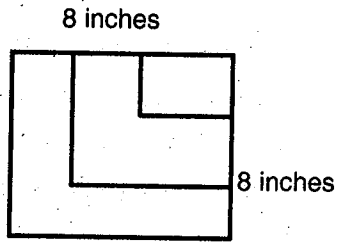
9. The perimeter of a rectangle is 6w. If one side has length $w/2$, what is the area of the rectangle?

(A) $\frac{w^2}{4}$ (B) $\frac{5w^2}{4}$ (C) $\frac{5w^2}{2}$ (D) $\frac{11w^2}{4}$ (E) $\frac{11w^2}{2}$




10. In the figure above, if the area of parallelogram JKLM is n, and if the length of KN is n + 1/n, then the length of JM is

(A) $\frac{1}{n}$ (B) $\frac{1}{n+1}$ (C) n+1 (D) $\frac{n^2}{n+1}$ (E) $\frac{n^2}{n^2+1}$




11. The figure above shows a large square formed by fitting 2 L-shaped tiles and one square tile together. If a rectangular floor 10 feet by 12 feet is to be tiled in large square of this design, how many L-shaped tiles will be needed?

(A) 34 (B) 135 (C) 270 (D) 540 (E) 810

12. What is the perimeter, in meters, of a rectangular play ground 24 meters wide that has a same area as a rectangular play ground 64 meters long and 48 meters wide?

(A) 112 (B) 128 (C) 224 (D) 256 (E) 304

13. If the diagonal of a square is 16 inches long, what is the area of the square?

(A) 64 sq. inches (B) $64\sqrt{2}$ sq. inches (C) 128 sq. inches
(D) 128 inches (E) 256 sq. inches

14. Square tiles with each side measuring 8 inches, cost 0.09 taka a piece. At this rate, what will be the cost to cover a floor measuring 10 feet by 16 feet?

(A) Tk. 22.50 (B) Tk. 25.00 (C) Tk. 28.00

(D) Tk. 32.40 (E) Tk. 36.00

15. The area of a square is $144s^2$. What is the length of the diagonal of the square?

(A) 12s (B) $12s\sqrt{2}$ (C) 24s (D) 144s (E) $144s^2$

16. The area of a square will be doubled if :

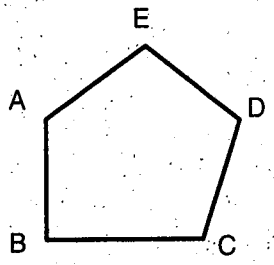
(A) the length of the diagonal is divided by 2.

(B) the length of the diagonal is divided by $\sqrt{2}$.

(C) the length of the diagonal is multiplied by 2.

(D) the length of the diagonal is multiplied by $\sqrt{2}$.

(E) none of these.




17. In pentagon ABCDE, AB ⊥ BC. What is the sum of the measures of angles C,D,E and A?

(A) 450 (B) 540 (C) 630 (D) 720 (E) 810

18. If the side of a square is increased by 150 percent, by what percent does the area increase?

(A) 125% (B) 225% (C) 300% (D) 525% (E) 625%

19. What is the degree measure of an interior angle of a regular nonagon?

(A) $90^0$ (B) $100^0$ (C) $120^0$ (D) $140^0$ (E) $150^0$

20. What is the area of a regular hexagon with sides equal to 6?

(A) $\frac{3\sqrt{3}}{4}$ (B) $\frac{3\sqrt{3}}{2}$ (C) $3\sqrt{3}$ (D) $9\sqrt{3}$ (E) $54\sqrt{3}$

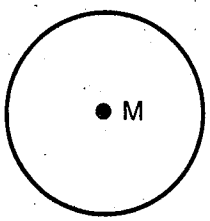
**Answer keys :**

| | | | | |
|---|---|---|---|---|
| 1. E | 5. C | 9. B | 13. C | 17. A |
| 2. C | 6. B | 10. E | 14. D | 18. D |
| 3. B | 7. C | 11. D | 15. B | 19. D |
| 4. D | 8. D | 12. E | 16. D | 20. E |

# Chapter Outline: Circle

**Some Important Definitions:**

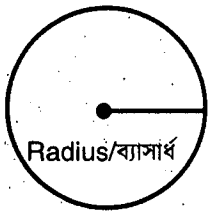
i) Center বা mid-point অনুসারে circle-এর নামকরণ করা হয় ঃ



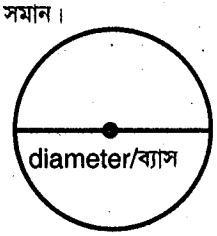

Circle M

ii) Circumference (C) হচ্ছে circle-এর একটি বৃত্তাকার রেখার দৈর্ঘ্য- অর্থাৎ circle এর perimeter হচ্ছে circumference বা পরিধি।

iii) Radius হচ্ছে Center ও Circumference-এর যে কোন বিন্দু সংযোগকারী রেখা। (S. radius→ Pl. radii).




iv) Circumference এর দুটি বিন্দু যোগ করলে তা কেন্দ্র গামী হলে তাকে diameter বা ব্যাস বলে। diameter এর length দুটি radius এর যোগফলের সমান।




v) $\pi$ (পাই) হচ্ছে একটি constant. যে কোন circle-এর circumference এবং diameter এর ratio একটি constant ($\pi$)। এটি আসলে একটি irrational number। তবে এর আসন্ন মান 3.14 বা $^{22}/_{7}$।

vi) r, d, c, A (Area) এর যে কোন একটি জানা থাকলে সহজেই অপর তিনটি নির্ণয় করা যায়। কোন Circle এর radius r হলে, d = 2r

$c = 2 \times \pi \times r = \pi d$

$A = \pi r^2 = \frac{\pi d^2}{4}$

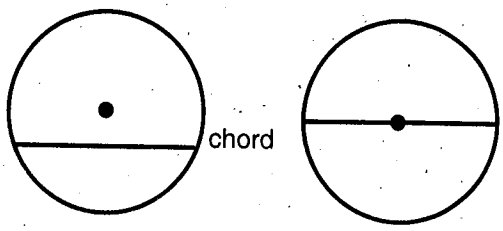
Example : r = 2m হলে

$d = 2 \times 2 = 4m$

$c = 4\pi m$

$A = 4\pi m^2$

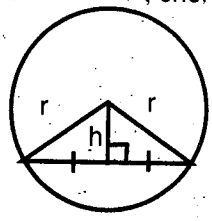
vii) Chord বা জ্যা circumference এর যে কোন দুটি বিন্দু সংযোগকারী রেখা




*N. B. a. Diameter circle-এর বৃহত্তম chord*

b. center এবং chord-এর মধ্যবিন্দু সংযোগকারী রেখা chord এর উপর Perpendicular.

c. Center থেকে chord-এর উপর লম্ব, chord কে সমদ্বিখন্ডিত করে।




d. সমান সমান chord কেন্দ্র থেকে সমান দূরবর্তী।

e. Center থেকে সমদূরবর্তী chord পরস্পর সমান।

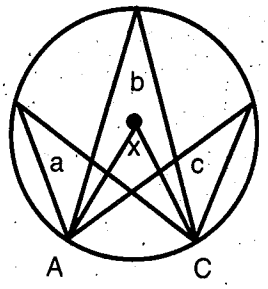
f. বৃহত্তর chord, center এর নিকটতর।

g. center এর নিকটতর chord বৃহত্তর।

viii) Arc বা চাপ হচ্ছে Circumference এর অংশ।

ix) ***Central and Inscribed Angles :***

Arc center-এ Central এবং circumference এর উপরে inscribed angle ধারণ করে।




x = Central angle

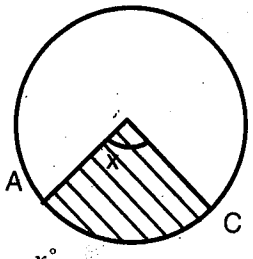
এখানে,

a. a = b = c অর্থাৎ একই চাপ AC-এর উপরে সব inscribed angle সমান।

b. $a = b = c = \frac{x}{2}$ অর্থাৎ inscribed angle, central angle-এর অর্ধেক।

c. সমান সমান chord সমান সমান arc ছিন্ন করে।

***Area of Pie :*** Central angle এর মান অনুযায়ী Pie এর area নির্ণয় করা যায়।

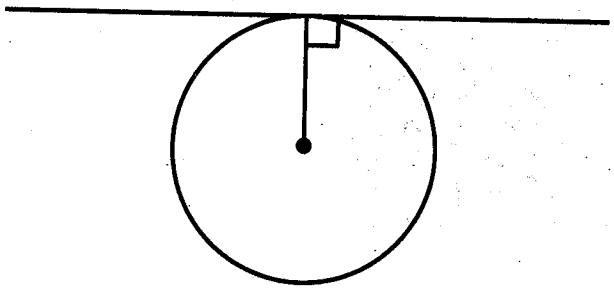



AC = $x^0$ হলে, area (shaded ) = A x $\frac{x^\circ}{360^0}$

Example : r = 3m এবং AC = $60^0$ হলে,

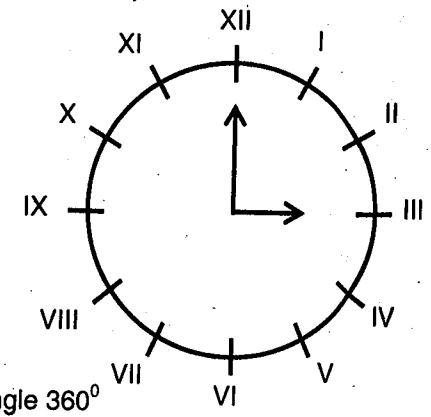
Shaded area = $\pi$ x $9m^2$ x $\frac{60}{360} = \frac{3}{2}\pi m^2$

***Tangent:*** Tangent circle এর একটি external line যা circumference কে একটিমাত্র point এ touch করে।



Center এবং point of tangency সংযোগ করলে তা tangent এর উপর perpendicular হবে।

***Angle between the Hands (Clock Problem):***




1. Clock এর Center চারিদিকে total angle $360^0$
2. Minute এর hand 60 m অর্থাৎ $360^0$ ঘুরলে 1 hour হয় বা hour hand $30^0$ ঘুরে।
3. x minute-এ hour hand $\frac{x}{2}$ degree ঘুরে। অর্থাৎ প্রতি minute-এ hour এর hand $\frac{1^\circ}{2}$ ঘুরে।
4. প্রতি minute-এ minute-এর hand $6^0$ ঘুরে।

***Example:*** What is the degree measure of the acute angle between the hands of minute and hour at 7 : 45

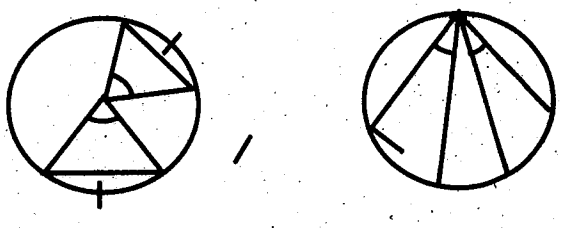
**Solution:** 7:00 থেকে minute এর hand 45 minute ঘুরলে hour এর hand স্থির থাকলে angle টি হতো $60^0$ (vii থেকে ix এর মাঝে $30^0 + 30^0 = 60^0$)

কিন্তু 45 minute এ hour hand $\frac{45^0}{2}$ ঘুরবে

$\therefore$ Acute angle = $60^0 - 22.5^0$

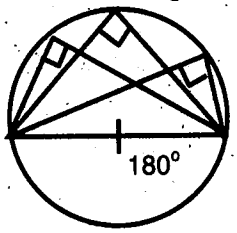
= $37.5^0$

d. সমান সমান chord বা arc এর central এবং inscribed angle গুলো সমান।



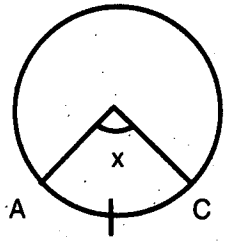
e. circle এর degree measure $360^o$

f. Semi-circle এ অর্থাৎ diameter এর উপর যে কোন angle $90^o$




***Length of an Arc:***

Central angle এর মান অনুযায়ী arc এর length নির্ণয় করা হয়।




AC = x হলে, AC = Circumference x $\frac{x}{360^0}$

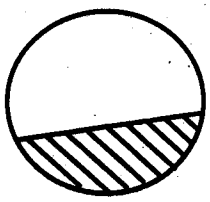
example r = 3m এবং AC = $60^0$ হলে,

AC = 2 x $\pi$ x 3 x $\frac{60^0}{360^0}$ m.

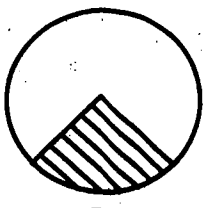
= $\pi$m.

***Segment and Pie:***

Segment এবং pie Circle এর surface-এর part :



**Segment**



**Pie**

Area of a pie= $\pi r^2 \times \frac{x}{360^0}$

***Some Important Formulae:***

বর্গক্ষেত্রের কর্ণের উপর অঙ্কিত বর্গের অর্ধেকেই হচ্ছে উক্ত বর্গক্ষেত্রের ক্ষেত্রফল।

সমকোণী ত্রিভূজের সমকৌণিক শীর্ষ হতে অঙ্কিত লম্বের দৈর্ঘ্য = $\frac{\text{ভূমি} \times \text{লম্ব}}{\text{অতিভূজ}}$

সমবাহু ত্রিভূজের বাহু a দেয়া থাকলে উক্ত ত্রিভূজের ক্ষেত্রফল = $\frac{\sqrt{3}}{4}a^2$

সমকোণী ত্রিভূজের অতিভূজ ভূমির দ্বিগুন হলে, লম্ব হবে ভূমির $\sqrt{3}$ গুণ বেশি।

সুষম ষড়ভূজের ক্ষেত্রফল = $\frac{3\sqrt{3}}{2}a^2$.

বর্গক্ষেত্রের কর্ণদ্বয় বর্গক্ষেত্রকে চারটি সমান সমদ্বিবাহু সমকোণী ত্রিভূজে বিভক্ত করে।

বর্গক্ষেত্রের কর্ণ এক বাহুর $\sqrt{2}$ গুণ।

বহুভূজের একটি কোণ = $\frac{(n-2)180^0}{n}$

সমবাহু ত্রিভূজের ভেতর অঙ্কিত কোন বৃত্তের ক্ষেত্রফল $\pi a^2$ হলে, উক্ত ত্রিভূজের ক্ষেত্রফল = $3\sqrt{3}a^2$.

স্থূলকোণী সমদ্বিবাহু ত্রিভুজের স্থূলকোন $120^0$ হলে, স্থূলকোনের বিপরীত বাহুর মান হবে সমান সমান বাহুর $\sqrt{3}$ গুণ বেশী।

সমকোণী ত্রিভূজের অপর কোনদ্বয় $30^0$ ও $60^0$ হলে, $30^0$ কোণের বিপরীত বাহু অতিভূজের অর্ধেক এবং $60^0$ কোণের বিপরীত বাহু $30^0$ কোণের বিপরীত বাহুর $\sqrt{3}$ গুণ বেশী।

শীর্ষ কোনের অন্তর্দিখন্ডক ভূমিকে কোন সংলগ্ন বাহুদ্বয়ের অনুপাতে ভাগ করে।

শীর্ষ কোনের বহিঃর্দিখন্ডক ভূমিকে কোন সংলগ্ন বাহুদ্বয়ের অনুপাতে বিভক্ত করে (বহিস্থ একটি বিন্দুতে)

**Exercise 3 (1):**

1. If the area of a circle is $64\pi$, then the circumference of the circle is

   (A) $8\pi$ (B) $16\pi$ (C) $32\pi$ (D) $64\pi$ (E_ $128\pi$

2. The ratio of the area of a circle to the radius of the circle is

   (A) $\pi$ (B) $2\pi$ (C) $\pi^2$ (D) $2\pi^2$ (E) none of these

3. If the circumference and the area of a circle are numerically equal, what is the numerical value of the diameter?

   (A) $\frac{22}{7}$ (B) 4 (C) $2x\frac{22}{7}$ (D) 2 (E)1

4. What is the area of a semicircle with a diameter of 16 inches?

   (A) $32\pi$ sq. feet (B) $64\pi$ sq. feet (C) $128\pi$ sq. feet

   (D) $256\pi$ sq. feet (E) $512\pi$ sq. feet.

5. If d is the diameter of a circle, then $\pi d^2$ represents

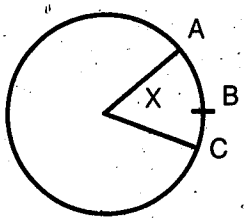
(A) area of the circle

(B) half the area of the circle

(C) twice the area of the circle

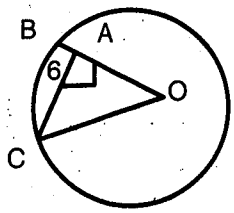
(D) One-fourth the area of the circle

(E) four times the area of the circle.




6. In the figure above, the ratio of the circumference of the circle B to the length of arc ABC is 8:1 what is the value of x?

(A) $30^0$ (B) $45^0$ (C) $60^0$ (D) $75^0$ (E) $90^0$

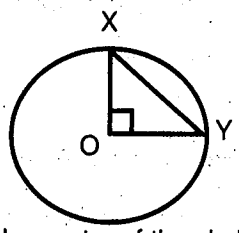



7. In the figure above, if the area of the circle with center O is $100\pi$ and CA has a length of 6, what is the length of AB?

(A) 2 (B) 3 (C) 4 (D) 5 (E) 6

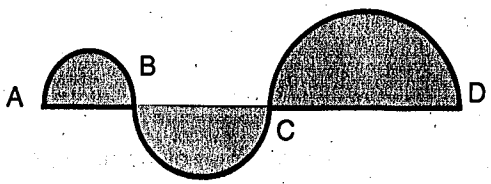
8. If the minute hand of a clock moves 45 degrees, how many minutes of time have passed?

(A) 6 (B) 7.5 (C) 15 (D) 5 (E) 6




9. In the figure above, O is the center of the circle. If the area of triangle XOY is 25, what is the area of the circle?

(A) $25\pi$ (B) $25\pi\sqrt{2}$ (C) $50\pi$ (D) $50\pi\sqrt{3}$ (E) $625\pi$

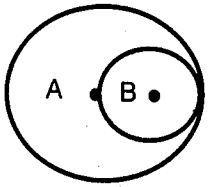



10. Each of the three shaded regions above is a semicircle. If AB=4, CD = 2BC and BC = 2AB, then the area of the entire figure is

(A) $28\pi$ (B) $42\pi$ (C) $84\pi$ (D) $96\pi$ (E) $168\pi$

11. If the diameter of a circle increases by 50 percent; by what percent will the area of the circle increase?

(A) 25% (B) 50% (C) 100% (D) 125% (E) 225%

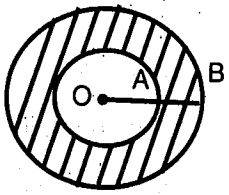



12. In the diagram above, if the circle with center A has an area of $72\pi$, what is the area of the circle with center B?

(A) $18\pi$ (B) $24\pi$ (C) $30\pi$ (D) $36\pi$ (E) $48\pi$

13. A circular garden twenty feet in diameter is surrounded by a path three feet wide. What is the area of the path?

(A) $9\pi$ sq. feet (B) $51\pi$ sq. feet (C) $60\pi$ sq. feet
(D) $69\pi$ sq. feet (E) $90\pi$ sq. feet

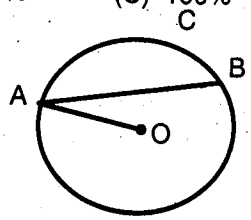



14. In circle O, OB = 6 and AB = 2. The ratio of the shaded portion to the small circle =

(A) 1:9 (B) 1:3 (C) 5:4 (D) 3:5 (E) 3:4

15. If the radius of a circle is increased by 50 percent, the circumference is increased by

(A) 25% (B) 50% (C) 100% (D) 125% (E) 250%




16. Arc ACB=120°. Angle BAO =

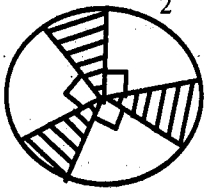
(A) 12° (B) 30° (C) 45° (D) 60° (E) 120°

17. What is the acute angle between the hands of hour and minute at 6:35?

(A) 5° (B) $12\frac{1^0}{2}$ (C) 15° (D) $17\frac{1^0}{2}$ (E) 30°

18. What is the acute angle between the hands of hour and minute at 6:25?

(A) $12\frac{1^0}{2}$ (B) 15° (C) 30° (D) $42\frac{1^0}{2}$ (E) 45°



19. In the circle above, three right angles have vertices at the center of the circle. If the radius of the circle is 8, what is the combined area of the shaded region?

(A) $8\pi$ (B) $9\pi$ (C) $12\pi$ (D) $13\pi$ (E) $16\pi$

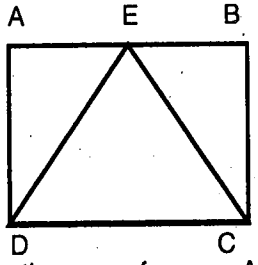
20. If an arc with length of $12\pi$ is $\frac{3}{4}$ the circumference of a circle, what is the shortest distance between the end points of the arc?

(A) 4 (B) $4\sqrt{2}$ (C) 8 (D) $8\sqrt{2}$ (E) 16

**Answer keys:**

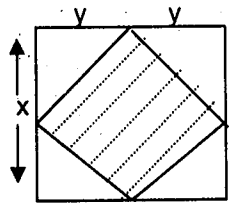
| | | | | |
|---|---|---|---|---|
| 1. B | 5. E | 9. C | 13. D | 17. B |
| 2. E | 6. B | 10. B | 14. C | 18. D |
| 3. B | 7. A | 11. D | 15. B | 19. E |
| 4. A | 8. B | 12. A | 16. B | 20. D |

**Exercise 3 (II):**

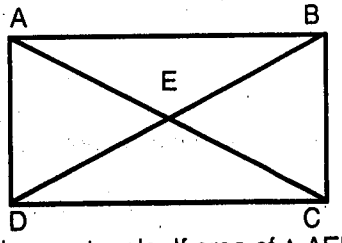



1. What is the ratio of Δ DEC to the area of square ABCD in the figure above?

(A) $\frac{1}{4}$ (B) $\frac{1}{3}$ (C) $\frac{1}{2}$ (D) $\frac{2}{1}$ (E) cannot be determined

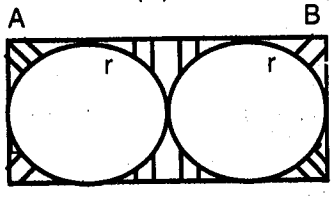



2. In the square above, what is the area of the dotted region? (x = 2y)
(A) $x^2 - y^2$ (B) $x^2 - 2y^2$ (C) $x^2 - 4y^2$ (D) $(x - y)(x-y)$ (E) $y^2 - x^2$




3. In the figure above, ABCD is a rectangle. If area of Δ AEB is 8, what is the area of Δ ACD?

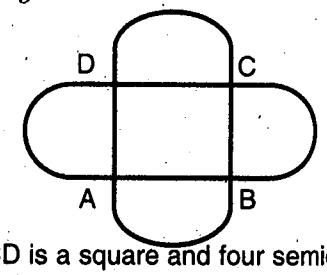
(A) 8 (B) 12 (C) 16 (D) 20 (E) 24




4. In the figure above, the area of the shaded portion is
(A) $2r^2 (4 - \pi)$ (B) $2r^2 (2 - 2\pi)$ (C) $2r^2 (\pi - 4)$ (D) $2r^2 (\pi - 2)$ (E) $r^2 (2 - \pi)$

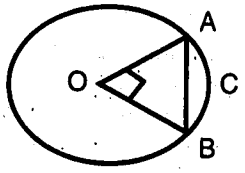
5. The area of a circle with radius r is equal to the area of a rectangle with base b. What is the height of the rectangle in terms of $\pi$, r and b?

(A) $\sqrt{\pi r}$ (B) $\frac{2\pi r}{b}$ (C) $\pi r^2 b$ (D) $\frac{\pi r^2}{b}$ (E) $\frac{\pi r^2}{b^2}$



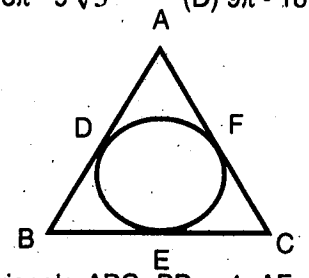

6. In the figure above, ABCD is a square and four semicircles are constructed on each side of the square. If AB = 2, what is the area of the entire figure?

(A) $2 + 4\pi$ (B) $2 - 4\pi$ (C) $4 + 8\pi$ (D) $4 - 2\pi$ (E) $4 + 2\pi$



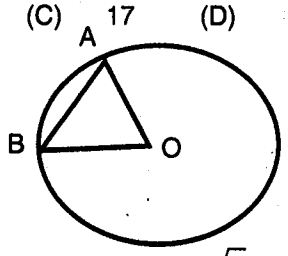

7. In circle, O, OA = 6. AO $\perp$ BO. The area of segment ACB is

(A) $2\pi$ (B) $\pi - 2$ (C) $6\pi - 9\sqrt{3}$ (D) $9\pi - 18$ (E) $36\pi - 9\sqrt{3}$



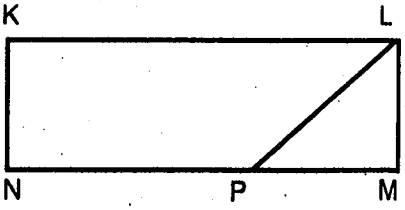

8. Circle O is inscribed in triangle ABC. BD = 4, AF = 3 EC = 5. The perimeter of triangle ABC is

(A) 12 (B) 15 (C) 17 (D) 24 (E) none of these




9. AB = radius OA; area of triangle AOB = $4\sqrt{3}$. Area of circle O =

(A) $4\pi$ (B) $8\pi$ (C) $16\pi$ (D) $24\sqrt{3}$ (E) $24\pi\sqrt{3}$



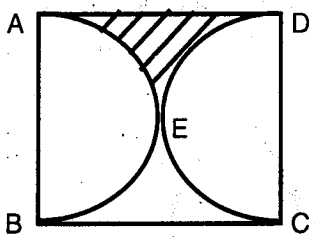

10. MP = $\frac{1}{3}$ of MN, the base of rectangle KNML. Area of triangle LMP = 8. Area of KNM=?

(A) 24 (B) 32 (C) 48 (D) 72 (E) 96

11. Which of the following figures has the smallest perimeter or circumference?
(A) a circle with diameter of 2 feet
(B) a square with a diagonal of 2 feet
(C) a rectangle with sides of 6 inches and 4 feet
(D) a pentagon with each side equal to 16 inches
(E) a hexagon with each side equal to 14 inches.

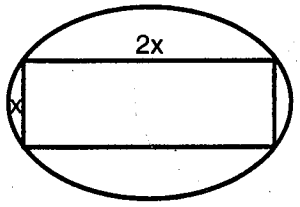
12. Which of the following figures has largest area?
(A) a 3 : 4 : 5 triangle with a hypotenuse of 25 inches.
(B) a circle with a diameter of 20 inches.
(C) a square with a 20 inch diagonal.
(D) a regular hexagon with a side equal to 10 inches.
(E) a rectangle with sides of 10 inches and 30 inches.

13. Which of the following has the largest perimeter?
(A) a square with a diagonal of 10 inches.
(B) a 3 : 4 : 5 triangle with a hypotenuse of 15 inches.
(C) a pentagon, each of whose sides is 5 inches.
(D) a right isosceles triangle with an area of 72 square inches.
(E) a regular hexagon with a radius of 5 inches.



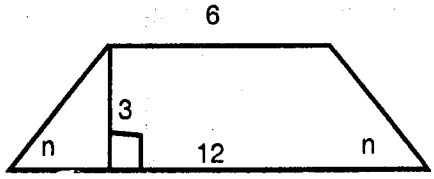

14. If ABCD is a square with side AB = 4 and AEB and CED are semicircles, what is the area of the shaded portion in the diagram below?

(A) $8 - \pi$ (B) $8 - 2\pi$ (C) $16 - 2\pi$ (D) $16 - 4\pi$ (E) $16 - 18\pi$



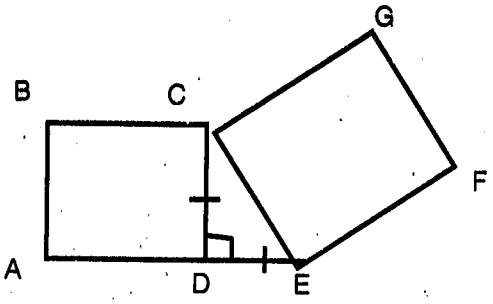

15. In the figure above area of the inscribed rectangle is 32. The circumference of the circle =

(A) $20\pi$ (B) $4\pi\sqrt{5}$ (C) $4\pi\sqrt{3}$ (D) $2\pi\sqrt{5}$ (E) $2\pi\sqrt{3}$



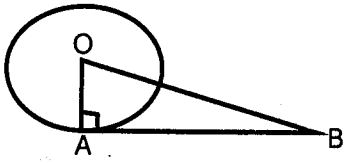

16. What is the perimeter of the quadrilateral shown above?

(A) 21 (B) 24 (C) $24+\sqrt{2}$ (D) $18+6\sqrt{2}$ (E) $24\sqrt{2}$



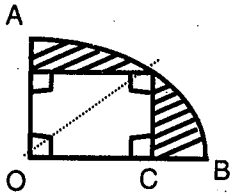

17. In the figure above, ABCD and CEFG are squares. If the area CEFG is 36, what is the area of ABCD?

(A) 6 (B)$6\sqrt{2}$ (C) 9 (D)18 (E) 24



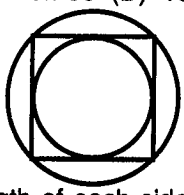

18. In the figure above, if radius OA is 8 and the area of right triangle OAB is 32, what is the area of the entire figure?

(A) $64\pi+32$ (B) $60\pi+32$ (C) $56\pi+32$ (D) $32\pi+32$ (E)$16\pi+32$




19. In the figure above, AB is an arc of a circle with centre O. if the length of arc AB is $5\pi$ and the length of CB is 4, what is the sum of the area of the shaded region?

(A) $25\pi-60$ (B) $25\pi-48$ (C) $25\pi-36$ (D) $100\pi-48$ (E)$100\pi-36$



20. In the figure above, if the length of each side of the square is 8,what is the ratio of the area of the larger circle to the area of the smaller circle.

(A) $2\sqrt{2}$ (B) 2 (C) $\sqrt{2}$ (D) 25 (E) $5\sqrt{2}$

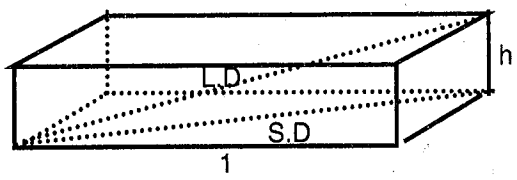
**Answer keys:**

| | | | | |
|---|---|---|---|---|
| 1. C | 5. D | 9. C | 13. D | 17. D |
| 2. B | 6. E | 10. C | 14. B | 18. C |
| 3. C | 7. D | 11. B | 15. B | 19. B |
| 4. A | 8. D | 12. B | 16. D | 20. B |

Solid বা ঘন বস্তুর volume বা আয়তন আছে। এখানে কিছু solid নিয়ে অতি সংক্ষেপে আলোচনা করা হলো।

**Rectangular Solid:** Rectangular Solid বা আয়াতাকার ঘন বস্তুর আকার box এর মতো, এই box এর প্রত্যেকটি surface rectangular.

## Chapter Outline: Solid Geometry




Rectangular solid এর চারটি vertex বা শীর্ষবিন্দু আছে। এর total 12 টি edge বা প্রান্ত আছে।

Total edge = 4 (l + w + h)

Rectangular solid এর মোট উপর পৃষ্ঠের ক্ষেত্রফল বা total surface area,

TSA = 2 (lw + lh + wh) [ TSA=total Surface Area]

Volume = base × height = length × width × height

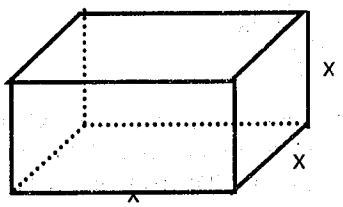
= l x w x h

Short diagonal 3 টির পরিমাপ $\sqrt{l^2+w^2}, \sqrt{l^2+h^2}$ এবং $\sqrt{w^2+h^2}$ longest diagonal (দূরবর্তী vertex এর distance) = $\sqrt{l^2+w^2+h^2}$

N. B. Volume হচ্ছে একটি ঘন বস্তু কি পরিমান স্থান জুড়ে অবস্থান করে বা কি পরিমান বস্তু ধারণ করে তার পরিমাপ।

**Cube:** Cube বা ঘনক অনেকটা rectangular solid এর মতোই। তবে এর প্রত্যেকটি প্রান্তই সমান

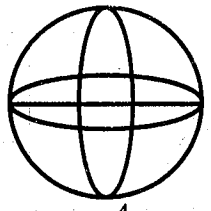
অর্থাৎ, l = w = h




Cube এর একটি প্রান্ত x হলে,

| | |
|---|---|
| Total edge | = 12x |
| TSA | = $6x^2$ [TSA=total Surface Area] |
| Volume | = $x^3$ |
| Short diagonal | = $x\sqrt{2}$ |
| Longest diagonal | = $x\sqrt{3}$ |

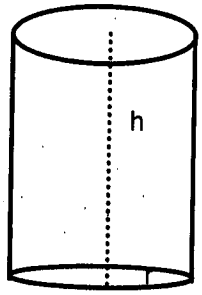
**Sphere:** Sphere বা গোলকের radius r হলে



Volume = $\frac{4}{3}\pi r^3$

T. S.A = $4\pi r^2$ [TSA=total Surface Area]

**Cylinder:** cylinder বা বেলুন এর আকার নিম্নরূপ ঃ




Cylinder এর height h এবং circular surface এর radius r হলে

T.SA. $= 2\pi rh + 2\pi r^2$ [TSA=total Surface Area]

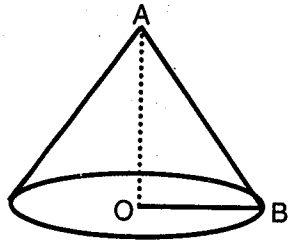
$= 2\pi r (h + r)$

Volume = base x height

$= \pi r^2 \times h$

$= \pi r^2 h$

**Cone:** Cone বা কোনক এর আকার নিম্নরূপ ঃ




এখানে OB = radius = r, AO = height = h এবং AB = 1 হলে

$$V = \frac{1}{3}\pi r^2 h$$

T. S.A $= \pi r (r + 1)$ [ TSA=total Surface Area]

N. B. Solid এর volume এর unit বা একক হবে cubic inches বা cubit feet বা cubic meter বা c.c (cubic centimeter)

**Exercise 4:**

1. What is the volume of a cube with a surface area of 96?
   (A) 8 (B) 16 (C) 27 (D) 48 (E) 64

2. A cylinder has a volume of $72\pi$ cubic inches and height of 8 inches. If the height is increased by 4 inches, what will be the new volume, in cubic inches?
   (A) $84\pi$ (B) $96\pi$ (C) $108\pi$ (D) $120\pi$ (E) $144\pi$

3. A cube and a rectangular solid are equal in volume. If the lengths of the edges of the rectangular solid are 4, 8 and 16, what is the length of an edge of the cube?
   (A) 8 (B) 10 (C) 12 (D) 16 (E) $16\sqrt{2}$

4. What is the volume of a cylinder with diameter 6 and height 6?
   (A) $36\pi$ (B) $54\pi$ (C) 54 (D) 16 (E) $216\pi$

5. If the length of an edge in a cube is $3\sqrt{3}$, what is the length of the longest diagonal?
(A) $3\sqrt{6}$ (B) 9 (C) $9\sqrt{3}$ (D) 2 (E) $2\sqrt{3}$

6. If the edges of a cube add up to 4 feet in length, what is the volume of the cube?
(A) 64 cubic inches (B) 125 cubic inches (C) 216 cubic inches
(D) 16 cubic feet (E) 64 cubic feet

7. The volume of a sphere is equal to the volume of a cylinder. If the radius of the sphere is 4 meters and the radius of the cylinder is 8 meters, what is the height of the cylinder?
(A) 4 meters (B) $\frac{4}{3}$ meters (C) 8 meters (D) $\frac{16}{3}$ meters (E) 16 meters

8. If the volume of a cube is 216 c.c., find the surface area of the cube.
(A) 36 sq. c.m (B) 54 sq. c.m (C) 216 sq. c.m
(D) 36 c.c (E) 216 c.d.

9. If the radius of the base of a cylinder is tripled, and height is divided by three, what is the ratio of the volume of the new cylinder to that of the original cylinder?
(A) 1 : 9(B) 1 : 3 (C) 1 : 1 (D) 3 : 1 (E) 9 : 1

10. A rectangular block with a volume of 250 cubic inches was sliced into 2 cubes of equal volume. How much greater, in square inches, is the combined surface area of the 2 cubes than the original surface area of the rectangular block?
(A) 5 sq. inches (B) 10 sq. inches (C) 25 sq. inches
(D) 50 sq. inches (E) 125 sq. inches

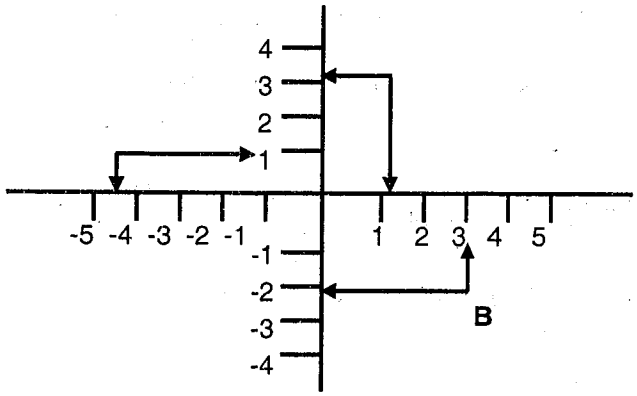
**Answer keys:**

| | | | | |
|---|---|---|---|---|
| 1.E | 3.A | 5.B | 7.B | 9.D |
| 2.C | 4.B | 6.A | 8.C | 10.D |

## Chapter Outline: Coordinate Geometry

Admission Test-এ এখন পর্যন্ত এক পরীক্ষায় একটির বেশী Coordinate geometry related problem আসেনি। এই chapter এ অতি সংক্ষেপে coordinate geometric concept এবং কিছু function আলোচনা করা হলো।

**Cartesian Grid:** Cartesian grid basically cross আকারে দুটি perpendicular axis (number line)। এখানে horizontal line টিকে x-axis এবং vertical line টিকে y-axis বলা হয়। x-axis এবং y-axis এর point of intersection কে Origin বলে। x-axis ও y-axis এর cross একটি plane কে চারটি ভাগে বিভক্ত করে এবং এদেরকে Quadrant বলে।




একটি plane-এ কোন point এর অবস্থান এই grid এর সাহায্যে নির্ণয় করা যায়। x-axis ও y-axis এর উপর point টি থেকে লম্ব টেনে x-axis এর উপরের বিন্দুটি x এর মান ও y-axis এর উপরের বিন্দুটি y এর মান নিয়ে বিন্দুর অবস্থান (x,y) নির্ণয় করা হয়। উপরের grid এর মতো চারটি quadrant-এ x ও y এর মানের sign নির্ধারিত হয়। Grid টিতে B point এর x এর মান 4 এবং y এর মান –1। অতএব B এর coordinate (-4, 1)

**Mid Point:** দুটি point A (x, y) এবং B (x', y') হলে, তাদের midpoint, C এর coordinate হবে ঃ

$$\text{Coordinates of Midpoint} = \left(\frac{x+x'}{2}, \frac{y+y'}{2}\right)$$

**Example:** A (2,4) এবং B (6,-2) হলে midpoint হবে $\left(\frac{2+6}{2}, \frac{4+(-2)}{2}\right)$ বা (4,1)

**Distance:** দুটি point A (x, y) এবং B (x', y') হলে তাদের distance হবে ঃ

$$\text{Distance} = \sqrt{(x-x')^2 + (y-y')^2}$$

Example: A (0, 2) এবং B (6, -2) হলে

$$\text{Distance} = \sqrt{(8-0)^2 + (17-2)^2} = \sqrt{8^2+15^2} = 17$$

**Area of a Triangle:** তিনটি point A( $x_1$, $y_1$), B ($x_2$, $y_2$) এবং C ($x_3$, $y_3$) হলে

Area of $\Delta$ ABC = $\frac{1}{2}$ [ $x_1$ $y_1$ / $x_2$ $y_2$ / $x_3$ $y_3$ / $x_1$ $y_1$ ]

$$= \frac{1}{2} [x_1 y_2 + x_2 y_3 + x_3 y_1 - y_1 x_2 - y_2 x_3 - y_3 x_1]$$

N. B. Point গুলোর sequence এর কারণ negative sign আসলে তা ignore করতে হবে।

Example: A (2, 4) এবং B (6, -2) হলে midpoint হবে $[\frac{2+6}{2}, \frac{4+(-2)}{2}]$ বা (4, 1)

Area of a triangle: তিনটি point A (0,4), B (2,8) এবং C (6, 5) হলে

Area of $\Delta$ ABC = $\frac{1}{2}$ [0 4 / 2 8 / 6 5 / 0 4 ]

$$= \frac{1}{2} (0 + 10 + 24 - 8 - 48 - 0)$$

$$= \frac{1}{2} (-22)$$

$$= -11$$

কিন্তু area negative হতে পারে না। অতএব এক্ষেত্রে area হবে –11 এর absolute value বা 11.

**Exercise 5:**

1. A line segment AB is drawn from point (2, 3) and point (4, 7). What are the coordinates of the midpoint?
   (A) (5, 3) (B) (3, 5) (C) (6, 10) (D) (2, 4) (E) (4, 2)
2. What is the distance from point A (3,4) to point B (-3, -4)?
   (A) 2 (B) 5 (C) 10 (D) 13 (E) 14
3. Point P (4,2) is the midpoint of line OPC, where O is at origin (0, 0). The coordinates of C are
   (A) (2, 3) (B) (4, 8) (C) (4, 4) (D) (8, 2) (E) (8, 4)

4. Point P (0, -4) is the midpoint of line AB, where the coordinates of point A are (-2, -5). The coordinates of point B are
(A) (-4, -10) (B) (2, -5) (C) (2, 5) (D) (2, -3) (E) (2, 3)

5. The vertices of triangle ABC are (-1, 2), (-1, 1) and (-3, 2). Triangle ABC is
(A) obtuse (B) isosceles (C) right
(D) equilateral (E) either isosceles or equilateral

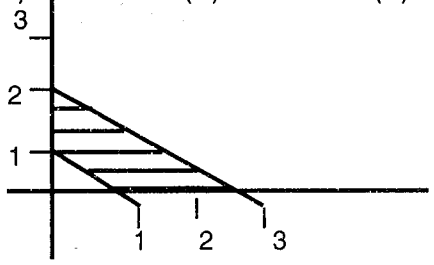
6. Triangle ABC has the following vertices: A( 1, 1), B (9, 4) and C (1, 7). Which of the following statements is true?
(A) AB = BC (B) AB = AC (C) AB>BC
(D) AB < AC (E) AC = BC

7. The area of a circle whose center is at (0,0) is $9\pi$. The circle passes through all of the following points except.
(A) (-3, 0) (B) (3, 0) (C) (0, 3) (D) (0, -3) (E) (3, 3)

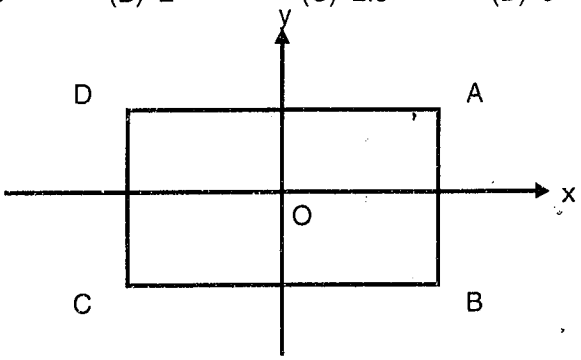
8. AB is a diameter of a circle whose center is O. The coordinates of point A are (- 2,0) and point B are (2, 0). The circle passes through a point whose coordinates are
(A) (-2, -2) (B) (-2, 2) (C) (0, 4) (D) (0, -2) (E) (2, 2)

9. The coordinates of a point equally distant from A( 4, -2) and B (4, 6) and on the y-axis are
(A) (0, 2) (B) (0, 4) (C) (0, 8) (D) (2, 0) (E) (2, 2)

10. What is the area of a triangle with vertices at (5, 3), (11, 3) and (8, 8)?
(A) 7 (B) 15 (C) 24 (D) 30 (E) 64



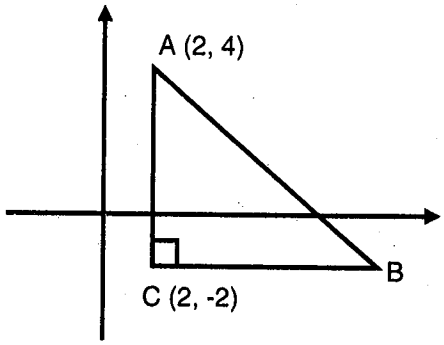

11. In the figure above, what is the area of the shaded region?
(A) 1.5 (B) 2 (C) 2.5 (D) 3 (E) 3.5




12. In the figure above, ABCD is a square with center at the origin. If the coordinates of vertex A are (4, 4), what are the coordinates of vertex C?
(A) $(-4\sqrt{2}, -4\sqrt{2})$ (B) $(-4\sqrt{2}, -4)$ (C) (-4, -4) (D) (-4, 4) (E) (4, -4)

13. Point A has coordinates (1, 2) and point B has coordinates (9, b). If the distance between points A and B is 10, find the value of b.
(A) 4 (B) 6 (C) 7 (D) 8 (E) 10

14. What is the area of the triangle having co-ordinates of (0,2), (4, 7) and (3, 6)?
(A) 3 (B) 7.5 (C) 22 (D) 0.5 (E) 1.5




15. In the rectangular coordinate system above, if the area of right triangle ABC is 24, what are the coordinates of point B?
(A)(10, -2) (B)(10, 2) (C) (2, 6) (D) (8, -2) (E) cannot be determined

**Answer key:**

| | | | | |
|---|---|---|---|---|
| 1. B | 4. D | 7. E | 10. B | 13. D |
| 2. C | 5. C | 8. D | 11. C | 14. D |
| 3. E | 6. A | 9. A | 12. C | 15. A |

# Arithmetic Review

**Unitary System, Ratio, Proportion, Work Problems.**

**Percentage, Deviation, Profit - Loss, Discount Successive Discount**

**Median, Mode, Average**

**Distance, Time, Speed, Average Speed, Relative Speed, Rotation of Wheel**

**Mixture, Solution.**

## Chapter Outline: Unitary System, Ratio, Proportion, Work Problems

**Unitary System:** Arithmetical Problems solve করার বিভিন্ন tools (ratio, proportion, percentage, rate, spend ইত্যাদি) গুলোর -base হচ্ছে Unitary System বা ঐকিক পদ্ধতি । Unitary System -এ given value থেকে Unit value বা ঐকিক মান এবং তা থেকে disired solution নির্ণয় করা হয়।

**Example:**

i) If the cost of one hour call is Tk. 72. What would be the cost of a ten-minute call at the same rate?

**Solution:** Cost of a 60 m call = 72 tk

Cost of a 1m call $= \frac{72}{60}$ tk

Cost of a 10 m call = $\frac{72\times10}{60}$ tk = 12 tk.

এই example টিতে দুটি quantity–র relation দেখানো হলো। Relation আরো বেশি quantity-র জন্য extend করা যায়। একই ভাবে যে quantity নির্ণয় করতে হবে তাকে right side -এ রাখতে হবে।

ii) If 30 men can survive 3 days with 90 can of food, how many men can survive 2 days with 180 cans of food?

**Solution:**

3 days, 90 cans 30 men

1 day, 1 can $\frac{30\times3}{90}$ men

2 days, 180 cans $\frac{30\times3\times180}{90\times2}$ men

= 90 men

**Ratio:** Ratio বা অনুপাত একটি expression যার সাহায্যে একটি সংখ্যাকে আরেকটি সংখ্যা দিয়ে ভাগ করে সংখ্যা দুটিকে তুলনা করা হয়।

**Example**: In a class of 10 girls and 15 boys.

Ratio of girls to boys is 10:15 = $\frac{10}{15} = \frac{2}{3}$ or 2:3

Ratio of boys to girls is 15:10 = $\frac{15}{10} = \frac{3}{2}$ or 3:2

এখানে ratio দুটি part to part ratio কেননা এখানে class এর একটি part এর সাথে আরেকটি part compare করা হয়েছে। class এর total এর সাথে no. of boys or girls compare করলে whole to part or part to whole ratio পাওয়া যাবে।

Ratio of girls to class = 10:25 = $\frac{10}{25} = \frac{2}{5}$ or 2: 5

N.B. i) Ratio নির্ণয় করতে হলে রাশি দুটি একই type এর হতে হবে, Unit একই থাকবে।

ii) Ratio কে fraction আকারে express করা যায়।

iii) Ratio কে fraction এর reduced form এ express করা হয় অর্থাৎ সংখ্যা দুটি common factor cross out করা হয়।

iv) Ratio reduced form এ সাধারণত দুটি integer এর comparison show করে।

v) No. of girls np এবং boys nq হলে class total = np + nq

or T = n (p + q), এখানে T, n(p+q) দ্বারা evenly divisible, অর্থাৎ boys : girls = 3 : 2 হলে no. of students অবশ্যই 5 দ্বারা divisible.

**Worked out problems:**

i) The ratio of two numbers is 16:35. The larger number is 280. Find the smaller.

Let common factor = n

35n = 280

16n = 128 (The smaller number)

ii) Two numbers are in the ratio 5:8. When 2 is added to each, the ratio of resulting numbers is 2 to 3. Find the numbers.

$\frac{5n+2}{8n+2} = \frac{2}{3}$

or, n = 2

The numbers are 10 and 16.

**Proportion:** Proportion একটি equation যার দুটি side-ই fraction.

e.g. $\frac{1}{5} = \frac{15}{75}$ একটি proportion। একটি proportion এ চারটি term থাকে।

e.g. a : b = c : d ; এখানে a ও d extreme value এবং b ও c mean value. Proportion এর mean দুটি product extreme দুটির product এর সমান।

a : b = c : d হলে

$\frac{a}{b} = \frac{c}{d}$ এবং

ad = bc এবং $\frac{a}{b} = \frac{c}{d} = \frac{a+c}{b+d}$

কোন problem এ চারটি term যদি proportionate হয় এবং term গুলোর মধ্যে দুটি variable থাকে যার একটি change হলে অন্যটিরও change হয় তাহলে problem টি proportion ব্যবহার করে solve করা যায়। variable দুটির relation দুই type এর হতে পারে :

i) Direct proportion ii) Inverse proportion

**Direct proportion:** Direct proportion এ x ও y variable দুটি একটি increase করলে অপরটি increase এবং একটি decrease করলে অপরটি decrease করবে অর্থাৎ $\frac{x}{y}$ = K (constant) অর্থাৎ x কে কোন number দিয়ে multiply বা divide করলে y কে same number দিয়েই respectively multiply এবং divide করতে হবে।

Conversion (Dollar to taka-money exchange) বা mile to kilometer-unit exchange), work problem-input-output relation (time বা worker এর সংখ্যার সাথে work done এর relation), business problem (Partnership-এ investment এবং profit-এর share), recipe problem (in gradient এবং quantity) এবং geometric problem-এ similar triangles এর side direct proportion এ related.

**Inverse proportion:** Inverse proportion এর ক্ষেত্রে xy = k অর্থাৎ একটি increase বা decrease করলে অপরটি respectively decrease বা increase করবে।

Input to input relation (worker এর সংখ্যা এবং time required), number of survivers to days survived (food limited) ইত্যাদি Inverse proportion-এ related.
N.B. Ratio এবং Proportion এর Problem গুলো সাধারণত Unitary System এ solve করা যায়। Direct এবং Inverse relation এর complexity avoid করার tool হচ্ছে common sense.

**Work Problems:** Work problem solve করতে Fraction of time এবং rate of work use করতে হয়। Fraction of work এর একটি simple formula:

$$\frac{\text{Time spent working}}{\text{Time required to do job}} = \text{Fractional part of job done}$$

একটি worker এর rate of work হচ্ছে সে unit time এ কতটুকু কাজ করতে পারে তার পরিমাপ।

$$\text{Rate} = \frac{\text{Total work}}{\text{Total time}} = \frac{\text{fractional work (1)}}{\text{fractional time (1)}} = \frac{fractional work(2)}{fractional time(2)} =$$

এই Proportion ব্যবহার করে fractional work-এর Problem solve করা যায়।

যখন একাধিক worker অথবা machine একসাথে কাজ করে তখন তাদের rate of work add করে group rate determine করতে হয় অর্থাৎ group এর unit time-এ completed work হবে individual worker দের unit time এ completed work এর যোগফল।

**Example**: Mr. Asif can do a job in 10 days. After working 3 days, he hires a helper and the two complete the job in another 5 days. How long would it have taken the helper to complete the task alone?

**Solution**: Mr. Asifএর rate $\frac{1}{10}$ অর্থাৎ সে একদিন job এর one- tenth complete করে। তার 8 দিনের (3+5) কাজ subtract করলে (Total work=1) helper এর 5 দিনের work পাওয়া যাবে। বাকিটুকু Unitary System-এ solve করা যায়। অথবা, worker যদি x দিনে কাজটি করে,

$$\frac{3}{10} + \frac{5}{10} + \frac{5}{x} = 1$$
$$3x + 5x + 50 = 10x$$
$$x = 25 \text{ (Ans.)}$$

**Review Exercise-1:**

1. A city street has four large apartment houses and fourteen private homes. What is the ratio at apartment houses to Private homes?

A) $\frac{2}{5}$ B) $\frac{2}{9}$ C) $\frac{4\frac{1}{2}}{1}$ D) $\frac{1}{3\frac{1}{2}}$ E) 7

2. If 3 apples cost 19 cents, how many apples can be purchased for $ 1.52 ?

A) 15 B) 19 C) 22 D) 24 E) 26

3. Candy previously sold for $ 1.60 per pound is now offered for 48 cents in a 6 ounce package. What is the ratio of former price to present price?

A) 3:1 B) 5:4 C) 10:3 D) 3:10 E) 4:5

4. A boy makes a diagram of a plane to scale of $\frac{1}{400}$ of actual size. If the diagram of the plane is 9.6 inches in length, what is the length, in feet, of the plane?

A) 96 B) 320 C) 384 D) 960 E) 3,840

5. On a map drawn to the scale $\frac{1}{2}$ inch = 200 miles, what is the distance, in miles, between two cities that are $3\frac{1}{2}$ inches apart on the map?

A) 300 B) 350 C) 700 D) 1,200 E) 1,400

6. If rain is falling at a rate of 2 inches per hour, how many will it fall in 12 minutes?

A) $\frac{1}{360}$ B) $\frac{2}{5}$ C) $2\frac{1}{2}$ D) 5 E) 600

7. A vertical Pole 6 feet high casts a shadow 4 feet long. At the same time a tree casts a shadow 64 feet long. What is the height, in feet, of the tree?

A) 44 B) 72 C) 96 D) 192 E) 256

8. If 2 caps of melted chocolate weigh 16 ounces, how many cups of melted chocolate can be obtained from a package of chocolate weighing 1 pound, 8 ounces?

A) 2.2 B) 3 C) 3.2 D) 4 E) 4.3

9. There are 3 to 4 tablespoons of bread flour in 1 ounce. What is the maximum number of table spoons of bread flour in 12 ounces?

A) 8 B) 12 C) 36 D) 42 E) 48

10. If a apples cost d dollars, how many apples can be bought for x dollars?

A) $\frac{ad}{x}$ B) $\frac{d}{ax}$ C) $\frac{dx}{a}$ D) $\frac{a}{d}$ E) $\frac{ax}{d}$

11. If cards are sold at the rate of 3 for 10c, what will be the cost of 3-dozen such cards?

A) \$0.42 B) \$1.08 C) \$1.20 D) \$1.26 E) \$1.44

12. If m men can do a job in 10 days, how long will it take 10 men to complete the task, assuming that they work at the same rate?

A) $\frac{10}{m}$ B) $\frac{100}{m}$ C) 100m D) $\frac{m}{100}$ E) m

13. How many inches long is the shadow of an R-foot pole, if an r-inch ruler casts an s-inch shadow at the same time?

A) $\frac{12Rs}{r}$ B) $\frac{Rs}{r}$ C) $\frac{Rs}{12r}$ D) $\frac{12R}{rs}$ E) $\frac{rs}{12}$

14. A pound of commercial fertilizer occupies from 20 to 25 cubic induces, while a pound of humus occupies from 40 to 55 cubic inches. What is the maximum ratio of the amount of commercial fertilizer to humus in a 2-ton truck carrying equal amounts of each?

A) $\frac{1}{2}$ B) $\frac{4}{11}$ C) $\frac{5}{8}$ D) $\frac{5}{11}$ E) $\frac{9}{19}$

15. In Gulshan the ratio of private homes to apartment is 3:5. If all the apartments are brick made and $\frac{1}{6}$ of the private homes are wooden, that is the maximum portion of houses that may be brick?

A) $\frac{3}{8}$ B) $\frac{5}{8}$ C) $\frac{6}{13}$ D) $\frac{8}{13}$ E) $\frac{15}{16}$

16. Mr. Fuad, who owns $\frac{3}{7}$ of a business, received $ 6,000 as his share of profit for a certain year. How much will Mr. Rakib receive during the same year if he owns $\frac{2}{7}$ of this business?

A) $1.400 B) $1,614 C) $2,000 D)$2,562 E) $4,000

17. Mr. Debashis can do a job in 8 days, and his son can do it in 12 days. How long would it take them to do the job if they worked together?

A) 4.8 B) 5 C) 10 D) 15 E) 20

18. A and B can paint a wall in 3 days. A can do it alone in 5 days. How many days would it take B to do the job alone?

A) 0.2 B) 3.2C) 5.0 D) 6.4 E) 7.5

19. A machine can cut some wood in 6 minutes, and a man using a hand saw can do it in 18 minutes. After working alone for 4 minutes, the machine broke down. How many minutes must the man work to complete the task?

A) 12 B) 6 C) 12 D) 14 E) 18

20. Three pipes are used to fill a pool with water. Individually they can fill the pool in 9 hours, 6 hours and 3 hours. How many minutes will it take to fill the pool if all three pipes are used simultaneously?

A) 1.63 B) 11 C) 54 D) 56.4 E) 98

21. Mr. Rahul can do a job in 45 minutes, while his son can do in 2 hours. How long will it take them working together?

A) 18m B) 33m C) 35m D) 1 hr. 21m. E) 1 hr. 31m.

22. Mr. Nafis can mosaic his lawn in x hours. After 2 hours it begins to rain. What part of the lawn is left non-mosaic?

A) $\frac{2-x}{x}$ B) $\frac{x}{2}$ C) x-2 D) $\frac{x-2}{2}$ E) $\frac{x-2}{x}$

23. A regular postal clerk sorts 100 letters in c seconds, while a part time worker requires P seconds to sort 100 letters. How many seconds will they require to sort 100 letters working together?

A) $\frac{P+C}{2}$ B) $\frac{P+C}{PC}$ C) $\frac{PC}{P+C}$ D) $\frac{100(P+C)}{PC}$ E) $\frac{100PC}{P+C}$

24. Mrs. Bornali can do the dinner dishes in $\frac{1}{4}$ hour, while her daughter Naureen $\frac{1}{2}$ hour. What part of an hour would it take if they worked together?

A) $\frac{1}{8}$ B) $\frac{1}{6}$ C) $\frac{3}{16}$ D) $\frac{3}{8}$ E) $\frac{4}{3}$

25. Mr. Shihan mowed $\frac{3}{4}$ at his lawn in $1\frac{1}{4}$ hours. Mr. Ashique, who works twice as fast, finished the job. How many minutes did Mr. Ashique work?

A) $12\frac{1}{2}$ B) 16 C) 25 D) 38 E) 50

**Answer Keys**

| | | | | |
|---|---|---|---|---|
| 1. D | 6. B | 11. C | 16. E | 21. B |
| 2. D | 7. C | 12. E | 17. A | 22. E |
| 3. B | 8. B | 13. A | 18. E | 23. C |
| 4. B | 9. E | 14. C | 19. B | 24. B |
| 5. E | 10. E | 15. E | 20. E | 25. A |

## Chapter Outline: Percents, Deviation, Profit, Loss, Discount, Successive Discount

Percent একটি fraction যার denominator 100.এক্ষেত্রে denominator না লিখে % sign ব্যবহার করা হয়। IBA admission test- এ percentage related problem খুবই important.

**Conversions:** percent কে fraction-এ convert করতে হলে '%' sign এর পরিবর্তে সংখ্যার সাথে $\frac{1}{100}$ multiply করতে হবে।

Example:

$$22\% = 22 \times \frac{1}{100} = \frac{11}{50}$$

Decimal-এ convert করতে হলে decimal point দুই ঘর left এ সরাতে হবে। এবং '%' sign eliminate করতে হবে।

**Example: 22% = 0.22**

কিছু Percent-এর simplified fraction মনে থাকলে অনেক lengthy calculation avoid করা যায় :

| | | |
|---|---|---|
| $33\frac{1}{3}\% = \frac{1}{3}$ | $20\% = \frac{1}{5}$ | $83\frac{1}{3}\% = \frac{5}{6}$ |
| $66\frac{2}{3}\% = \frac{2}{3}$ | $40\% = \frac{2}{5}$ | $12\frac{1}{2}\% = \frac{1}{8}$ |
| $25\% = \frac{1}{4}$ | $60\% = \frac{3}{5}$ | $100\% = 1$ |
| $50\% = \frac{1}{2}$ | $80\% = \frac{4}{5}$ | $200\% = 2$ |
| $75\% = \frac{3}{4}$ | $16\frac{2}{3}\% = \frac{1}{6}$ | $250\% = 2\frac{1}{2}$ |

Fraction কে percent-এ convert করতে হলে, fraction কে 100 দিয়ে multiply করে '%' sign ব্যবহার করতে হবে :

**Example:** $\frac{3}{25} = \frac{3}{25} \times 100\% = 12\%$

Decimal কে percent-এ convert করতে হলে decimal point 2 ঘর right-এ সরিয়ে '%' sign ব্যবহার করতে হবে :

0.7 = 70%

Percent নিয়ে basic problem তিন type এর :

(I) x is what percent of y?

(II) What is z percent of y?

(III) x is z percent of which number?

**Example**:

(1) 2 is what percent of 5 ?

(এই question-এর অর্থ একটি number 5 হলে অপরটি 2,5 যদি 100 হয় 2 কত হবে?)

**Solution**: $\frac{2\times100}{5}\% = 40\%$

(II) What is 40% of 5 ?.

(এই question –এর অর্থ একটি number 100 হলে অপরটি 40. 100 যদি 5 হয় 40 কত হবে?)

**Solution**: $\frac{40\times5}{100} = 2$

(III) 2 is 40% of which number?

(এই question –এর অর্থ একটি number 40 হলে অপরটি 100. 40 যদি 2 হয় 100 কত হবে?)

**Solution**: $\frac{100\times2}{40} = 5$

N.B. word problem-এ percentage বের করতে হলে মনে রাখবেন percent হচ্ছে $\frac{is}{of}$

**Percent Increase / decrease:**

Percent increase অথবা decrease বের করতে হলে আপনাদের এই formula ব্যবহার করতে হবে :

$$\text{Percent increase / decrease} = \frac{\text{number increase/decrease}}{\text{Original whole}}$$

Example: In 1998, the population of Dhaka city was 80 thousand and in 1999 it is 100 thousand. What is the percent increase of the population of Dhaka City?

$$\text{Solution: } \frac{\text{new population} - \text{original population}}{\text{original population}}$$

$$= \frac{(100-80)\text{ thousand}}{80\text{ thousand}}$$

$$= \frac{1}{4}$$

$$= 25\%$$

N.B. 20 thousand original population 80 thousand এর $\frac{1}{4}$. $\frac{1}{4}$ মানে 25%।

**Percent Deviation:**

Percent deviation অনেকটা percent increase / decrease এর মতো। Estimated amount এবং actual amount এর মধ্যে difference থাকলে percent deviation বের করা হয়।

$$\text{Percent deviation} = \frac{\text{estimated amount} \sim \text{actual amount}}{\text{actual amount}}$$

N.B.'~' sign এর অর্থ হচ্ছে, greater term থেকে smaller term subtract করতে হবে অর্থাৎ দুটি রাশির positive difference count করতে হবে।

**Example**: An entrepreneur initially estimated the cost of a new venture to be 1,20,000 Tk but the actual cost of incorporation was 1,00,000 Tk. what was the percent deviation of his estimation?

**Solution:**

$$\text{Deviation} = \frac{(1,20,000 - 1,00,000)\text{ Tk.}}{1,00,00\text{ Tk.}}$$

$$= \frac{1}{5}$$

$$= 20\%$$

N.B. Question যদি হতো what was the percent deviation of actual cost from his estimation? তাহলে,

$$\text{Deviation} = \frac{(1,20,000 - 1,00,000)\text{ Tk.}}{1,20,00\text{ Tk.}}$$

$$= \frac{1}{6}$$

$$= 16\frac{2}{3}\%$$

**Adjustments to get original price:**

কোন কিছুর price increase/decrease করার পর original price-এ back করতে হলে price একই amount-এ respectively decrease/increase করতে হবে। e.g. একটি shirt-এর price Tk. 400 থেকে increase করে Tk. 500 হলে original price-এ back করতে হলে new price থেকে Tk.100 কমাতে হবে। যদিও টাকার পরিমান সমান, initial increase /decrease এর percentage এবং adjustment এর percentage different হবে কেননা এই percentage দুটি যথাক্রমে original price এবং new price এর উপর base করে নির্ণয় করা হয়।

**Example:** The price of a shirt was Tk. 400. It is increased by 25%. By what percent it should be discounted to get the original price?

**Solution:**

Increase in price = 25% of 400 = $\frac{1}{4}$ 400 = 100

New price = 500

Percent decrease = 100 out of 500 = $\frac{1}{5}$ = 20% (Ans.)

N.B. (i) Initial price যাই হোক না কেন, price 25% increase করা হলে discount 20% করতে হবে।
(ii) Initial price যাই হোক না কেন, price 20% decrease করলে, original price পেতে হলে price 25% increase করতে হবে।

নীচের table এ রকম কিছু corresponding percentage দেয়া আছে। এই percentage গুলো মনে থাকলে actual amount নির্ণয় না করেই problem solve করা যাবে।

| % increase | 12.5% or $\frac{1}{8}$ | 20% or $\frac{1}{5}$ | 25% or $\frac{1}{4}$ | 33% or $\frac{1}{3}$ | 50% or $\frac{1}{2}$ | 100% or $\frac{1}{6}$ |
|---|---|---|---|---|---|---|
| %decrease | 11.11% or $\frac{1}{9}$ | 16.67% or $\frac{1}{6}$ | 20% or $\frac{1}{5}$ | 25% or $\frac{1}{4}$ | 33.33% or $\frac{1}{3}$ | 50% or $\frac{1}{2}$ |

**Simple and compound Interest:**

**Basic terminology:**

| | |
|---|---|
| (a) Invested Amount | P = Principle (আসল) |
| (b) Gain on Investment | I = Interest (সুদ) |
| (c) % gain on Investment | R =Rate of interest p.a (সুদের হার) |
| (d) Future value of P | A or T = Accumulated Amount or total (সুদাসল) |
| (e) Duration of investment | t = Time or years (সময়) |

**Simple Interest:**
Simple interest বা সরল সুদে শুধুমাত্র Principle এর উপর Interest count করা হয় অর্থাৎ succeeding period-এ preceding period এর interest এর উপর interest count করা হয় না।

Unitary system apply করে এই problem গুলো solve করা যায়। তবে P,R,T,I এবং A এর relation থেকেও problem solve করা যায় ঃ

$I = p \times r \times t$ এবং

$A = p \times r \times t + p$

$= p(r \times t + 1)$

**Example**: What will be the simple interest and accumulated amount after 2 year if Tk. 1000 is invested at 10% p.a.

**Solution**: $I = p \times r \times t$

$I = 1000 \times \frac{10}{100} \times 2$

$= 200$ tk.

$A = p \times r \times t + p$

$= (200+1000)$ tk.

$= 1200$ tk.

**Compound Interest:** Compound interest বা চক্রবৃদ্ধি সুদে, interest payment এর উপর interest count করা হয়।

এক্ষেত্রে,

$A = P(1 + r)^t$

$I = P(1 + r)^t - P$

$= P\{(1 + r)^t - 1\}$

**Example**: What will be the compound interest and accumulated amount after 2 years in tk. 1000 if invested at 10% p.a.?

$A = 1000\,(1+\frac{10}{100})^2$ tk

$= 1000 \times 1.21$ tk

$= 1210$ tk

$I = (1210 - 1000)$ tk

$= 210$ tk

**N.B.** (i) Simple বা compound interest-এ 1st year শেষে total amount এ কোন difference থাকবে না।

(ii) কোন amount যদি n years এ 2 times হয়। অর্থাৎ x যদি n years 2x হয় তবে (n + n) অর্থাৎ 2n year এ 4x হবে।

**Profit and Loss:** Selling Price এবং Cost Price এর difference positive হলে profit হয়। এখানে cost price থেকে selling price এর percent deviation হচ্ছে percentage of profit.

Selling Price এবং Cost Price এর difference যদি negative হয় তাহলে seller এর loss হয়। Cost price থেকে selling price এর percent deviation হবে percentage of loss.

**Example**: A retailer buys a radio from the wholesaler for $ 75. What will be the percent of profit if he sells the radio for $100? What will he the percent of loss if he sells for $ 60?

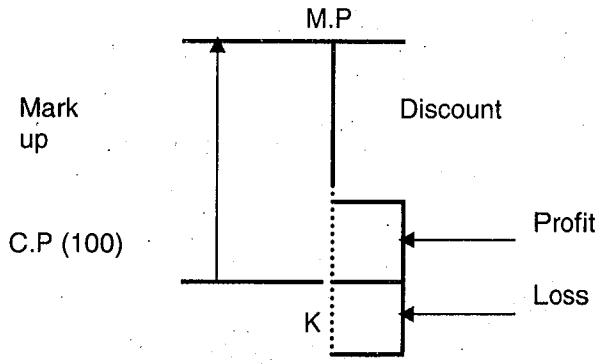
**Solution**: % profit $= \frac{100-75}{75} \times 100$

$= 33.33\%$

$\%\text{ioss} = \frac{75-60}{75} \times 100$

$= 20\%$

**Mark up and Discount**: কখনো কখনো seller cost price এর উপর some percent profit ধরে একটি price ঠিক করে। এই percentage টিকে mark up percentage এবং price টিকে ধার্য্য মূল্য বা mark up price বলে।
কখনো কখনো seller, mark up price এর উপর some percent price reduction offer করে। এই reduction কে discount করা বলে। Discount এর পর final price পাওয়া যায়। Cost price কে base ধরে deviation থেকে profit এবং loss নির্ণয় করা যায়।




**Example**: If the discount is 10%. Profit is 8%. What is the percentage of profit/loss if the discount is 20%?

**Solution**: Cost price $100 হলে 10% discount এ selling price $108. Mark up price এর উপর 10% discount করার পর selling price $108. $\therefore$Mark–up price $= \frac{100 \times 108}{90} = \$120$

এখন $ 120 এর উপর 20% discount করলে,

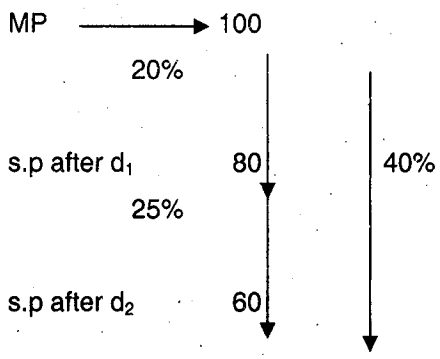
$$\text{Selling price} = \frac{80 \times 120}{100} = \$\,96$$

$\therefore$ Cost price $ 100 হলে selling price $96 $\therefore$ % Loss = 4%

**Successive Discount:** Mark up price এর উপর একবার discount করার পর discounted price এর উপরে আবার discount করা হলে তাকে successive discount করা বলে। এই দুটি discount একটি discount এর সমতুল্য বা equivalent.

**Example**: Successive discount of 20% and 25% are equivalent to a single discount of what percent?

**Solution**:




∴Single discount of 40%

**Review Exercise 2(I):**

1. What percent is $\frac{3}{12}$?
2. What percent of 12 is 3?
3. 12%= $\frac{3}{?}$
4. What percent of 3 is 12?
5. 40 = 5% of what?
6. How much is 40% of 5?
7. $\frac{2}{40}$ = ? %
8. 3 is 6% of a certain number. What is the number?
9. $\frac{3}{?}$ = 6%
10. What percent of 6 is 3?
11. What percent of 3 is 6?
12. What percent of 7 is 5?
13. What percent of 5 is 7?
14. Calculate 5% of 7.
15. Calculate 7% of 5.
16. What fraction is equivalent to 325%?
17. 3% of a certain number is equal to 7. What is the number?
18. What is the fraction equivalent of 0.024%?
19. Find 600% of 0.075.
20. What percent of 0.002 is 0.0004?
21. Find 0.003% of 0.0012%?

22. What percent of m is n?

23. What is a percent of b divided by b percent of a ?

24. What is 6.03% of 80 divided by 80% of 6.03?

25. If b is larger than d,. What is the difference between 6% of b and 5% of d?

N.B. এই exercise এর উদ্দেশ্য percentage এর basic operation practice করা। Standard Multiple choice আকারে অবশ্য test এ এধরনের question আসতে পারে।

**Answer keys:**

| | | | | |
|---|---|---|---|---|
| 1. 25% | 6. 2 | 11. 200% | 16. $\frac{13}{4}$ | 21. 0.0000000036 |
| 2. 25% | 7. 5 | 12. 71.4% | 17. $233\frac{1}{3}$ | 22. $\frac{100n}{m}$ |
| 3. 25 | 8.50 | 13. 140 % | 18. $\frac{24}{100{,}000}$ | 23. 1 |
| 4. 400% | 9. 50 | 14. 0.35 | 19. 0.45 | 24. 1 |
| 5. 800 | 10. 50% | 15. 0.35 | 20. 20% | 25. $\frac{6b-5d}{100}$ |

**Review Exercise 2(II)**

1. How much money would a man have to invest at the rate of 5% per year, to have $ 1470 at the end of the year?

(A) $70 (B) $700 (C) $1400 (D) $1462 (E) $1540

2. A class of 80 is 25% girls. If 10% of the boys and 20% of the girls attended a picnic, what percent of the class attended?

(A) 10% (B) 12% (C) $12\frac{1}{2}\%$ (D) 20% (E) 30%

3. Q is what percent of 20% of 15?

(A) $\frac{Q}{300}\%$ (B) $\frac{3}{100Q}\%$ (C) $\frac{3Q}{100}\%$ (D) $\frac{100Q}{3}\%$ (E) $\frac{100}{3Q}\%$

4. $\frac{7}{8}\%$ of 20 is 20% of what number?

(A) $\frac{7}{8}$ (B) $\frac{7}{100}$ (C) $\frac{8}{100}$ (D) 7 (E) 8

5. What is the value of n after it has been decreased by $16\frac{2}{3}$ percent?

(A) $\frac{1}{6}$n (B) $\frac{1}{3}$n (C) $\frac{5}{6}$n (D) $\frac{6}{7}$n (E) $\frac{7}{6}$n

6. x is what percent of $\frac{4}{5}$ of x?

(A) 75% (B) 80% (C) 120% (D) 125% (E) 180%

7. If 54% of town's population received the first two polio "shots" but 10% of these people did not received the third, what percent of the town took all three shots?

(A) 44% (B) 48.6% (C) 49.6% (D) 59.9% (E) 64%

8. 80% of the apartments in city D have smoke alarms installed. Of these 20% have smoke alarms that are not working. What percent of the apartments is city D has working smoke alarms?

(A) 60% (B) 64% (C) $66\frac{2}{3}\%$ (D) 70% (E) 72%

9. If 65% of x is 195, what is 75 percent of x?

(A) 215 (B) 225 (C) 235 (D) 250 (E) 26

10. A store sells a watch for a profit of 25% of the wholesale cost. What percent of the selling price of the watch is the stores profit?

(A) 12.5% (B) 15% (C) 20% (D) 25% (E) 50%

11. A stock decreases in value by 20%. By what percent must the stock price increase to reach its former value?

(A) 15% (B) 20% (C) 25% (D) 30% (E) 40%

12. A man bought 10 crates of oranges for a total cost of $80. If he lost 2 of the crates, at what price would he have to sell each of the remaining crates in order to earn a total profit 25% of the cost?

(A) $1000 (B) $12.50 (C) $15.00 (D) $100.00 (E) $120.00

13. A baseball team won 45 percent of the first 80 games it played. How many of the remaining 82 games will the teams have to win in order to win exactly 50 percent of all the games it plays?

(A) 36 (B) 45 (C) 50 (D) 80 (E) 100

14. In a certain school 50% of all the male students and 60% of all the female students play a varsity sport. If 40% of the students at the school are male, what percent of the students do not play that varsity sport?

(A) 44% (B) 50% (C) 55% (D) 56% (E) 60%

15. A retailer buys a radio from the wholesaler for $75.00. He then marks up the price by $\frac{1}{3}$ and sells at a discount of 20%. What was his profit on the radio?

(A) $5.00 (B) $6.67 (C) $7.50 (D) $10.00 (E) $13.33

16. A store usually sells a certain item at a 40% profit. One week the store has a sale, during which the item is sold for 10% less than the usual price. During the sale, what is the percent profit the store makes on each of these items?

(A) 4% (B) 14% (C) 26% (D) 30% (E) 36%

17. Successive discount of 20%, 20% and 12.5% are equivalent to a single discount of:

(A) 52.5% (B) 36.5% (C) 40% (D) 48% (E) 44%

18. For a certain article, if the discount is 20%, the profit is 20%. What is the profit if the discount is 10%.

(A) 40% (B) 35% (C) 30% (D) 25% (E) 20%

19. A man borrows $360 and pays it back in 12 monthly payments of $31.50, what is his interest rate?

(A) 1.5% (B) 4.5% (C) 5% (D) 10% (E) 18%

20. A 10% rebate enables one to get a meter of cloth extra for $ 45. What was the original price per meter of cloth?

(A) 4 (B) 4.25 (C) 4.5 (D) 5 (E) 5.25

**Answer keys:**

| | | | | |
|---|---|---|---|---|
| 1. C | 5. C | 9. B | 13. A | 17. E |
| 2. C | 6. D | 10. C | 14. A | 18. B |
| 3. D | 7. B | 11. C | 15. A | 19. C |
| 4. A | 8. B | 12. B | 16. C | 20. D |

## Chapter Outline: Median, Mode, Average

**Median:** Median হচ্ছে ascending অথবা decending order-এ সাজানোর কতগুলো number এর middle number (মানের উর্ধ্বক্রম) (মানের নিম্নক্রম) n সংখ্যক arranged number এর median $\frac{n+1}{2}$ th number, অর্থাৎ 7টি ক্রমানুসারে সাজানো number এর $4^{th}$ number টি median এবং 10 টি মানের ক্রমানাসুরে সাজানো number এর $5.5^{th}$ number টি অর্থাৎ $\frac{5\text{th number} + 6\text{th number}}{2}$ হচ্ছে sequence এর median.

**Example**: Find the median of –3, 18, -4, $\frac{1}{2}$, 11, 18

**Solution**: The number in order: -4, -3, $\frac{1}{2}$, 11, 18

$$\text{Median} = \frac{1}{2}$$

**Mode:** কোন sequence এ যে number টি সবচেয়ে frequent অর্থাৎ সবচেয়ে বেশী বার আছে তাকে sequence এর mode বলে।

**Example**: Find the mode of 1, 3, 2, 9, 8, 7, 3, 1, 6, 3, 9

এখানে 3 টি 3 আছে এবং অন্য কোন number 2 টির বেশী নেই। অতএব mode হচ্ছে 3।

**Average (Arithmetic Mean):** কিছু number এর average বের করতে হলে তাদের sum (মোট) কে তাদের সংখ্যা দিয়ে ভাগ করতে হয়। Average এর basic formula :

$$\text{Average} = \frac{\text{Sum}}{\text{Number of numbers}}$$

এখান থেকে পাওয়া যায়,

Sum = Average x Number of numbers

**Example**: What is the average of one tenth, one hundred and one thousand?

**Solution**: $\frac{.1+.01+.001}{3} = \frac{.111}{3} = .037$

**Weighted Average:** $x_1$, $x_2$ এবং $x_3$ এই সংখ্যা তিনটির average হবে $\frac{x_1 + x_2 + x_3}{3}$ কিন্তু $x_1$ যদি $f_1$ সংখ্যক, $x_2$ যদি $f_2$ সংখ্যক এবং $x_3$ যদি $f_3$ সংখ্যক হয় তবে এদের average হবে $\frac{x_1 f_1 + x_2 f_2 + x_3 f_3}{f_1 + f_2 + f_3}$

এখানে $f_1 + f_2 + f_3 = N$ = Number of the numbers.

এখানে $f_2 > f_1 > f_3$ হলে mode হবে $x_2$ কারণ $x_2$ আছে $f_2$ সংখ্যক। Median হবে $x_1$, $x_2$ ও $x_3$ কে ধারাবাহিক সাজানোর পর $\frac{f_1 + f_2 + f_3 + 1}{2}$ th value অর্থাৎ $\frac{n+1}{2}$ th value

**Example:**

| Age<br>xi | No. of boys<br>fi |
|---|---|
| 10 | 4 |
| 11 | 5 |
| 12 | 5 |
| 13 | 6 |
| 14 | 2 |

Find the average, median and mode for the ages of the boys according to the table shown above.

**Solution:** Average $= \frac{10\times4+11\times5+12\times5+13\times6+14\times2}{4+5+5+6+2}$

$= \frac{261}{22} = 11.86$

Median $= \frac{22+1}{2}$ $= 11.5^{th}$ value $= 12$

Mode = 13 (13 এখানে 6 টি আছে)

**Find the missing Number:**

কিছু সংখ্যার average এবং একটি সংখ্যা বাদে অপর সংখ্যাগুলোর average এবং number of numbers জানা থাকলে missing numberটি অথবা missing number গুলোর total বা average বের করা যায়।

**Example:**

(1) The average of 7 numbers is 6. If the average of any 4 is 4, what is the average of rest of the numbers?

**Solution:**

7 টির sum = average × n

= 7 × 6 = 42

4 টির sum = 4 x 4 = 16

টির sum = 42 – 16 = 26

3 টির average = $\frac{26}{3}$

(2) If Galib scored 22 runs on average in first 10 matches in this year. What should he score in the $11^{th}$ match to make his average 25?

**Solution:**

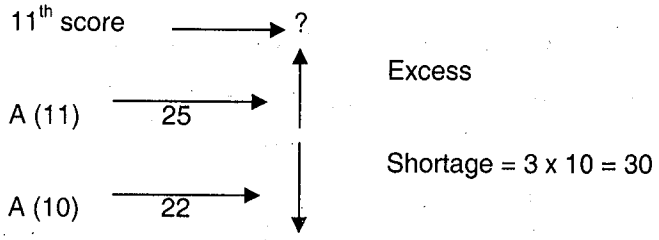
$\therefore$ Required Score $= 25 \times 11 - 22 \times 10$

$= 275 - 220$

$= 55$

N. B. Average থেকে number গুলোর difference এর sum সব সময় O. Average এর উপরে যতটুকু excess থাকে average এর নীচে ততটুকু shortage থাকবে।

অর্থাৎ, excess = shortage




এখানে excess 30 হতে হবে, $\therefore$ $11^{th}$ score = 25 + 30 = 55

**Review Exercise-3:**

1. If the average of a and –5 is 10, then a

   (A) 25 (B) 15 (C) 5 (D) –5 (E) –15

2. The average of 6 consecutive integers is $18\frac{1}{2}$. What is the average of the first 5 of these integers?

   (A) $12\frac{1}{2}$ (B) 15 (C) 16 (D) $17\frac{1}{2}$ (E) 18

3. A certain store stocks five different brands of ice-cream, and sells a pint of each for \$2.75, \$ 3.25, \$ 2.50, \$ 3.25 and \$ 3.00 respectively. What is the positive difference between the mode price and the median price?

   (A) \$ 0.05 (B) \$ 0.25 (C) \$ 0.30 (D) \$ 0.50 (E) \$ 0.75

4. A violinist practices 1 hour a day from Monday through Friday. How many hours must she practice on Saturday in order to average 2 hours a day for the 6-day period?

   (A) 4 (B) 5 (C) 6 (D) 7 (E) 8

5. If the average of x + 2, x + 4 and x + 6 is 0 then x=

   (A) –4 (B) –3 (C) –2 (D) –1 (E) 0

6. In a class there are 12 boys and 18 girls. If class average for an algebra exam is 90 and the boys' average score is 87, what is the girls' average score?

   (A) 88.5 (B) 91 (C) 92 (D) 93 (E) 94.5

7. 15 movie theatres average 600 customers per theater per day. If 6 of the theatres close down but the total number of attendance remains the same, what is the daily attendance per theater among the remaining theater?

(A) 600 (B) 750 (C) 1000 (D) 1200 (E) 1500

8. The average of M numbers is A and the average of N numbers is B. What is the average of all the numbers?

(A) A+B (B) $\frac{A+B}{2}$ (C) $\frac{AM+BN}{2}$ (D) $\frac{AM+BN}{M+N}$ (E) $\frac{AM+BN}{A+B}$

9. Mr. Bobby bought 50 shares at $60, and 2 months later purchased 25 shares a $56. At what price should he purchase 25 additional shares in order to have an average price $58 per share?

(A) $53 (B) $54 (C) $55 (D) $56 (E) $57

10. The readings in a freezer are $5^0$, $-7^0$ and $8^0$. What must the next reading be so that the average will be $1^0$?

(A) $-5^0$ (B) $-2^0$ (C) $-1^0$ (D) $1^0$ (E) $10^0$

11. What is the value of x if the average of 1.0, 0.8, 0.2 and x is exactly 0.6?

(A) .2 (B) .4 (C) .6 (D) 1 (E) 1.2

12. What average must a students earn in her sixth semester in order to attain a scholastic average of 80% if semesters were as follows: 71%, 75%, 80%, 86%, and 88%?

(A) 78% (B) 80% (C) 82% (D) 84% (E) 86%

13. The average of 11 results is 40 and that of the first five is 25 and that of the last five is 28.What is the $6^{th}$ result?

(A) 60 (B) 65 (C) 70 (D) 75 (E)none

14. The average age of a family of 6 members is 25 years. The average of the family after a 45 years old members leaves is?

(A) 2 Years (B) 21 Years (C) 20 Years (D) 19 Years (E) none

15. The average age of 24 students in a class is 14. If the teacher's age is included the average increases by 1. What is the teacher's age in years?

(A) 39 (B) 40 (C) 45 (D) 49 (E) 51

16. The average of first five prime numbers is

(A) 3.6 (B) 5.4 (C) 5.6 (D) 7.8 (E) none

17. The average of first five odd prime numbers is

(A) 3.6 (B) 5.4 (C) 5.6 (D) 7.8 (E) none

18. The average height of a group of 25 students goes up by 2 cm when a student of height 165 cm replaces a student from the group. The height of the boy who went out of the group was

(A) 115 cm (B) 114 cm (C) 112 cm (D)110 cm (E)none

19. In a course, a student's final exam is weighted twice as heavily as his midterm exam. If a student receives a score of 84 on his final exam 90 on his midterm, what is the average for the course?

(A) 88 (B) 87.5 (C) 87 (D) 86 (E) 85

20. The average of the runs made by 10 players in a cricket team of 11 is 43. If the eleventh player's runs are also considered, the average of the 11 players runs decreases by 1. How many runs did the eleventh player score?

(A) 22 (B) 32 (C) 34 (D) 42 (E) none

**Answer keys:**

| | | | | |
|---|---|---|---|---|
| 1. A | 5. A | 9. D | 13. E | 17. D |
| 2. E | 6. C | 10. B | 14. B | 18. A |
| 3. B | 7. C | 11. B | 15. A | 19. D |
| 4. D | 8. D | 12. B | 16. C | 20. B |

## Chapter Outline: Distance, Time, Speed, Average Speed, Relative Speed, Rotation of Wheel.

**Speed:** কোন moving object, unit time-এ যতটুকু distance অতিক্রম করে তাকে তার speed বলে। অতএব speed এর basic formula :

$$\text{Speed} = \frac{Distance}{Time}$$

এই equation এর S, D এবং T এর যে কোন দুটির মান জানা থাকলে সহজেই অপরটি নির্ণয় করা যায়। যেমন-

$$\text{Time} = \frac{Distance}{Speed}$$

**Example:** What is the distance covered by a jet plane that travels at the rate of xy miles per hour for 2 hours.

**Solution:** Distance = Time x Speed
= 2 h x xy mph
= 2xy miles

**Average Speed:** Average নির্ণয় করা সাধারণ পদ্ধতিতে average speed নির্ণয় করা যায় না।

$$\text{Average speed} = \frac{\text{Total Distance}}{\text{Total Time}}$$

কোন বস্তু যদি $D_1$ distance $T_1$ সময়ে এবং $D_2$ distance $T_2$ সময়ে অতিক্রম করে তাহলে,

$$\text{Average Speed} = \frac{D_1 + D_2}{T_1 + T_2}$$

**Example:** If a car travels at $S_1$ miles per hour for $T_1$ hours and $S_2$ miles per hour for $T_2$ hours, find its average speed.

**Solution:**

$D_1 = S_1 \times T_1$

$D_2 = S_2 \times T_2$

$\therefore$ Averages speed = $\frac{S_1T_1 + S_2T_2}{T_1 + T_2}$ OR $\frac{D_1 + D_2}{T_1 + T_2}$

N. B. Average speed এর problem-এ $D_1 = D_2$ হলে, Average Speed = $\frac{2S_1S_2}{S_1 + S_2}$

**Example:** If a car traveled from City X to City Y at a rate of 40 mph and returned at a rate of 60 mph, what was its average speed?

**Solution:** Average speed = $\frac{2 \times 40 \times 60}{40 + 60}$

= 48 mph

N. B. 48 mph, 40 এবং 60 এর average অর্থাৎ 50 এর ছোট। এই information d1 = d2 হলে always applicable. Elimination এটি helpful হতে পারে।

**Speed for a Boat:**

1. Upstream বা স্রোতের প্রতিকুলে boat এর Total speed.

   TS = Speed of the boat – Speed of the current

2. Downstream বা স্রোতের অনুকুলে total speed,

   TS = Speed of the boat + Speed of the current

**Crossing a point or a place:** একটি moving object কে তার গতিপথে কোন particular point অতিক্রম করতে হলে নিজের length অতিক্রম করতে হবে এবং কোন place অতিক্রম করতে হলে নিজের length এবং place টির length এর sum এর সমপরিমান length cross করতে হবে।

**Relative speed:** Relative speed বা আপেক্ষিক বেগ এর সাহায্যে দুটি moving object এর একটির সাপেক্ষ্যে অপরটির speed বা দুটির পারস্পরিক অবস্থান তুলনা করা হয়। দুটি moving object A ও B এর speed $S_1$ ও $S_2$ হলে,

(1) যদি same direction-এ A ও B একই সময়ে একই point থেকে যথাক্রমে $S_1$ ও $S_2$ speed-এ start কওে এবং $S_1 > S_2$ তাহলে unit time পরে তাদের distance হবে $S_1 - S_2$.

(2) যদি same direction-এ চলাকালীন সময়ে B সামনে থাকে এবং $S_1 > S_2$ হলে তাদের দুরত্ব unit time-এ $S_1 - S_2$ পরিমান কমবে।

(3) Opposite direction এ same point থেকে start করলে তাদের distance unit time পরে $S_1 + S_2$ পরিমান হবে।

(4) Opposite direction এ দুটি point থেকে পরস্পরের দিকে চলতে শুরু করলে distance unit time-এ $S_1 + S_2$ পরিমান কমবে।

**Rotation of a Wheel:** Wheel এক rotation-এ তার circumference এর সমপরিমান length অতিক্রম করে। Circumference C হলে এবং unit time-এ wheel টি N বার rotate করলে,

$$\text{Distance} = CN$$

**Example:** At a speed of 22 revolutions per minute, how long will it take a wheel with radius 10″, rolling on its edge, to travel 10 feet?

**Solution:** $C = 2 \times 10'' \times \frac{22}{7}$

$$\text{Speed} = CN = 2 \times 10'' \times \frac{22}{7} \times 22'' \text{ [Per minute]}$$

$$10 \text{ feet} = 120''$$

$$\therefore \text{Time} = \frac{\text{Distance}}{\text{Speed}} = \frac{120 \times 60}{2 \times 10 \times \frac{22}{7} \times 22} \text{ [seconds]} = 5.2 \text{ seconds}$$

**Two Wheels:** r, d ও c (radius, diameter.. circumference) বিশিষ্ট একটি wheel n rotation-এ যতটুকু distance অতিক্রম করে R, D ও C বিশিষ্ট আরেকটি wheel N rotation-এ ততটুকু distance অতিক্রম করলে,

$$rn = RN \quad \text{(i)}$$

$$dn = DN \quad \text{(ii)}$$

$$cn = CN \quad \text{(iii)}$$

Equation গুলোর যেকোন টিতে চারটি value এর তিনটির মান জানা থাকলে $4^{th}$ value টি সহজেই নির্ণয় করা যায়।

**Example:** Two wheels have radius of 10m and 15m, respectively. If they roll along at the same linear speed until the small wheel revolved 30 times, now many times has the larger wheel revolved?

**Solution:**

$$rn = RN$$

$$\therefore 10 \times 30 = 15N$$

$$\therefore N = 20$$

**Review Exercise 4:**

1. How many miles can a motorist travel from 9:55 a.m. to 10:15 a.m. at a rate of 40 miles per hour?

(A) $13\frac{1}{3}$ (B)15 (C) 20 (D) 30 (E) 40

2. A man walked into the woods at the rate of 4 miles per hour and returned over the some road at the rate of 3 miles per hour. If he completed the entire trip in $3\frac{1}{2}$ hours, how far, in miles, into the woods did he walk?

(A) 3 (B) 4 (C) 5 (D) 6 (E) 7

3. A man travels for 2 hours at 30 miles an hour and then covers 60 miles in the next 3 hours. What is the average rate for the entire trip?

(A) 18 (B) 24 (C) 36 (D) 45 (E) 90

4. A train covers d miles the first hour, e miles the second hour and f miles the third hour. What is the average rate for the entire trip?

(A) $\frac{def}{3}$ (B) 3 def (C) 3 (def) (D) 3(d+e+f) (E) $\frac{1}{3}$(d+e+f)

5. A train travelling 100 miles at m miles per hour arrived at its destination 1 hour late. How many miles an hour should it have travelled to arrive on time?

(A) $\frac{100}{m}$ (B) $\frac{100-m}{m}$ (C) $\frac{100m}{100-m}$ (D) $\frac{100m}{100+m}$ (E) $\frac{100-m}{100m}$

6. A boat sails m miles upstream at the rate of r miles per hour. If the rate of the stream is s miles per hour, how long will it take the boat to return to its starting point?

(A) $\frac{m}{r}$ (B) $\frac{m}{r+2S}$ (C) mr – 8 (D) $\frac{m}{s}+r$ (E) $\frac{m}{r+s}$

7. A motorist travelled 60 miles at the rate of 20 miles per hour and returned over the same route at 40 miles per hour. What was the average rate for the entire trip?

(A) $26\frac{2}{3}$ (B) 30 (C) 34 (D) $37\frac{1}{2}$ (E) 60

8. Two automobiles travel in the same direction at 40 miles per hour and 50 miles per hour, respectively. How many hours after they are along side of each other will they be 18 miles apart?

(A) $\frac{4}{5}$ (B) $\frac{5}{4}$ (C) $\frac{5}{9}$ (D) $\frac{9}{5}$ (E) $\frac{8}{9}$

9. Ms. Beedle rides her bicycle at an average rate of m kilometers per minute. Ms. Coddle walks half the distance in 3 times the length of time. What is Ms. Coddles rate, in kilometer per minute?

(A) $\frac{m}{90}$ (B) $\frac{m}{40}$ (C) $\frac{m}{10}$ (D) $\frac{m}{6}$ (E) $\frac{2m}{3}$

10. Mr. Walker travels a miles in b hours, and then c miles in d hours. How many hours will be needed to travel 1,000 miles if the maintains this average rate?

(A) $\frac{1000}{a+c}$ (B) $\frac{1000}{b+d}$ (C) $\frac{1000}{b+c+d}$ (D) $\frac{1000(b+d)}{a+c}$ (E) $\frac{a+c}{1000(b+d)}$

11. A man rowed 3 miles upstream in 90 minutes. If the river flowed with a current of 2 miles per hour, how long did the man's return trip take?

(A) 20 minutes (B) 30 minutes (C) 45 minutes (D) 60 minutes (E) 80 minutes

12. A train went 300 miles from Dhaka to Khulna at an average rate of 80 mph. At what speed did it travel on the way back if its average speed for the whole trip was 100 mph?

(A) 120 mph (B) 125 mph (C) $133\frac{1}{3}$ mph (D) $137\frac{1}{2}$ mph (E) 150 mph

13. A and B can run 200m in 22 and 25 seconds respectively. How far is B from the finishing line when A reaches it?

(A) 8 m(B) 16 m (C) 20 m (D) 24 m (E) 32 m

14. A man travels for 6 hours at a rate of 50 miles per hour. His return trip takes him $7\frac{1}{2}$ hours. What is his average speed for the whole trip?

(A) 44.4 mph (B) 45 mph (C) 46 mph (D) 48 mph (E) 50 mph

15. Town A and B are 420 miles apart. If a train leaves for B at 60 mph, how many hours will it take to meet another train going from B to A at 45 mph?

(A) $3\frac{3}{4}$ (B) 4 (C) $4\frac{1}{2}$ (D) 5 (E) $5\frac{1}{2}$

16. A circular disc of area $.49\pi$ sq. meters rolls down an incline of 88 kms. length. What is the number of revolution it makes during this journey?

(A) 150 (B) 200 (C) 250 (D) 280 (E) 300

17. Two wheels have diameters of 12 inches and 18 inches, respectively. Both wheels roll along parallel straight lines at the same linear speed until the large wheel has revolved 72 times. At this point, how many times has the small wheel revolved?

(A) 32 (B) 48 (C) 72 (D) 108 (E) 162

18. A train 55 meters long passes a railway station 220 meters long in 10 seconds. How many seconds will it take to pass a telegraph pole?

(A) 2 (B) 2.2 (C) 2.5 (D) 3 (E) 5

19. If a wheel rotates 12 times each minute, how many degrees does it rotate in 5 seconds?

(A) 72° (B) 40° (C) 360° (D) 450° (E) 540°

20. Namely rides her bicycle 10 miles at an average rate of 12 miles per hour and x miles at an average rate of 10 miles per hour. If her average rate for the entire trip was 11 miles per hour, find the value of x.

A) 8 (B) 10 2/3 (C) 12 (D) 8 1/3 (E) 15 1/2

**Answer keys:**

| | | | | |
|---|---|---|---|---|
| 1. A | 5. C | 9. D | 13. D | 17. D |
| 2. D | 6. B | 10. D | 14. A | 18. A |
| 3. B | 7. A | 11. B | 15. B | 19. C |
| 4. E | 8. D | 12. C | 16. B | 20. D |

## Chapter Outline: Mixture, Solution

কোন একটি mixture-এ কোন একটি substance এর Concentration =

$$\text{Concentration} = \frac{\text{the amount of substance}}{\text{the amount of mixture}}$$

কোন একটি solution এর concentration, Concentration = $\frac{\text{Solid}}{\text{Solution}}$

**Example**: A 10- gallon solution of disinfectant contains 1 gallon of disinfectant. What is the percent concentration of the solution?

**Solution**: $\frac{1}{10} = 10\%$

দুটি solution বা একটি solution এর সাথে solid বা liquid add করা হলে mixture এর concentration হবে

$$\text{Concentration (C)} = \frac{C_1Q_1 + C_2Q_2}{Q_1 + Q_2}\%$$

$C_1$ concentration এর $Q_1$ g. m solution$_1$ এর সাথে $C_2$ concentration এর $Q_2$ gm solution$_2$ add করা হলে mixture এর percentage of concentration হবে উপরের formula অনুরূপ।

যদি solution$_2$ এর বদলে solid add করা হয় তাহলে $C_2$ হবে 100 এবং liquid add করা হলে $C_2$ হবে O, উপরের C, $C_1$, $C_2$, $Q_1$ ও $Q_2$ এই 5 টির 4 টি জানা থাকলে সহজেই অপরটি বের করা যাবে।

N. B. Concentration এই formula টিতে weight average এর concept করা হয়েছে। এই একটি formula দিয়ে solution related সব ধরনের Problem solve করা যায়।

কিছু কিছু mixture problem-এ average এর excess = shortage formula use করে solve করা যায়।

**Example**: How many pounds of pure salt must be added to 30 pounds of a 2% solution of salt in water to increase it to a 10% solution?

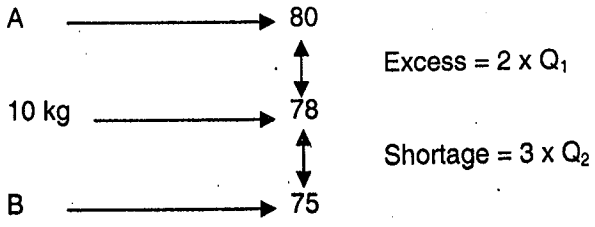
**Solution**: $C = \frac{C_1Q_1 + C_2Q_2}{Q_1 + Q_2}$

$\therefore 10 = \frac{2x30 + 100Q_2}{30 + Q_2}\%$

বা, $300 + 10Q_2 = 60 + 100Q_2$ বা, $90Q_2 = 240$ বা, $Q_2 = 2\frac{2}{3}$

**Example:** Coffer A normally costs 75 paisa per pound. It is mixed with coffee B, which normally costs 80 paisa per pound. To form a mixture, which costs 78 paisa per pound; how many kg of coffee A was used if there are 10 kg of the mix?

**Solution**: এখানে average 78 paisa.




এখানে 10 কে এমনভাবে $Q_1$ ও $Q_2$ তে ভাগ করতে হবে যেন $2Q_1 = 3Q_2$ হয়। $\therefore Q_1 = 6$

অথবা, মনে করি quantity of coffee A = x kg

$\therefore$ $80x + 75(10 - x) = 78 \times 10$

or, $5x + 750 - 780$

or, $x = \frac{30}{5} = 6$ kg.

**Review Exercise 5:**

1. What is the concentration of the mixture if two quarts of 30% acid solution is mixed with 3 pints of 20% acid solution?
(A) 22% (B) 23% (C) 24% (D) 25% (E) 26%

2. A 30% solution of barium chloride is mixed 10 gm of water to form a 20% solution. How many grams of the original solution did we start with?
(A) 10 (B) 15 (C) 20 (D) 25 (E) 30

3. How many pounds of $ 1.20 per pound nut mixture must be mixed with two pounds of 90c per pound mixture to produce a mixture that sells for $ 1.00 per pound?
(A) 0.5 (B) 1.0 (C) 1.5 (D) 2.0 (E) 2.5

4. How much water must be added to 3 quarters of a 10% solution of acid to reduce it to a 6% solution?
(A) 1 quart (B) 2 quart (C) 3 quart (D) 4 quart (E) 6 quart

5. How many quarts of water must be added to 10 quarts of alcohol that is 95% pure in order to obtain a solution that is 50% pure?
(A) 0.5 (B) 5 (C) 9 (D) 10 (E) 15

6. An alloy of copper and tin is 20% copper. How many pounds of copper must be added to 20 pounds of the alloy in order for the resulting alloy to be 50% copper?
(A) 6 (B) 12 (C) 12.5 (D) 13 (E) 14

7. How many quarts of pure alcohol must be added to 10 quarts of a mixture that is 15% alcohol to make the mixture to be 25% alcohol?
(A) $\frac{3}{4}$ (B) $1\frac{1}{3}$ (C) $1\frac{1}{4}$ (D) $2\frac{1}{2}$ (E) 4

8. A solution of 27 gallons of acid contains 9 gallons of pure acid. How much water in gallons, should be added to produce a 25 percent solution of this acid?
(A) $6\frac{3}{4}$ (B) 9 (C) $15\frac{3}{4}$ (D) 18 (E) 27

**Answer keys:**

| | | | |
|---|---|---|---|
| 1. E | 3. B | 5. C | 7. B |
| 2. C | 4. B | 6. B | 8. B |

## MEASUREMENTS

You should memorize the following measurements:

| | | |
|---|---|---|
| Length | 1 foot = 12 inches | 1 yard = 3 feet |
| Area | 1 square foot = 144 square inches | 1 square yard = 9 square feet |
| Time | 1 minute = 60 seconds<br>1 day = 24 hours<br>1 year = 52 weeks | 1 hour = 60 minutes<br>1 week = 7 days |
| Volume | 1 quart = 2 pints | 1 gallon = 4 quarts |
| Weight | 1 pound = 16 ounces | 1 ton = 2,000 pounds |

## LIST OF MATHEMATICAL TERMS

Unitary system- ঐকিক নিয়ম
Fraction- ভগ্নাংশ
Ratio- অনুপাত
Proportion- সমানুপাত
Decimal- দশমিক
Division- ভাগ
Multiplication- গুন
Multiple- গুণক
Factor- উৎপাদক
Odd- বিজোড়
Even- জোড়
Sum- যোগফল
Difference- বিয়োগফল
Product- গুণফল
Quotient- ভাগফল
Dividend- ভাজ্য
Divisor- ভাজক
Variable- চলক
Constant- ধ্রুবক
Numerator- লব
Denominator- হর
L.C.M- ল. সা. গু
H.C.F- গ. সা. গু
L.C.D- সমহর
Remainder- ভাগশেষ
Approximate value- আসন্ন মান
Factorization- উৎপাদকে বিশ্লেষণ
Progression- প্রগমন
Area- ক্ষেত্রফল
Perimeter- পরিসীমা
Cube- ঘন
Volume- আয়তন
Polygon- বহুভূজ
Regular polygon- সুষম বহুভূজ
Hexagon- ষড়ভূজ
Sphere- গোলক
Cylinder- বেলন
Altitude- উচ্চতা
Surface Area- উপরিতলের ক্ষেত্রফল
Rectangular Solid- আয়াতাকার ঘন

### QUADRILATERALS

Rectangle- আয়তক্ষেত্র
Square- বর্গক্ষেত্র
Parallelogram- সামন্তরিক
Trapezoid- ট্রাপিজিয়াম
Diagonal- কর্ণ
Rhombus- রম্বস

### ANGLES

Vertex- শীর্ষবিন্দু
Angle- কোণ
Right Angle- সমকোণ
Obtuse Angle- স্থূল কোণ
Acute Angle- সুক্ষ্ম কোণ
Corresponding Angle- অনুরূপ কোন
Alternate Angle- একান্তর কোণ
Straight Angle- সরল কোণ
Adjacent Angles- সন্নিহিত কোণ
Complementary Angle- পূরক কোণ
Supplementary Angle- সম্পূরক কোণ
Vertical Angle- বিপ্রতীপ কোণ
Hypotenuse- অতিভূজ
Reflex Angle- প্রবৃদ্ধ কোণ
Interior Angle- অন্তঃস্থ কোণ
Exterior Angle- বহিঃস্থ কোণ
Transversal- ছেদক

### TRIANGLES

Triangle- ত্রিভূজ
Perpendicular- লম্ব
Isosceles Triangle- সমদ্বিবাহু ত্রিভূজ
Equilateral Triangle- সমবাহু ত্রিভূজ
Scalene- বিষম বাহু ত্রিভূজ
Right Triangle- সমকোণী ত্রিভূজ

### CIRCLE

Radius- ব্যাসার্ধ
Radii- ব্যাসার্ধের বহুবচন
Diameter- ব্যাস
Circumference- পরিধি
Center- কেন্দ্র
Tangent- স্পর্শক
Chord- জ্যা
Arc- বৃত্ত চাপ
Segment- বৃত্তাংশ
Secant- ছেদক
Semi-circle- অর্ধবৃত্ত
Inscribed Angle- বৃত্তস্থ কোণ
Central Angle- কেন্দ্রস্থ কোণ

# Chapter 4
# Analytical Ability

Critical Reasoning Review

Puzzles Questuins

Data Sufficiency Review

IQ Questions

# CRITICAL REASONING

IBA ভর্তি পরীক্ষায় Analytical Ability section এর অত্যন্ত গুরুত্বপূর্ণ একটি subsection হচ্ছে critical reasoning. এ ধরনের প্রশ্নগুলো সাধারণত GMAT (Graduate Management Aptitude Test) অথবা GRE (Graduate Record Examination) এর প্রশ্নগুলো অনুকরণে করা হয়। কিন্তু মনে রাখবেন, GMAT বা GRE এর শুধুমাত্র সহজ সমস্যাগুলো IBA এর ভর্তি পরীক্ষায় আসে। Graduate level student দের জন্য প্রস্তুত করা এ ধরনের প্রশ্নগুলো সহজ উপায়ে কিভাবে Solve করা যায়, তা বিস্তারিত ভাবে এই Section এ আলোচনা করা হয়েছে।

Critical reasoning questions এর প্রধান উদ্দেশ্য হচ্ছে argument construction evaluation-এ student দের skill test করা। সুতরাং প্রথমেই আমাদের জানতে হবে argument কি?

**Agrument:** An agrument is a sequence of two or more phases, clauses, sentenes or statements, one of which is a claim or conclusion, which follows the premise.

অর্থাৎ একটি agrument হচ্ছে দুই বা ততোধিক বক্তব্যের সমষ্টি। এই বক্তব্যগুলোর একটি হচ্ছে Claim বা conclusion (সিদ্ধান্ত) এবং বাকী এক বা একাধিক বক্তব্য হচ্ছে premise বা evidence (সূত্র বা ঘটনা)। এই এক বা একাধিক সূত্রের উপর ভিত্তি করে আমরা যে সিদ্ধান্তে উপনীত হই, সেটাই হচ্ছে conclusion.

## Premise এবং Conclusion :

**PREMISE:** সোজা বাংলায় Premise অর্থ হচ্ছে প্রাঙ্গন। আমরা যদিও একে সূত্র বা ঘটনা বলে অভিহিত করছি; এর actual ধারণাটা কিন্তু অর্থের মধ্যে নিহিত আছে। প্রাঙ্গন বলতে একটি নির্দ্দিষ্ট area বোঝানো হয়। আমরা যখনই কোন conclusion বের করতে চাইব, আমাদেরকে অবশ্যই সেই নির্দিষ্ট area এর ভিতর কাজ করতে হবে। Premise-এ যা বলা থাকবে, সেটাকে সঠিক ধরে নিয়ে আমাদের এগোতে হবে। Remember, premise (s) is (are) always true.

আরেকটা জিনিস খেয়াল রাখতে হবে। আমাদেরকে premise (s) এর সম্পূর্ণ area cover করতে হবে। তবেই আমরা logical conclusion এ পৌঁছাতে পারব। যেমন, All cars are red-এই বাক্যটি একটি premise. আমাদেরকে এখন ধরে নিতে হবে যে সব গাড়ীই লাল, যদিও এটা নিতান্তই অবাস্তব একটা বক্তব্য। কিন্তু premise (s) এর যথার্থতা বিচার করা আমাদের কাজ নয়, আমাদের কাজ হচ্ছে - যে premise (s) দেওয়া আছে, তার উপর ভিত্তি করে একটি যৌক্তিক সিদ্ধান্তে (Conclusion) পৌঁছানো।

**Conclusion:** Reading comprehension এর ক্ষেত্রে আমরা যেভাবে passage পড়ি, Analytical ability এর passage পড়াটা সেটার থেকে সম্পূর্ণ different এক্ষেত্রে passage টা খুব closely পড়তে হবে। পড়ার সময় আমাদের মূল উদ্দেশ্য হবে conclusion টা খুঁজে বের করা। অনেক সময় argument থাকে partial, এতে শুধুমাত্র premise (s) দেয়া থাকে এবং student দের conclusion খুঁজে বের করতে বলা হয়। আবার অনেক ক্ষেত্রে একটি premise ও একটি conclusion দেওয়া থাকে এবং student দেরকে বলা হয় যে এই conclusion টি illogical অথবা invalid, আরেকটি premise উপরোক্ত argument -এ add করলে হয়তো আমরা প্রদত্ত Conclusion এর

যৌক্তিকতা প্রমাণ করতে পারব। অতএব, argument এর conclusion বের করা এবং এর logic বা validity বিচার করা অত্যন্ত important একটি কাজ। আমরা আমাদের আগের premise-এ ফিরে যাই- All cars are red. এর সাথে আরও একটি premise যোগ করি- I have a car. এই দুটো premise থেকে obvious যে conclusion পাওয়া যায় তা হচ্ছে- My car must be red.

**IDENTIFYING OR LOCATING 'PREMISE' AND 'CONCLUSION':**

A conclusion gets support; premise (s) provide it. অর্থাৎ একটি argument এর এক বা একাধিক Premise ঐ argument এর conclusion কে support করে।

The premises answer the question. "Why"?

To find the conclusion, ask yourself, "What's the point"? অর্থাৎ, argument এর point বা claim হচ্ছে conclusion এবং এই claim এ আসার পেছনে যে reason আছে, তা হচ্ছে premise.

Let's try a simple example:

"I like to watch television. My TV just broke down. Therefore, I should get a new TV".

এখন আমরা একটা পরীক্ষা করব যার নাম **"WHY TEST"**. উপরোক্ত argument এর conclusion খুঁজে বের করা হবে আমাদের প্রথম কাজ। অতঃপর আমাদের প্রশ্ন হবে 'why'? অন্য statement গুলোকে অবশ্যই এই conclusion আসার কারণ দেখাতে হবে। Now let's try.

Conclusion: "My TV just broke down".

Why: "I like to watch television. I should get a new TV".

Huh! It just doesn't make sense this way. Reason অথবা cause হিসেবে যে statement গুলোকে উপস্থাপন করা হয়েছে, সেগুলো উপরোক্ত Conclusion কে Support করে কি? অবশ্যই না।

Now let's try it in another way-

**CONCLUSION:** "I should get a new TV".

**WHY:** "I like to watch television. My TV just broke down".

Students, এখন নিশ্চয়ই আপনারা Clearly দেখতে পাচ্ছেন যে উপরোক্ত Conclusion কে নিচের cause দুটো support করছে। নতুন একটি টিভি কেনার পেছনে যুক্তি হিসেবে কাজ করছে দুটো statement-এক, আমি টিভি দেখতে পছন্দ করি এবং দুই, আমার টিভিটা ভেঙ্গে গেছে।

**CUE WORDS:** কিছু Specific শব্দ আছে, যেগুলোর সাহায্যে অতি সহজেই আমরা premise এবং conclusion identify করতে পারব। এগুলোকে বলা হয় cue words.

**Cue words for locating premise**

| | | | | |
|---|---|---|---|---|
| If | given that | since | suppose | as |
| for | In view of | because | assume | |

**Cue words for locating conclusion**

| | | | | |
|---|---|---|---|---|
| thus | Therefore | so | as a result | which means that |
| Hence | consequently | then | it follows that | which proves that |
| must | which shows that | should | it can be inferred that | which suggests that |

আমরা example এর মাধ্যমে এগুলোর use বোঝার চেষ্টা করি।

"The ground was wet, so it must have been raining".

এখানে আমরা conclusion চিহ্নিত করার জন্য দুটি cue word পাচ্ছি so এবং must.

"Since this car is made in Japan and all Japanese cars are relatively cheap, this car must be cheap".

উপরের argument এ আমরা premise locate করার জন্য since এবং conclusion locate করার জন্য must এ দুটো Cue words পাচ্ছি।

কিন্তু অনেক সময় দেখা যায়, argument-এ কোন Cue word নেই। তখন আমাদেরকে চিন্তা করতে হবে what the author is trying to prove : Argument এর প্রতিটি বক্তব্য পড়ার সময় আমরা চিন্তা করব, লেখক কি সিদ্ধান্তে আসতে চাচ্ছেন। নিচের example টা দেখলে ব্যাপারটা বোঝা যাবে ঃ

"Our suggestions proved to be logical. The officer promised to implement those after we had described their necessities".

উপরোক্ত argument এ কোন cue word নেই। এখন আমরা এই argument কে তিন ভাগে ভাগ করে ফেলি-

1) We suggested something to an officer.
2) The officer promised to implement those after hearing the necessities of the suggestions.
3) Our suggestion proved to be logical.

লেখক উপরোক্ত argument-এ কি সিদ্ধান্ত নিতে চাইছেন, তা একটু মাথা খাটালেই বের করা যায়। আমাদের কিছু পরামর্শের যৌক্তিকতা বিচার করে একজন কর্মকর্তা সে সব পরামর্শ কার্যক্ষেত্রে apply করার প্রতিশ্রুতি দিয়েছেন। Argument-এর এই অংশটুকু একটা ঘটনার বিবরণ দিচ্ছে। সুতরাং this is not the part the author is trying to prove. লেখক এই ঘটনার ভিত্তিতে এই সিদ্ধান্তে পৌঁছেছেন যে, আমাদের পরামর্শগুলো logical বলে প্রমাণিত হয়েছে। অর্থাৎ প্রদত্ত argument এর প্রথম বাক্যটিই argument এর conclusion এবং বাকী অংশটুকু premise.

এ থেকে আমরা আরেকটি সিদ্ধান্তে আসতে পারি- "Conclusions do not have to be at the end of an argument. Conclusion and premises may be reversed while the same meaning is conveyed".

অর্থাৎ, কোন কোন argument- এ conclusion প্রথমে এবং premise (s) পরে থাকতে পারে। এতে argument এর meaning পরিবর্তন হয় না।

এবার আমরা argument-কে দুটি category তে ভাগ করব।

**Deductive and Inductive Arguments:**

An argument may be defined as deductive if it is IMPOSSIBLE for the conclusion to be false if all the premises are true. In other words, in a deductive argument, the premises necessitate the conclusion.

অর্থাৎ, যদি কোন argument এর premise গুলো সত্যি হলে ঐ argument এর conclusion কে মিথ্যা প্রমাণিত করা অসম্ভব হয়, তবে ঐ argument হচ্ছে Deductive Argument.

একটি example এর সাহায্যে আমরা ব্যাপারটা বোঝার চেষ্টা করি-

**Premise:** All men are mortals.
**Premise:** Iftekhar is a man.
**Conclusion:** Therefore, Iftekhar is mortal.

এই argument এর premise দুটি যদি সত্যি হয়, তাহলে Conclusion টা অবশ্যই সত্যি। এক্ষেত্রে Premise দুটি Conclusion টিকে অপরিহার্য করে তুলেছে।

An argument is inductive if it is "IMPROBABLE' that the conclusion is false if all premises are true. The premises do not necessitate the conclusion. The conclusion may be false if all premises are true.

অর্থাৎ একটি argument এর premise গুলো সত্যি হওয়া সত্ত্বেও যখন ঐ argument এর Conclusion valid না invalid তা নিশ্চিতভাবে বলা যাবে না, তখন ঐ argument কে বলা হবে Inductive Argument.

Premise: New students usually do the classes seriously.
**Premise:** Farah and Iftekhar are new students.
**Conclusion:** Therefore, they do the classes seriously.

উপরোক্ত argument এর key word হচ্ছে usually. সাধারণত নতুন ছাত্রছাত্রীরা seriously class করে। এখানে কিন্তু বলা হচ্ছে না সব নতুন ছাত্র ছাত্রী Seriously Class করে। সুতরাং আমরা এই সিদ্ধান্ত নিতে পারি না যে নতুন student হলেই সে seriously class করবে। বরং আমাদের Conclusion হওয়া উচিত এরকম- They may do the classes seriously এ ধরনের argument কে বলা হয় inductive argument.

Some, Usually, Sometimes, Generally এ ধরনের শব্দগুলো inductive argument কে চিহ্নিত করে।

**'ONLY' AND 'ALL'- A common Analytical trick:**

শুনতে খুবই সহজ দুটি শব্দ- only এবং all- 'শুধুমাত্র' এবং 'সব'' কিন্তু এই দুটো শব্দের মধ্যে কোন প্রকার Confusion যদি student দের মনে থাকে, তবে তারা অতি সহজেই analytical question এর ফাঁদে ধরা দেবে। তাই আসুন আমরা এখন এই ছোট্ট এবং সহজ শব্দ দুটি নিয়ে আলোচনা করি। প্রথমেই নিচের example টা পর্যবেক্ষণ করা যাক।

**Premise:** Shafwat is a student of I. B. A.
**Premise:** Only I. B. A. students are involved with Mentors'.
**Conclusion:** Therefore, Shafwat is involved with Mentors'.

উপরোক্ত argument এর conclusion টি valid নয়। কারণ প্রথম ও দ্বিতীয় premise থেকে আমরা কখনও বলতে পারি না যে সব IBA students Mentors' এর সাথে জড়িত। বরং দ্বিতীয় premise থেকে আমরা বলতে পারি যে, Mentors' এর সাথে যারাই জড়িত, তারা সবাই IBA students. যদি দ্বিতীয় premise -এ only এর পরিবর্তে all' থাকতো, তবেই প্রদত্ত argument এর conclusion টি valid হতো।

এখন আমরা আরেকটি example পর্যবেক্ষণ করি।

**Premise:** All the players of the Brazil team have exceptional skill.
**Premise:** Baggio is a player of the Italian team.
**Conclusion:** Baggio does not have exceptional skill.

এক্ষেত্রেও Conclusion টি invalid প্রদত্ত premises থেকে এটা clear যে, Brazil team এর সব player-ই exceptionally skilled; কিন্তু premise এ বলা নেই যে, তারা ছাড়া আর কেউ exceptionally skilled হতে পারে না। প্রথম premise এ যদি আমরা all এর পরিবর্তে only ব্যবহার করি, তখন conclusion টা valid হয়ে যায়, কারণ তখন premise এর বক্তব্যে দাঁড়ায় এরকম-শুধুমাত্র ব্রাজিল team এর player রা exceptionally skilled, আর কেউ নয়। অর্থাৎ অন্যান্য team এর খেলোয়াড়রা এই Category থেকে বাদ পড়ে যাচ্ছে।

## Types of questions:

এখন আমরা analytical ability section এর critical reasoning part এর প্রশ্নের প্রকারভেদ আলোচনা করব।

**I) Assumption questions:**

An assumption bridges the gap between an argument's evidence and conclusion.

অর্থাৎ, assumption বলতে আমরা argument এর সেই statement কে বোঝাব যেটা অনুপস্থিত থাকলে argument এর conclusion valid হবে না। অতএব, assumption question এ premise (S) থাকবে, একটি conclusion ও থাকবে। কিন্তু, লক্ষ্য করলে দেখা যাবে conclusion টি valid নয়, একটি premise যোগ করলে conclusion টি valid হয়। এই অনুল্লেখিত premise কে বলা হয় assumption বা Hidden premise আমরা নিচের উদাহরণটি লক্ষ্য করি।

Rumi plays basketball for I.B. A.

Therefore, Rumi must be over six feet tall.

বোঝাই যাচ্ছে, প্রথম Sentence টি premise এবং দ্বিতীয়টি conclusion প্রশ্ন হচ্ছে, Conclusion টি কি valid?

Obviously not. Premise এবং Conclusion এর মধ্যে একটা ফাঁক রয়ে যাচ্ছে। আপনাদেরকে question করা হবে- এই ফাঁকটা কি? নিজেই বের করুন- আমরা তখনই Rumi কে Six feet এর উপর লম্বা বলতে পারব যখন আমরা জানব - All basketaball players of the I. B. A. team are over six feet tall. এটিই হচ্ছে প্রদত্ত argument এর assumption.

এই question টি বিভিন্ন ভাষায় করা হতে পারে। যেমন-

Which one of the following does the author assume?

Upon which of the following assumptions does the author realy?

The argument depends on the assumption that-

Which one of the following, if added to the passage, will make the conclusion logical ?

The validity of the argument depends on which of the following?

The argument presupposes which one of the following?

**II) Strengthen or Weaken questions:** Strengthen questions এর argument এ premise (s) এবং conclusion দুইই থাকে। এক্ষেত্রে conclusion টি valid ও হতে পারে, আবার invalid ও হতে পারে। যদি conclusion invalid হয়, তবে question টি assumption এর মত হয়ে যায়। অর্থাৎ hidden premise খুঁজে বের করে conclusion কে stronger করতে হবে। যদি conclusion valid হয় তবে আপনার কাজ হবে answer choice থেকে এমন একটি Sentence খুঁজে বের করা যেটা সত্যি হলে প্রদত্ত conclusion এর দাবী আরও জোরালো হয়। নিচের উদাহরণটি দেখলে ব্যাপারটি পরিস্কার হবে।

Noel: Don't eat so much red meat. It's bad for health.

Shafwat: How can you say that? I don't weigh a pound more than I did a year ago.

Question: Which of the following would strengthen Noel's argument ?

a) ---------- b) ---------- c) ---------- d) ---------- e) ----------

দুজন ব্যক্তি কথা বলছেন। Noel নামক ব্যক্তি Shafwat কে বেশি red meat খেতে নিষেধ করল এবং বলল এটা স্বাস্থ্যের জন্য ক্ষতিকর। Shafwat এ কথাকে defend করার জন্য যে যুক্তি দাঁড় করাল তা হচ্ছে- তার weight গত এক বছরে এক pound ও বাড়েনি। এখন আমাদের কাজ হচ্ছে এমন একটি statement খুঁজে বের করা যা Noel এর দাবীকে জোরালো করে। একটু চিন্তা করুন। Answer choice দেয়া নেই (যদিও পরীক্ষায় দেয়া থাকবে), তাই নিজে answer develop করার চেষ্টা করুন।

আমরা যদি বলি, Putting on weight is not the only harmful effect of eating red meat (অর্থাৎ, weight বাড়াই red meat খাওয়ার একমাত্র ক্ষতিকর effect নয়, অন্যান্য ক্ষতিকর effect ও থাকতে পারে) তাহলে কি Noel এর argument (Eating too much red meat is harmful for health) এর claim জোরালো হচ্ছে না ? অবশ্যই হচ্ছে।

এভাবেই আমাদের strengthen questions answer করতে হবে।

Strengthen questions এর language ও বিভিন্ন রকম হতে পারে-

Which one of the following, if true, would most strengthen the argument?

Which one of the following, if true, would provide the best support for the conclusion in the argument above?

The argument above would be more persuasive if which one of the following were found to be true?

The conclusion would be more properly drawn if it were made clear that –

**Weaken questions** এর ব্যাপারটা ঠিক উল্টো।

One way to weaken an argument is to break down a central piece of evidence. Another way is to attack the validity of any assumption the author must be making.

অর্থাৎ weaken questions এর ক্ষেত্রে আমাদেরকে লেখকের বক্তব্যকে আক্রমণ করতে হবে। লেখক যা prove করতে চাচ্ছেন তার against এ কোন একটা logic উপস্থাপন করতে হবে। এক্ষেত্রে প্রথমেই আমাদের কাজ হবে argument এর conclusion খুঁজে বের করা। তারপর আমরা চেষ্টা করব কিভাবে ঐ conclusion এর claim টাকে দুর্বল করা যায়।

"Monjur did not go to the university. So it must be Friday".

অর্থাৎ যেহেতু Monjur versity -তে যায়নি, তাই এটি শুক্রবার। Argument এর দ্বিতীয় অংশটি এক্ষেত্রে Conclusion এই Conclusion -কে বিভিন্নভাবে খন্ডন করা যায়। আমরা বলতে পারি- (i) Monjur was sick; (ii) Monjur has a class on Friday; (iii) Monjur does not have any class on both Friday and Saturday ইত্যাদি।

উপরোক্ত তিনটি Statement এর যে কোন একটি answer choice এ থাকলেই আমরা সেটাকে answer হিসেবে pick করব। প্রথম statement অনুসারে Monjur এর versity তে না থাকার আরেকটি reason পাওয়া যাচ্ছে, সুতরাং আমরা Conclusion টিকে valid বলতে পারি না। দ্বিতীয় statement এ বলা হচ্ছে শুক্রমার Monjur-এর class থাকে। এক্ষেত্রেও conclusion টি invalid তৃতীয় statement এ বলা হচ্ছে, শুক্রবার ও শনি দুদিনের একদিনও Monjur-এর class থাকে না। সুতরাং conclusion বের কারা সময় নিশ্চিত হয়ে বলা যায় না, যে দিনটি শুক্রবার ছিল।

Weaken question এর বিভিন্ন question stem নিচে দেখানো হলো-

Which of the following, if true, would most weaken the argument above?

Which of the following, if true, would most seriously damage the argument above?

Which of the following casts most doubt on the argument above?

Which of the following is criticism of the argument above?

Which of the following indicates a flaw in the conclusion above?

Which of the following would be a logical contradiction of the argument above?

**III) Inference Questions:** The process of inferrng is a matter of considering one or more statements as evidence and then drawing a conclusion from them.

অর্থাৎ, এ ধরনের প্রশ্নে কিছু সত্র বা ঘটনা দেওয়া থাকে, আমাদের কাজ হবে এসব সত্র বা ঘটনা থেকে একটি সিদ্ধান্তে পৌঁছুনো। Assumption এবং Inference এর পার্থক্য হচ্ছে- একটি Conclusion এর Validity যেমন assumption এর উপর depend করে, Inference এর ক্ষেত্রে তা হয় না। A valid inference is merely something that must be true if the statements in the passage are true; it's an extension of the argument rather than a necessary part of it, অর্থাৎ Inference একটি argument এর আবশ্যকীয় কোন অংশ নয়; বরং argument এর বক্তব্যকে true ধরে নিয়ে আমরা প্রদত্ত answer choices এর যে statement টিকে true বলতে পারি, তা-ই হচ্ছে Inference.

নিচের উদাহরণটি ব্যাপারটিকে পরিষ্কার করবে।

Anis plays cricket for the I. B. A team despite the team's rule against participation of non – students.

অর্থাৎ 'ছাত্ররা ছাড়া আর কেউ অংশ নিতে পারবে না'- এই নিয়ম থাকা সত্ত্বেও নাসিম I.B.A টিমের হয়ে ক্রিকেট খেলে।

প্রশ্ন হচ্ছে, What can you infer from the above argument?

আমরা উপরের argument থেকে clearly বলত পারি- Anis I. B.A এর ছাত্র নয়।

**Inference:** Anis is not a student of I.B.A

Inference question এর রকমভেদ হতে পারে এরকম-

What can be inferred from the argument above?

Which of the following is implied by the argument above?

The author suggests that-

If all the statements above are true, which one of the following must also be true on the basis of them?

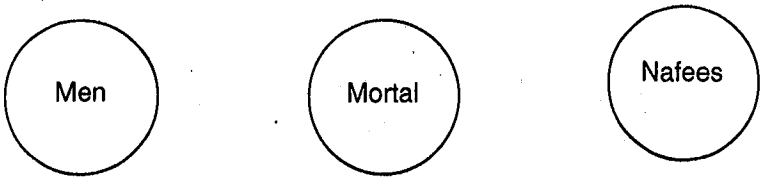
The author of the following would most likely agree with which one of the following?

## Some special Techniques and Tips:

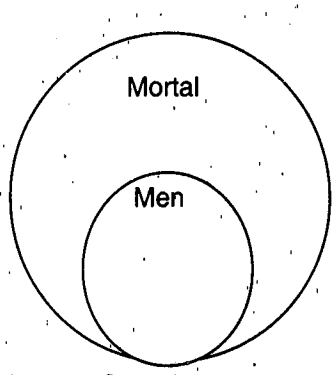
**Using Venn Diagrams:** Example এর মাধ্যমে আমরা ব্যাপারটা বোঝার চেষ্টা করব। Let's take a simple argument.

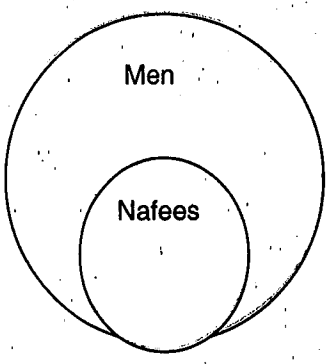
"All men are mortal. Nafees is a man. Therefore, he must be mortal."

আমরা এখন উপরোক্ত argument এর প্রত্যেকটি component এর জন্য একটি circle তৈরী করব। এই argument এ তিনটি প্রধান উপকরণ আছে- Men, mortal and Nafees.

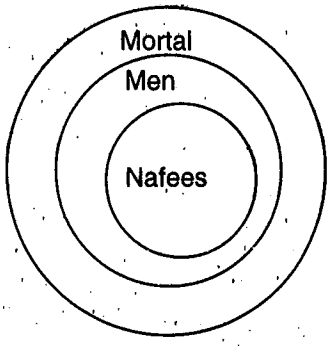


আমরা argument এর প্রথম ও দ্বিতীয় statement অর্থাৎ premises দুটি থেকে নীচের Circle দুটি আকতে পারি।



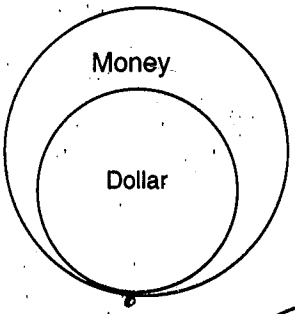



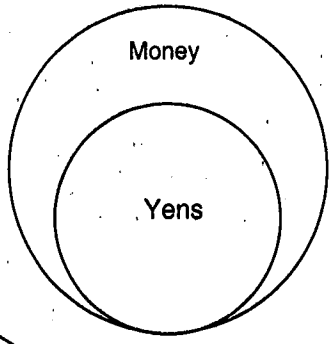

এখন উপরের দুটি circle থেকে আমরা deductive conclusion-এ পৌছুতে পারি- Nafees is mortal.

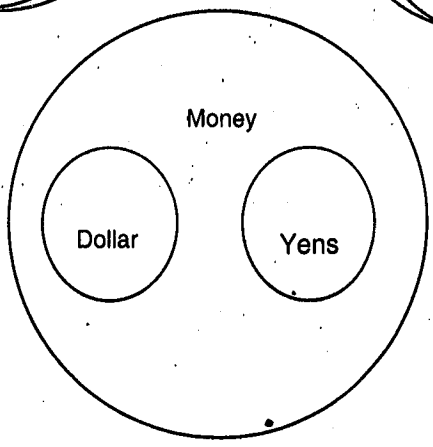



আরেকটি example দেখুন-

"All dollars are money. All yens are money. Therefore, all dollars must be yens".



That's all what we get. সুতরাং venn diagram থেকে এটা পরিষ্কার যে, argument এর conclusion-টি invalid. Both dollars and yens are included in the money circle but we cannot conclude that all dollars are yens or vice versa.

একটু জটিল ধরনের কিছু Critical reasoning questions solve করার জন্য venn diagram বেশ কার্যকর।

**Avoiding generalization:** Critical reasoning questions solve করার জন্য সবসময় generalization avoid করতে হবে। Lets consider the following example.

"Tariffs on textiles benefit the textile industry. Tariffs on steel benefit the steel industry.

ব্যাপারটা এরকম হয়ে গেল আমি একজন লোককে চিনি যার বাড়ী 'অমুক' জায়গায় এবং লোকটি খারাপ। আমি আরও একজন লোককে চিনি যার বাড়ী ঐ একই জায়গায় এবং সে-ও লোক ভাল নয়। সুতরাং আমি সিদ্ধান্ত নিলাম, 'অমুক' জায়গায় সব লোকই খারাপ। Absurd ! একটি, দু'টি বা অনেক example দিয়ে আমরা কখনও পুরো একটি এলাকার সব লোককে খারাপ বলতে পারি না।

একইভাবে, প্রদত্ত argument-এ দুটি industry tariff এ উপকৃত হয়েছে বলে আমরা conclude করতে পারি না যে সব industry-ই এতে উপকৃত হবে। এই ভুলটিকেই বলা generalization.

**Using Four-step Approach:** Critical reasoning questions answer করার জন্য আমরা একটি four-step approach follow করতে পারি। Step গুলো নিম্নরূপ ঃ

1. **Preview the question stem:** প্রথমে argument না পড়ে stem পড়া উচিত অর্থাৎ আমাদের আগেই জেনে নেয়া ভাল what we have to do-আমাদের কি infer করতে হবে নাকি assume করতে হবে নাকি weaken বা stengthen করতে হবে।

2. **Read the stimulus:** এবার আমরা given passage টা পড়ব। Read the passage actively and critically. Also get a sense for how strong or weak the argument is.

3. **Try to pre-phrase an answer:** Questions stem এবং stimulus পড়ার পর অধিকাংশ ক্ষেত্রেই আমাদের মনের মধ্যে একটি obvious answer develop করবে। অন্যান্য ক্ষেত্রে answer সম্বন্ধে একটা general idea মাথায় আসবে। যাই হোক না কেন, নিজে নিজে একটা answer assume করতে পারলে কাজ অনেকটাই সহজ হয়ে যায়।

4. **Choose an answer:** Answer pre-phrase করতে আপনি যদি successful হন, তাহলে আপনার কাজ হবে answer choices থেকে সেই answer টি খুঁজে বের করা which sound like what you have in mind. যদি এরকম কোন choice খুঁজে না পান, নিজের ষড়মরপ টা আবার একটু ঝালিয়ে নিন। তাতেও যদি না হয়, You should go back to the question stem to make sure that you're indeed answering the question that was asked.

আমরা আমাদের critical reasoning সম্পর্কিত critical আলোচনার শেষ পর্যায়ে। কোন argument inductive বা কোনটা deductive সেটা বের করা আসল কাজ নয়- আসল কাজ হচেছ আপনার logic এ কোন খুঁত আছে কিনা তা বের করা। If you are sure of an answer, go for it- don't think about those critical things. They might be very confusing sometime.

আমরা দুটি example দিয়ে critical reasoning question কিভাবে solve করতে হবে তার কিছুটা ধারণা দেয়ার চেষ্টা করেছি। এই example দুটি ভালভাবে পর্যবেক্ষণ করুন। তাহলে critical reasoning এর concept develop করবে।

Example দুটির পরে একটি practice exercise আছে। এতে ৩০টি question আছে। Review Chapter টি প্রথমে ভালমত পড়ে নিন, তারপর exercise গুলো solve করার চেষ্টা করুন।

Critical reasoning এর exercise solve করার আগে দুটি solved example দেখে নিন। Exercise গুলোর শুধু answer দেয়া আছে।

**Example – 1:**

All good athletes want to win. All athletes who want to win eat a well-balanced diet. Therefore- all athletes who do not eat a well-balanced diet are bad athletes.

If the assumptions of the argument above are true, then which of the following statements must be true?

A) No bad athlete wants to win.
B) No athlete who does not eat a well balanced diet is a good athlete.
C) Every athlete who eats a well-balanced diet is a good athlete.
D) All athletes who want to win are good athletes.
E) Some good athletes do not eat a well-balanced diet.

Question এ যে argument দেয়া আছে সেটি valid সুতরাং আমরা এখন Denial process (Process of elimination) follow করতে পারি। Argument টির conclusion হচ্ছে- যেসব athlete well-balanced diet খায়না তারা অবশ্যই bad athlete. সুতরাং choice (E) কে সরাসরি বাদ দেয়া যায়। Argument এ বলা আছে-All good athletes want to win, কখনোই বলা হয়নি All those who want to win are good athletes. সুতরাং choice (D) এবং (A) বাদ পড়ে যাচ্ছে। Argument এ বলা আছে good athlete হতে হলে well-balanced diet খেতে হবে। That does not mean well-balanced diet খেলেই আপনি ভাল athlete হয়ে যাবেন। সুতরাং answer choice (C) ও বাদ। বাকী রইল (B) This choice is actually rephrasing the argument's conclusion. Therefore, the answer is (B).

**Example – 2:**

If you present a purple pass, then you can enter the compound.
If the statement above is true, which of the following must also be true?

i) If you do not present a purple pass, then you cannot enter the compound.
ii) If you could enter the compound, then you must have presented a purple pass.
iii) If you cannot enter the compound, then you did not present a purple pass.

A) I only (B) II only (C) III only (D) I and II (E) I, II and III.

ব্যাপারটা হচ্ছে- If P, then Q (এক্ষেত্রে P = purple pass, Q=entering the compound) অর্থাৎ P ঘটলে Q ঘটবে। কোথায় বলা নেই যে, P না ঘটলে Q ঘটবেনা। সুতরাং আমরা ধরে নিতে পারি যে, P একা Q এর Prerequisite (পূর্বশর্ত) নয়। R. S. U. এগুলো ঘটলেও Q ঘটতে পারে (এক্ষেত্রে R. S. U. প্রভৃতি হচ্ছে অন্য color এর pass বা pass ছাড়া অন্য কোন কাগজপত্র)। সুতরাং আমরা choice (A) এবং (B) বাদ দিয়ে দিতে পারি। The answer is (C). Actually, "If P, then Q" এটা থেকেই বোঝা যায় যে, 'If no Q, then no P" (অর্থাৎ আপনি যদি compound এ ঢুকতে না পেরে থাকেন, তাহলে আপনার কাছে Purple pass ছিল না।)

## PRACTICE EXERCISE

1. Bidyut must be a cricketer I saw him with a cricket bat.
The conclusion above is valid only if it is true that
A) Cricket players often hold cricket bat.
B) All cricketers hold cricket bats.
C) Cricketers never hold any kind of bat other than cricket bat.
D) Cricketers are required to hold cricket bats.
E) Only cricketers hold cricket bats.

2. I am afraid that Sharon will never be an outstanding actress. Last month she burnt her face and the doctors failed to cure that.
The argument above is based upon which of the following assumptions?
1. One must have unburnt face to act.
2. How well a person acts may be influenced by the condition of one's face.
3. Unburnt face is a must for a professional acting career.
A) 1 only (B) 2 only (C) 1 & 2 only
(D) 2 & 3 only (E) 1, 2 & 3 together, but not individually.

3. Zia must be a football player; he is wearing a football jersey.
The conclusion above is valid only if it is true that
A) Football players often wear football jerseys
B) All football players wear football jerseys
C) Football players never wear any kind of shirt other than football jerseys.
D) Football players are required to wear football jerseys?
E) Only football players wear football jerseys.

**Questions 4-5 are based on the following passage**
A church found that their facilities were too small to accommodate the crowd for a special two-day religious service. They received a license to use the public park, and a public address system was promptly installed. Citizens who were not members of that church protested the action of the park Department for having issued this license.

4. What is the best argument used by the church to retain its license?
A) Wide publicity had already been made to announce the location of special service.
B) The public address system was installed at great expense.
C) The church is a local taxpayer.
D) The park had been used before by religious organization for rallies, concerts and meetings.
E) No one would be excluded from entering the park during the service.

5. What is the best argument used by the citizens who protested the action by the Park Department?
A) Freedom of spech was violated.
B) Citizens would be denied the enjoyment of the public park during these two days.
C) There would be a violation of the noise-level standards.
D) A public referendum should have been held.
E) The town would incur expenses to clean up the park after the two-day service.

**Questions 6-7 are based on the following:**

In 1978, Thomas Malthus published "Essay on Population" in which he postulated that food supply can never keep pace with the rate of increase in human population.

6. Which of the following statements, if true, would tend to weaken Malthus's argument?
I) The total population of humans has risen at a rapid rate partly because of the removal of natural checks on population.
II) In many nations, the increase of human population has far outstripped the food-producing capacity.

III) Human population growth may be halted by the use of contraception.
IV) For many ethnic and religious groups, artificial control of conception is morally unacceptable.
A) I only (B) I and II (C) II only (D) I and IV (E) III only.

7. Which of the following would be most likely to help limit the demands placed on food supplies?
A) wars (B) conservation of natural resources
C) better farming methods (D) better international relations
E) improved disease control.

8. Those who oppose the new water project claim to have the best interest of this community at heart. Yet they are the same people who, only three years ago, opposed the building of the new state high way, which now provides half a million commuters with fast, eassy motoring every day. What could be a better argument in favor of the water project?
Which of the following statements is most like the argument above?
A) Those who oppose nuclear power are unable or simply unwilling to recognize the fact that the nuclear energy industry has a safety record unparalleled by that of any other industry.
B) The new gun controls law is a misguided and dangerous proposal, which has been denounced by every sportsman's club and gun-owners association in the state.
C) We must fight the proposed anti-pornography statute, for its principle sponsors have voted against every major piece of women's right legislation introduced in the last twenty years.
D) The polls show that over 60% of the concerned parents in this state favor the school bond issue; cast your vote with the concerned majority on Election Day.
E) The so-called tax reform bill now before the state senate must be defeated; its only true beneficiaries would be the wealthy corporations, which already pay too little in taxes.

9. Partho: Moutushi has become a better singer since she started mediatating.
Sazid: Impossible. A singer's most important asset is his or her nice voice.
Sazid's statement implies that he believes that
A) Mediation tends to make a person's voice harsh.
B) Meditation has little or no effect on the person who practices it.
C) Moutushi was a poor singer previously, because she did not have nice voice.
D) Moutushi has not really been meditating.
E) Mental attitude has little or nothing to do with a singer's effectiveness.

10. Talha is over six feet tall.
The statement above can be logically deduced from which of the following statements?
A) The average height of the members of the basketball team is over six feet. Talha is the center on the basketball team.
B) If Talha was not asked to join the basketball team, then he is not over six feet tall. Talha was asked to join the basketball team.
C) If Talha is over six feet tall, then he can see the parade. Talha can see the parade.
D) In Dr. Khairul's seminar, everyone who is not over six feet tall is seated in the first row. Dr. Khairul seated Talha in the second row.
E) Everyone who is over six feet tall has to help stack cartons in the stockroom. Talha has to help stack cartons.

11. Noel: I wish you wouldn't drink so much beer. It's bad for your health.
Mokbul: How can you say that? I don't weigh a pound more that I did a year ago.
Which of the following responses would most strengthen Noel's Argument?
A) You weigh ten pounds more than you did six years ago.
B) Most people who drink a lot of beer do put on weight.
C) If you keep drinking so much beer, you will soon put on weight.
D) Putting on weight is not the only harmful effect of drinking beer.
E) You can put on weight in other ways than by drinking beer.

12. Bobby – 'Only general council members sit on the president's cabinet.
Hillol – 'That's not true; Dr. Rab is a general council member and he is not on the president's cabinet. Hillos response implies that he incorrectly interpreted Bobby's statement to mean that
A) All cabinet members are on the general council.
B) Dr. Rab sits on the president's cabinet.
C) All members of the general council sit on the president's cabinet.
D) No general council members are on the president's cabinet.
E) None of the above.

13. Abdul: I want to stay out of Mr. Mofiz's classes if I can. I have heard he is very right-handed so far the grades are concerned.
Kuddus: That's not true. My friend took his class last year and he gave hir an A.
From the coversation above it can be inferred that Kuddus interpreted Abdul's statement to mean that Mr. Mofiz.
A) makes unfair demands on his students
B) only gives good grades to a fewer favoured students
C) has become increasingly strict over the past year.
D) gives out fewer good grades than most teachers in the department.
E) never gives out grades of A.

14. Television convinces viewers that the likelihood of their becoming the victim of a violent crime is extremely high; at the same time, by its very nature, television persuades viewers to passively accept whatever happens to them.
The argument above leads most logically to the conclusion that
A) people should not watch television
B) television promotes a feeling of helpless vulnerability in its viewers.
C) television viewers are more likely to be victimized that other persons.
D) the content of television programs should be changed to avoid fostering the attitudes mentioned
E) television viewing promotes criminal behavior.

15. Javed: I just heard that Mini flunked out of college.
Hasan: That can't be true; she got straight A's in high school.
From the conversation above, it can be inferred that
A) Hasan thinks Javed is lying
B) Hasan assumes that no one who got straight A's in high school can flunk out of college.
C) Javed thanks Mini has flunked out of college
D) Hasan thinks Mini is still in college
E) Javed knows that Mini flunked out of college.

16. A meadow in springtime is beautiful, even if no one is there to appreciate it.
The statement above would be a logical rebuttal to which of the following claims?
A) People will see only what they want to see
B) Beauty is only skin deep C) There's no accounting for taste
D) Beauty exists only in the eye of the beholder
E) The greatest pleasure available to mankind is the contemptation.

17. Since it is possible that substances contained in certain tree roots may provide a cure for cancer, the government must provide sufficient funds to allow thorough testing of this possibility.
The argument above assumes that
A) Substances contained in certain tree roots will probably cure cancer.
B) The line of research mentioned offers at present the most promising possibility for finding a cure for cancer.

C) The possibility of finding a cure is sufficient reason for funding research into possible cancer cures.
D) A cure for cancer would be extremely valuable society.
E) The government is the only possible source of funds for the research described.

**Questions 18-19 are based on the following information:**
All students who major in philosophy wear Lee jeans:
None of the students of the Mentors wears Lee jeans or majors in history:
If Monjur majors in philosophy, Shanto majors in history.

18. If the statements above are all true, which of the following must also be true?
A) If Monjur majors in philosophy. Shanto does not wear Lee jeans.
B) None of the students of Mentors' majors in philosophy
C) If Monjur wears Lee jeans, he majors in philosophy
D) If Shanto majors in history, Monjur is not in the Mentors'
E) Either Monjur or Shanto wears Lee jeans.

19. The conclusion 'Monjur' does not major in philosophy' could be validly drawn from the statements above if it were established that
') Shanto does not major in histry
ii) Monjur does not belong to Mentor's
iii) Monjur does not wear Lee jeans.
A) i only (B) ii only (C) iii only (D) i and iii only (E) ii and iii only.

20. Spokesman for a chemical company to residents of a nearby town. We have conducted tests and have found no evidence that the fumes leaking from our waste disposal site are harmful to humans. There is no reason to be alarmed, much less to begin evacuating people from their homes.
Which of the following would be the least relevant question for the head of the residents committee to direct to the chemical company spokesman?
A) What steps are being taken to correct the situation?
B) Are further tests being conducted?
C) How much will it cost you to stop the leaks?
D) Do the fumes have an adverse effect on plants or animals?
E) What are the possible long-term effects of exposure to the fumes?

21. But the number of flights has increased by 30% in the last ten years.
The statement above would be logical rebuttal to which of the following claims?
A) The airlines must be losing money. The cost of jet fuel has tripled in the last ten years.
B) Airline ticket prices have increased so fast in the last ten years that some people who could once afford to fly no longer can.
C) Flying is getting more unsafe. The number of airplane accidents per year had increased by over 10% in the last decade.
D) More air travelers are taking short hopi, commuter flights. The average number of miles traveled per flight had decreased by 20% in the last ten years.
E) The flight industry is being taken over by a few large airlines. There are 25% fewer airlines today than there were ten years ago.

**Questions 22-23 are based on the following information:**
If Dr. Mimi's theory is correct, then the events he predicts will happen. The events he predicted did happen. Therefore, his theory must be correct.

22. Which of the following arguments has a logical structure that most nearly resembles that of the argument above?
A) If we win the game, we will be the league champions. We won the game; therefore, we are the league champoins.
B) If the fan is running, then the electricity must be on. The electricity is on; therefore, the fan must be running.
C) If the store is open, I will buy a shirt, I think the store is open; therefore, I should be able to buy a shirt.

D) If Farah answers her phone, then my prediction is correct, I predict that she is at home; therefore, she will answer the phone.
E) If Ropuls flight is delayed, he will miss his appointment. He kept his appointment; therefore, his flight must have been on time.

23. The conclusion above would be valid if which of the following were true?
A) Only Dr. Mimi's theory full explains the events that happened.
B) If the events Dr. Mim predicted happen then his theory is correct.
C) If Dr. Mimis theory is correct the events he predicted may happen.
D) Only Dr. Mim predicted the events that happened.
E) If the events Dr. Mim predicted happen, then Dr. Mimi's theory may be correct.

24. Leafleting and speechmaking on government property should be outlawed. Radicals and fanatics have no right to use public property when peddling their unsavory views.
The argument above is based on the assumption that
A) Radicals and fanatics prefer using public property when disseminating their views.
B) Legal restrictions that apply to one group need not apply equally to all.
C) The general public has a vested interest in the free exchange of varied political views
D) Political activity that interferes with the orderly functioning of government should not be protected b law .
E) All those who leaflet and make speeches on government property are radicals and fanatics.

**Questions 25-26 are based on the following.**

Large mammals are not common in desert regions Small animals such as the Kangaroo rat have special adaptations for water conservation. Their kidney tubules are able to extract water from dry seeds.

25. An important exception to this statement is the case of the
A. Kangaroo B. opossum C . camel D. snake C. cactus

26. The statement makes it clear that survival depends upon
A. food B. temperature C. soil D. water E. sun

27. The new English film " Brave Heart", the historical movie of a heroic character, is clearly the best foreign film of the year, since the box office receipts show that even more people are going for the movie than ' Aguner Parashmoni' the highly acclaimed Bangladeshi film on similar them. The argument above is based on which of the following assumption.
A) "Aguner Parashmoni" is the best Bangladeshi film.
B) Foreign films should be judged by the same standards used for Bangladeshi films.
C) Foreign films should be judged by the same standards used for Bangladeshi films.
D) Historical stories make best films.
E) The quality of a film can be measured by the number of people who go to see it.

28. Excessive amount of mercury drinking water, associated with certain types of industrial pollution have been shown to cause 'Hobson's Disease. Island Hatia has an economy based on subsistence level of agriculture, modern industry of any kind is unknown. The inhabitants of Hatia have an unusually high incidence of Hobson's Disease. Which of the following can be validly inferred from the above statements?
1) Mercury in drinking water is actually safe
2) Mercury in drinking water must have other sources than industrial pollution
3) Hobson's Disease must have causes other than mercury in water.

A) 2 only (B) 3 only (C) 1 or 2 but not both (D) 2 or 3 but not both (E) 2 or 3 or both.

**Questions 29-30 are based on the following:**

A class was divided into two equal groups. One group was given toothpaste containing fluoride and the other was given toothpaste without fluoride. Public funds were used to supply each student with a sufficient supply of toothpaste for the entire school year. The group using the fluoride toothpaste had fewer tooth cavities at the end of the year.

29. The results of this experiment would be more valid if.
I) greater number of pupils was, used
II) Provision was made of check on faithful daily use of toothpaste
III) New toothbrushes were supplied
IV) A control group was provided.
A) only I (B) only II (C) only IV (D) I and II (E) II and III.

30. The results of this class experiment could be used to demonstrate the
I) value of water fluoridation
II) difficulties and problems involved in conducting scientific research
III) value of regular use of the toothbrush
IV) need for public support to conduct scientific research.
A) only I (B) only II (C) I and II (D) only III (E) I, II, III and IV.

**Answer Key**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. E | 2. B | 3. E | 4. D | 5. B | 6. E | 7. A | 8. C |
| 9. A | 10. D | 11. D | 12. C | 13. E | 14. B | 15. B | 16. D |
| 17. C | 18. B | 19. D | 20. C | 21. C | 22. B | 23. B | 24. E |
| 25. C | 26. D | 27. E | 28. E | 29. D | 30. A | | |

## PUZZLE QUESTIONS

IBA এর BBA/MBA ভর্তি পরীক্ষায় Analytical Ability section এর একটি অন্যতম important part হচ্ছে Puzzle Questions. এ ধরনের questions এ বেশকিছু Data/Information দেয়া থাকে। আমাদের কাজ হবে এই Data/Information গুলোকে organize করে questions গুলি solve করা। Example দিয়ে না বুঝলে আসলে ব্যাপারটি clear হবে না। আমরা recent BBA পরীক্ষায় একটি question নিয়ে আলোচনা করি।

An office manager must assign six employees to six offices, consecutively numbered 1 to six 6, which are arranged in row and are separated only by allow- height wall. Therefore, voices, sound, and cigarette smoke readily pass from each office to those on either side.

* Beauty's work requires her speak on the telephone frequently throughout the day.
* Wasim and Borhan often talk to one another, and prefer to have adjacent offices.
* Gulzar, the senior employee, is entitled to office 5, which has the largest window.
* Peter needs silence in the office (s) next to his our own.
* Ahmed, Wasim and Peter all smoke. Gulzar must have non –snokers in the office (s) next to her.

**Questions :**

I. The best imployee to occupy the furthest from Borhan would be
(a) Peter (b) Beauty (c) Gulzar (d) Ahmed (e) Wasim

2. The three employees who smoke should be placed in offices
(a) 2,3 and 6 (b) 1,2 and 4 (c) 1, 2 and 6 (d) 2, 3 and 4 (e) 1, 2 and 3

3. The best location for Wasem's office no.
(a) 1 (b) 2 (c) 3 (d) 4 (e) 6

আমরা প্রথমে question stimulus নিয়ে আলোচনা করব। আমাদেরকে ছয়জন কর্মচারীর জন্য ছয়টি ঘর বরাদ্ধ করতে হবে।

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|

বলা আছে, senior employee Gulzar 5 no. room-এ বসবেন।

| 1 | 2 | 3 | 4 | G | 6 |
|---|---|---|---|---|---|

Ahmed, Wasim আর Peter তিনজনই smoke করে এবং Gulzar smoking সহ্য করতে পারে না। সুতরাং Gulzar এর আশেপাশে অর্থাৎ 4 I 6 no, room এ তারা পারবে না। তাদেরকে বসাতে 1, 2 I 3-তে। Wasim I Borhan পাশাপাশি বসবে। সুতরাং smokers দের মধ্যে wasim-কে 3 no. room-টি দেয়া যায় যাতে আমরা 4 no. room-এ Borhan-কে বসাতে পারি।

| 1 | 2 | W | B | G | 6 |
|---|---|---|---|---|---|

Peter সব সময় পাশের room-এ silence চায়। অতএব, তাকে 2 no. room-এ দেয়া যাবে না। কারণ 3 ও 4 no. room এর Wasim ও Borhan সব সময় বলে। অর্থাৎ 1 no. room এ Peter এবং 2 no. room-এ Ahmed-কে বসানো যায়।

| P | A | W | B | G | 6 |
|---|---|---|---|---|---|

বাকী রইল Beauty. তার একটিই জায়গা room no. 6। এভাবে বসালে সব শর্তগুলোই মানা হয়-

| P | A | W | Bor | G | Bea |
|---|---|---|---|---|---|

সুতরাং, Question no. 1, 2 এবং 3 এর answer যথাক্রমে (a), (e) এবং (c)

এভাবে Puzzle Questions Solve করতে হবে। নিচে কয়েকটি exercise দেয়া আছে। এগুলো করার চেষ্টা করুন।

## PRACTICE EXERCISE

**Questions 1-3 are based on the following**

Eight varsity baseball players (G, H, J, K, L, M, N, and O) are to be honored at a special ceremony. Three of these players (H, M, and O) are also varsity football players. Two of them (K and N) are also basketball players on the varsity team. In arranging the seats it was decided that athletes in two sports should not be seated next to another two- sport athlete.

1) Which of the following combination is possible in order to have the arrangement of seat assignments as planned?
A) H G K L B) HKJL C) J K M N D) JLHKJ E) LKNJ

2)To have the proper seating arrangement, K should sit between.
A) G and H B) J and M C) L and N. D) J and N E) J and L

3) Which of the following cannot sit next to M?
A) G B) J C) G and J D) K E) L

**Questions 4-9 are based on the information given below:**

At a certain restaurant, above the kitchen door there are four small lights, arranged side by side and numbered consecutively, left to right, from one to four. The lights are used to signal waiters when orders are ready. On a certain shift there are exactly 5 waiters David, Ed. Flint, Guy, and Hank.

To signal David, all four lights are illuminated.
To signal Ed, only light 1 & 2 are illuminated.
To signal Flint, only light 1 is illuminated.
To signal Guy, only light 2, 3 & 4 are illuminated.
To signal Hank, only lights 3 & 4 are illuminated.

4. If lights 2 & 3 are off, the waiter signaled is
A) David B) Ed C) Flint D) Guy E) Hank.

5. If lights 3 & 4 are illuminated, then the signal of which of the following waiters might be displayed?
I) David (II) Guy (III) Hank.
A) I only B) III only C) I and II only D) II and III only E) I, II and III

6. If light one is not illuminated, then the signal of which of the following waiters might be displayed?
I) Ed. (II) Guy (III) Hank.
A) I only (B) I and II only (C) I and III only
(D) II and III only (E) I, II and III.

7. If light three is on and light two is off, then the waiter signaled is
A) David (B) Ed (C) Flint (D) Guy (E) Hank.

8. If 1 of the 5 waiters is being signaled, the lights in which of the following pairs could not both be off?
A) 1 & 2 (B) 1 & 3 (C) 2 & 3 (D) 2 & 4 (E) 3 & 4.

9. If light 4 is on, which of the following must be true ?
A) Light three is not on B) Light two is not on
C) If light one is on, David is signaled D) If light three is not on, Ed. is signaled

**From questions 10-15, consider the following passage:**

A student planning his curriculum for the upcoming semester must enroll in three courses. The available courses fall into one of five general areas: math, English, social studies, science & fine arts. The student must take courses from at least two different areas.

If he takes an English course, he cannot take a fine arts course & if he takes a math course, he cannot take an English course.
If he takes a science course, he must take a math course & if he takes math course, he must take a must take a science course.
He can take a social studies course only if he takes a fine arts course.

10. Which of the following is an acceptable schedule of courses?
A) one science course, on English course & one fine arts course.
B) one math course, one science course & one social studies course.
C) one math course, one social studies & one fine arts course.
D) one English course, one social studies course & one fine arts course.
E) one math course, one science course & one fine arts course.

11. Which of the following is NOT an acceptable schedule?
A) 2 math & one science course (B) 2 science course & one math course
C) 2 fine arts course & one math & one math course
D) 2 social studies courses & one fine arts course.
E) One social studies course & 2 fine arts course.

12. Which of the following courses when taken with one course in social studies is an acceptable schedule?
A) one course in math & one course in science
B) one course in fine arts & one course in English.
C) two courses in fine arts D) two course in English.
E) one math course & one English course

13. If a student wishes to take a course in math & a course in English, then he must select his third course in the area of
A) English (B) fine arts (C) math (D) science (E) social studies.

14. Which of the following pairs of courses can be combined in an acceptable schedule?
A) a course in math & a course in fine arts
B) a course in math & a course in social studies
C) a course in math & a course in English
D) a course in social studies & a course in science
E) a course in science & a course in English.

15. If the student wishes to take a course in science, then which of the following pairs of course would complete an acceptable schedule?
A) two math course (B) two science course (C) two English courses
D) one science course & one English course
E) one math course & one social studies course.

**Questions 16-18 are based on the following information:**

An office building has 6 floors & each floor is occupied by exactly I business. The 6 business are an insurance agency, a doctor's group, a law firm, a printing company, a dance studio, and a shirt factory.

The insurance agency is located somewhere below the fourth floor.
The doctor's group is separated from the insurance agency by the same number of floors that separate the insurance agency from the law firm, though that number may be zero.
The printing company is located somewhere between the dance studio and the insurance agency.
The law firm is either immediately above or immediately below the printing company.

16. Which of the following is a possible arrangement of the business, from 1st floor to the 6th floor?
A) docotor's group insurance agency, law firm, printing company, dance studio, shirt factory.
B) doctor's group, insurance agency, law firm, shirt factory, printing company, dance studio.
C) insurance agency, law firm, printing company, doctor's group, dance studio, shirt factory.
D) shirt factory, law firm printing company, insurance agency, doctor's group, dance studio.
E) dance studio, printing company, insurance agency, law firm doctor's group, shirt factory.

17. If the dance studio is on 5th floor, on which floor is the shirt factory located?
A) first (B) second (C) third (D) fourth (E) sixth.

18. If the shirt factory is located on the 5th floor, which of the following must be true?
A) the insurance agency is one the first floor
B) the doctor's group is on the second floor
C) the law firm is on the third floor
D) the dance studio is on the fourth floor
E) the printing company is on the sixth floor.

**Questions 19-24**

A museum curator must group nine paintings F, G, H, J, K, L, M, N, and O – in twelve spaces numbered consecutively from 1-12. The paintings must be in three groups, each group representing a different century. The groups must be separated from each other by at least one unused wall space. Three of the paintings are from the eighteenth century, two from the nineteenth century, and four from the twentieth century.
Unused wall spaces cannot occur within groups.
G and J are paintings from different centuries.
J, K, and L are all paintings from the same century.
Space number 5 is always empty.
F and M are eighteenth-century paintings.
N is a nineteenth-century painting.

19. If space 4 is to remain empty, which of the following is true?
A) Space number 10 must be empty.
B) The groups of paintings must be hung in chronological order by century.
C) An eighteenth-century painting must be hung in space 3.
D) A nineteenth-century painting must be hung in space 1.
E) A twentieth-century painting must be hung in space 12.

20. If the paintings are hung in reverse chronological order by century, the unused wall spaces could be
A) 1, 5, and 10 B) 1, 6, and 10 C)4 , 7, and 8 D)5, 8, and 12 E) 5, 9, and 10

21. Which of the following is a space that CANNOT be occupied by a nineteenth-century painting?
A) Space 1 B) Space 6 C) Space 8 D) Space 11 E) Space12

22. If J hangs in space 11, which of the following is a possible arrangement for spaces 8 and 9?
A) F in 8 and M in 9 B) K in 8 and G in 9 C) N in 8 and G in 9
D) 8 unused and H in 9 E) 8 unused and F in 9

23. If the twentieth-century paintings are hung in spaces 1-4, which of the following CANNOT be true?
A) Space 8 is unused B)Space 9 is unused C) F is hung in space 6
D) M is hung in space 12 E) N is hung in space 9

24. If the first five paintings, in numerical order of spaces, are F, O, M, N, G, which of the following must be true?
A) Either space 1 or space 4 is unused B) Either space 7 or space 12 is unused
C) H hangs in space 11
D) Two unused spaces separate the eighteenth-century and nineteenth-century paintings
E) Two unused spaces separate the nineteenth-century and twentieth-century paintings

**Questions 25-28**

A large office complex has exactly seven buildings – R, S, T, U, V, W, and X. A delivery service with four vans – van 1, van 2, van 3, and van 4 – carries packages by van from building to building at the complex. Each van has a unique route, which it repeats throughout the day:

Van 1 travels only from R to S, from S to T, from T to U, from U to V, and from V to R.
Van 2 travels only from S to W and back to S.
Van 3 travels only from T to V and back to T.
Van 4 travels only from U to X and back to U.

Vans stop at each building to which they travel, and packages can be picked up and delivered at any stop. Any van can also leave a package for any other van to pick up at any building where both vans stop.

25. A package sent by van can be delivered with no intermediate stops if it is sent from
A) R to W B) S to R C) T to R D) U to T E) V to T

26. On its way to any building in the complex, a package sent by van from W must travel to
A) R B) S C) T D) U E) V

27. What is the minimum number of intermediate stops for a package sent by a van from R to V?
A) One B) Two C) Three D) Four E) Six

28. Which of the following lists all of the vans, in the order of use, that would be needed to send a package by van from X to T with the minimum number of intermediate stops?
A) Van 3, Van 1 B) Van 4, Van 1 C) Van 1, Van 2, Van 3
D) Van 2, Van 1, Van 4 E) Van 4, Van 1, Van 3

**Questions 29-33**

Exactly seven persons – P, Q, R, S, T, U, and V – participate in and finish all of a series of swimming races. There are no ties for any position at the finish of any of the races.

V always finishes somewhere ahead of P
P always finishes somewhere ahead of Q
Either R finishes first and T finishes last, or S finishes first and U or Q finishes last.

29. If in a race V finishes fifth, which of the following must be true?
A) S finishes first. B) R finishes second C) T finishes third
D) Q finishes fourth E) U finishes last.

30. If in a race R finishes first, V can finish on lower than
A) second B) third C) fourth D) fifth E) sixth

31. If in a race S finishes second, which of the following can be true?
A) P finishes before R B) V finishes before S C) P finishes before V
D) T finishes before Q E) U finishes before V.

32. If in a race S finishes sixth and Q finishes fifth, which of the following can be true?
A) V finishes first or fourth. B) R finishes second or third.
B) P finishes second or fifth D) U finishes third or fourth.
E) T finishes fourth or fifth.

33. If in a race R finishes second and Q finishes fifth, which of the following must be true?
A) S finishes third. B) P finishes third. C) V finishes fourth.
D) T finishes sixth. E) U finishes sixth.

**Questions 34- 37**

Seven meetings – J, K, L, M, N, O, and P – are to be scheduled, one on each day of a week that begins on Sunday.

Meeting J must take place on Sunday

Meeting K must take place after both meeting L and meeting M.

Meetings N, O, and P must take place on three consecutive days, not necessarily in that order.

34. Which is the latest day of the week on which meeting L can take place?
A) Tuesday B) Wednesday C) Thursday D)Friday E) Saturday

35. Which of the following must be true about the order of meetings?
A) L takes place after J B) L takes place after O C) N takes place after O
D) N takes place after P E) O takes place after P

36. If meeting O is on Saturday, then meeting K must take place on
A) Monday B) Tuesday C) Wednesday D) Thursday E) Friday

37. Which of the following represents a possible ordering of meetings on three consecutive days?
A) JMK B) KLO C) MNJ D) OJN E) POM

**Questions 38- 40**

A detective watching suspects Q, R, S, and T and their movements in and out of a downtown building has made the following observations:

Every day, each of the suspects enters, and later leaves, the building exactly once.

No suspect ever enters or leaves the building together with another suspect.

No suspect ever leaves the building in the same position – first, second, third, or fourth – in which he or she entered the building.

Both in entering the building and in leaving it, R is always earlier than S.

38. Which of the following could be the order, from first to last, in which the suspects leave the building on a day on which they enter it in the order T, Q, R, S?
A) Q, R, S, T B) Q, R, T, S C) R, Q, S, T D) S, T, Q, R E) T, R, S, Q

39. If, on a certain day, Q and T enter the building second and third, respectively, and Q also leaves the building before T does, the order in which the suspects leave the building, from first to fourth, must be
A) Q, R, S, T B) Q, R, T, S C) Q, T, R, S D) R, Q, S, T E) R, S, Q, T

40. On a day on which the two suspects who enter the building first are also the two suspects who leave it first, the last two suspects to enter the building could be
A) Q and R B) Q and T C) R and S D) R and T E)S and T

**ANSWER KEY**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. A | 2. E | 3. D | 4. C | 5. E | 6. D | 7. E | 8. B |
| 9. C | 10. E | 11. C | 12. C | 13. D | 14. A | 15. A | 16. A |
| 17. E | 18. C | 19. C | 20. D | 21. A | 22. D | 23. E | 24. A |
| 25. E | 26. B | 27. B | 28. E | 29. A | 30. C | 31. E | 32. D |
| 33. D | 34. D | 35. A | 36. C | 37. E | 38. A | 39. A | 40. E |

# DATA SUFFICIENCY

Data Sufficiency questions IBA এর BBA/MBA ভর্তি পরীক্ষায় খুব একটা আসে না। এ ধরনের প্রশ্ন সাধারণত GMAT পরীক্ষার অনুকরণে করা হয় থাকে। Data sufficiency questions এ দুটো statement-এ আমাদেরকে কিছু Data দেয়া হবে। আমাদের কাজ হবে সেই Data দুটোর sufficiency (পর্যাপ্ততা) বিচার করা। এ ধরনের questions এর আগে কিছু Directions দেয়া থাকে answer choosing এ জন্য। Directions গুলো নিম্নরূপ ঃ

**Directions :** Each of the question below is followed by two statements labeled (i) and (ii) Analyze the information given in the statements (i) and (ii) and then mark the appropriate code in your answer sheet. The alternative courses are explained below :

A) If statement (i) alone is sufficient to answer the question, but not statement (ii) alone.
B) If statement (ii) alone is sufficient to answer the question, but not statement (i) alone.
C) If (i) and (ii) together are sufficient to answer the question, but neither alone is sufficient.
D) If either of the statements (i) or (ii) alone is sufficient to answer the question.
E) Additional information is needed because the question cannot be answered on the basis of (i) or (ii) or both of them.

একটা example এর সাহায্যে আমরা ব্যাপাটা বোঝার চেষ্টা করব।

**Example:** A rectangular field is 40 yards long
Can we find the area of the field?
i) A fence around the entire foundry of the field is 140 yards long.
ii) The field is more than 20 yards wide.

**Explanation:** আমরা জানি, rectangle (আয়তক্ষেত্রের) এর area (ক্ষত্রফল) = lenght (দৈর্ঘ্য) × width (প্রস্থ)। প্রদত্ত সমস্যায় আমাদের length দেয়া আছে (40 yards)। অর্থাৎ area জানার জন্য আমাদের widht বের করতে হবে। একবার চোখ বোলালেই বোঝা যায় যে শুধুমাত্র (ii) থেকে width বের করা অসম্ভব। কারণ, (ii) তে বলা আছে width 20 yards এর চেয়ে বিশী। এ থেকে actually কিছুই বোঝা যায় না। সুতরাং answer choice (B) এবং (D) বাদ। শুধুমাত্র (i) বিশ্লেষণ করলে আমরা দেখতে পাই, এখানে rectangular field টির perimeter (পরিসীমা) দেওয়া আছে (140 yards)। পরিসীমা=২ (দৈর্ঘ্য + প্রস্থ)= 2x40+2 প্রস্থ = 80+2x প্রস্থ

$80 + 2 \times \text{প্রস্থ} = 140$

$\Rightarrow 2 \times \text{প্রস্থ} = 60$

$\Rightarrow \text{প্রস্থ} = 30$

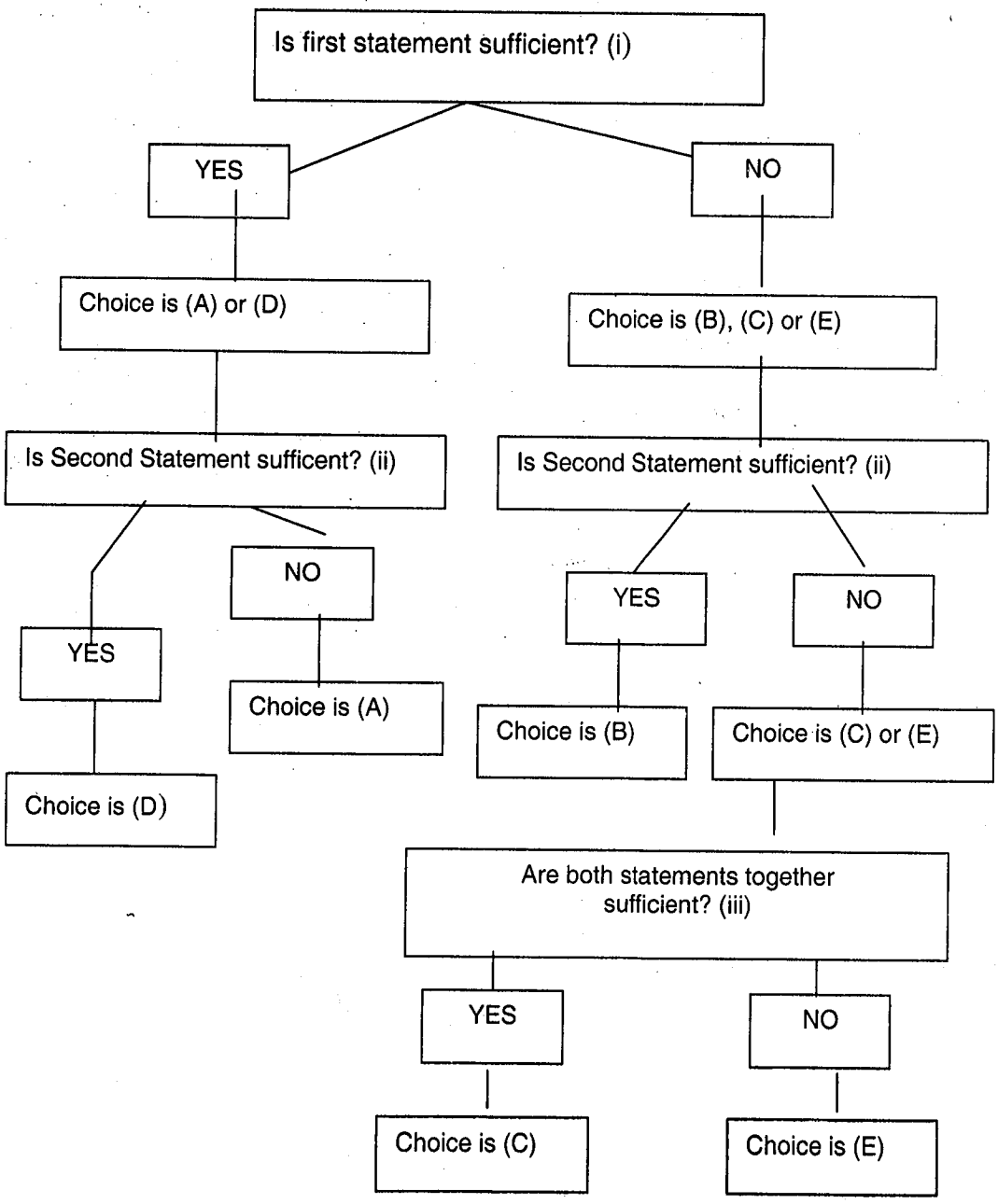
Actually, প্রস্থ (width) বের করার ঝামেলায় আপনাকে যেতে হবে না। আপনি যদি বুঝতে পারেন যে width বের করা সম্ভব, তাহলেই যথেষ্ট। কারণ, width বের করতে পারলেই আপনি area বের করতে পারবেন। আমাদেরকে area কত সেটা question করা হয়নি, rather করা হয়েছে আমরা area বের করতে পারব কিনা ? সেটা বুঝতে পারলেই যথেষ্ট। সুতরাং answer is (A)

**How to Proceed:** As a general rule, চেষ্টা করুন Directions এর sequence (ধারা) মেনে চলতে। প্রথমে (i) এর sufficiency try করুন, যদি answer হয় yes, তাহলে (A) বা (D) হবে answer, Now, if the answer to (ii) is yes, the choice must be (D), and if the answer to (ii) is no, the choice must be (A).

যদি (i) try করার পর answer আগে no, then the only possible choices are (B), (C) or (E). এখন, if the answer to (ii) is yes, then the choice must be (B) and if the answer to (ii) is no, the choice must be (C) and (E).

এরপর দেখতে হবে (i) + (ii) মিলে answer দেয়া possible কিনা। যদি possible হয়, তবে answer (c); আর যদি possible না হয়, তবে answer হচেছ (E).

নিচের diagram টি মনোযোগ দিয়ে বোঝার চেষ্টা করুন। তাহলে process টা clear হয়ে যাবে।



আমরা প্রথম exercise টি solve করে দিয়েছি। বাকী exercise গুলোর answer দেয়া আছে।

**Directions:**

A) If you can get the answer from (1) alone and not from (2) alone

B) If you can get the answer from (2) alone but not from (1) alone.

C) If you can get the answer from (1) and (2) together, although neither statement by itself is sufficient.

D) If statement (i) alone suffices and statement (2) alone suffices

E) If you cannot get the answer from statement (1) and (2) together but need even more data.

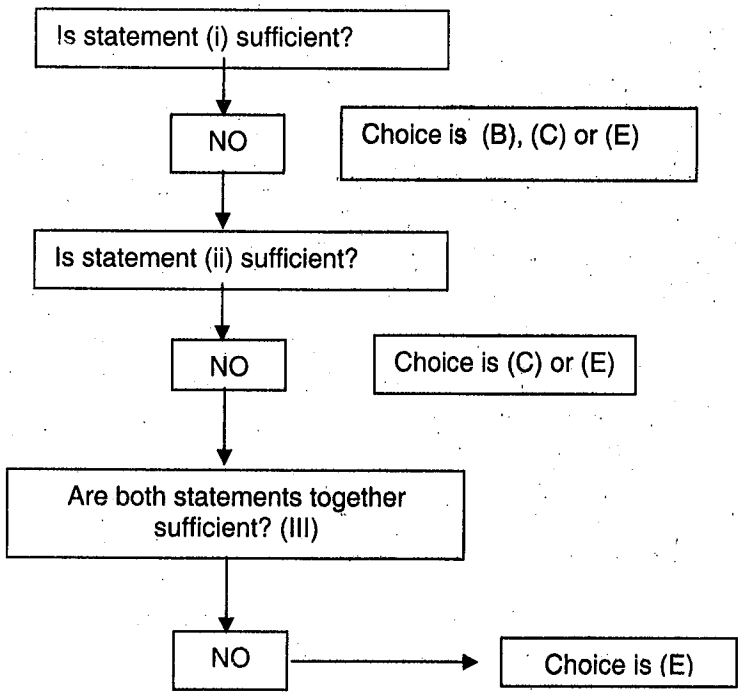
1. Did Pamela go to the beach yesterday?
   1) If Pamela goes to the beach she will be sunburned the next day.
   2) Pamela is sunburned today.
2. Is 10 average of a b and 10?
   a) $a + b = 20$ (b) $a - b = 4$.
3. How much does Shiplu weigh?
   a) Shiplu and Shan together 252 pounds
   b) Shan weigh thrice as much as Shiplu.
4. Is X/20 an integer?
   a) X/4 is an integer (b) X/5 is an integer.
5. Is Seba older than Musa?
   1) Shiela is four years younger than Seba and two years younger than Musa.
   2) The average of Seba's age in years and Musa's age in years is 17.
6. If a, b and c are consecutive integers, is b even?
   1) $a < b < c$ (2) ac is an odd integer.
7. How many students are enrolled in Professor Matin's history class?
   1) If three more students sign up for the class and none drop out, more than 35 students will be enrolled in the class.
   2) If four students drop out of the class and no more sign-up, fewer than 30 students will enrolled in the class.
8. What is the area of circular region C?
   1) C has a circumference of $4\pi$ (2) C has a diameter of 4.
9. Is $x < y$?
   1) $-0.25 < x < 0.25$ (2) $0.15 < y < 0.35$.
10. Is the sum of x and y an odd number ?
    1) x and y are two different prime number?
    2) The product of x and y is an even number?
11. If x is an integer, is x and odd number?
    1) 3x is an even number (2) $x + 2$ is an even number.
12. If p, q and r are consecutive integer, in that order, what is the value of q?
    1) $q + p + r = 0$ (2) $pr = -1$.
13. Is xy a positive number?
    1) $x^2y$ is a positive number (2) $x \div y$ is a positive number.

14. Is $a - b > 0$ ?
    1) $a > b$ (2) $a^2 > b^2$.

15. What is the remainder when x is divided by 15?
    1) x is a multiple of 3 (2) x is a multiple of 5.

**Explanation of exercise (i):** আমাদেরকে বে করতে হবে Pamela beach-এ গিয়েছিল কিনা। প্রথম statement-এ বলা আছে যদি Pamela beach-এ গিয়ে তাকে তাহলে সে পরের দিন sunburnt থাকবে না। Is this statement sufficient ? No. সুতরাং answer (A) বাদ। Statement (II) এ বলা হয়েছে যে Pamela আজকেই sunburnt এখন প্রশ্ন হচ্ছে, beach এ গেলেই যে sunburnt হবে এমন কোন certain condition আছে কিনা। অবশ্যই না। সুতরাং answer (B) বাদ। এবার দুটি statement একসাথে বিবেচনা করলে কি আমরা question এর answer দিতে পারি। পারি না। সুতরাং answer হচ্ছে (E).

Process টি নিম্নরূপ ঃ




এবার exercise এর problem গুলো solve করুন। Exercise করার সময় প্রথমে দুই একবার উপরের process টি follow করুন। তারপর আর এসব process follow করতে হবে না। এই process follow না করেই আপনি Answer করতে পারবেন।

**Answer key for Data Sufficiency Questions**

| | | |
|---|---|---|
| 1. E | 2. A | 3. C |
| 4. C | 5. A | 6. B |
| 7. C | 8. D | 9. E |
| 10. C | 11. D | 12. D |
| 13. B | 14. A | 15. C |

## IQ QUESTIONS

IBA ভর্তি পরীক্ষায় Analytical Ability section এ কিছু প্রশ্ন থাকতে পারে যেগুলো শুধুমাত্র সাধারণ বুদ্ধির (common sense) উপর করা হয়ে থাকে। এ সব প্রশ্নের মাধ্যমে আপনার IQ (Intelligence Quality) পরীক্ষা করা হয়। IBA Admission Test '96-97 এর একটি question ছিল এরকম-

Which is the odd one out?
A) Pen, (B) Paper (C) Dagger (D) Ink (E) Pencil.

Question টির অর্থ হচ্ছে answer choice গুলোর মধ্যে কোনটি বাকীগুলোর সাথে বেমানান। নিশ্চয় আপনি বুঝতে পারছেন এক্ষেত্রে Dagger-ই- সঠিক answer কারণ এটি বাকীগুলোর সাথে একেবারেই অসামঞ্জস্যপূর্ণ।

'97-98-এ একটি Question ছিল নিম্নরূপ-
If A = Bat, B = Cat, C = Dad, D – Eat, then E = ?
A) Dad (B) Egg (C) Eat (D) Fat (E) Fit.

খুবই সোজা একটি প্রশ্ন। Question stem-এ আমরা দেখতে পাচ্ছি প্রত্যেকটি letter কে represent করছে ঠিক পরবর্তী letter + a দিয়ে শুরু একটি শব্দ। সুতরাং E-কে represent করবে F + a দিয়ে শুরু কোন শব্দ। The answer is D (Fat).

আরেকটি question লক্ষ্য করুন-

A is the son of B, but B is not the father of A. What can we deduce from the above statement?

Answer choice-ও দেখার দরকার নেই। A, B এর ছেলে। B, A এর বাবা নয়। তাহলে অবশ্যই B, A এর mother.

'98 - 99 BBA Admission Test এ এসেছে এরকম একটি question দেখি-

Your friend throws a ball to you. After catching it you throw it back to him and the game goes on. If each of you catch the ball five times, at least how many throws must take place between two of you?
A) 25 (B) 15 (C) 11 (D) 5 (E) None of these.

প্রশ্নটা বোঝার চেষ্টা করুন। আপনার বন্ধু আপনাকে একটি বল ছুঁড়ে দিল এবং আপনি বলটি return করলেন। এভাবে চলতে থাকল। আপনারা দুজনেই পাঁচবার বলটি catch করেছেন। প্রশ্ন হচ্ছে সর্বনিম্ন কয়বার বলটি throw করা হয়েছে। সর্বনিম্ন throw এর সংখ্যা 10. Answer (E) পাঁচবার catch ধরতে হলে throw হতে হবে পাঁচটি। এভাবে উভয়ে যদি পাঁচটি catch ধরে থাকে তাহলে মোট throw ১০টির কম হওয়া অসম্ভব।

### PRACTICE EXERCISE

1. Which one of the following words fits best to hours, minutes and second?
   A) Decade (B) Year (C) Month (D) Week (E) Day.
2. Car is to wheel as Horse is to ---
   A) belly (B) body (C) tail (D) leg (E) none of these.
3. If 5 athletes run a mile in 5 minutes, how much time will 50 athletes take to run a mile ?
   A) 0.1 minutes (B) 5 minutes (C) 10 minutes (D) 50 minutes (E) 250 minutes.
4. If some electric poles stand in a straight row 60 yards apart, what is the distance from the first to the $10^{th}$?
   A) 600 yards (B) 540 yards (C) 1000 yards (D) 800 yards E) None.
5. BATHE stands for 23541, the TEA stands for
   A) 135 (B) 351 (C) 513 (D) 452 (E) 235.
6. If 653042 stand for VOLUME, the 4032 stands for
   A) MULE (B) MLEU (C) VOLU (D) UMLE (E) MELU.
7. Pen and Tuk, Chair and ---
   A) Stamp (B) Pencil (C) Pot (D) Handle (E) Table

8. Why the flash of a thunder is seen first, then the sound is heard a little?
A) Because it is distant (B) Because of air resistance
C) Because of clouds (D) Because light travels much faster than sound
E) Because the eye works faster than the ear.

9. Watch is to time, as barometer is to-------
A) thermometer (B) atmospheric pressure (C) Chemical energy
D) volume (E) solar energy

10. As tomorrow is to yesterday, so Tuesday is to -----
A) Sunday (B) Saturday (C) Monday (D) Wednesday (E) Friday

11. A is the brother of P. Q and R are sisters, R is the mother of B. B is A's sister.
If the assumptions are true, then it is also true that
A) Q is the mother of A (B) A and Q are sisters (C) P is the brother of B
D) B is R's son (E) None of the above.

12. Which is the odd one out?
A) Tennis B) Football C) Cricket D) Hockey E) Chess

13. If you buy a book for Tk. 100 and sell it at a price which is not more than your buying price, then your selling price can be------
A) Tk.75 B) 150 C) Tk.100 D) Both A and B E) Both A and C

14. You are playing chess with a player of the save standard as yours, what is the probability of your winning the game?
A) 25% B) 50% C) 66*% D) 33*% E) ) 100*%

15. Mr. Rahaman and his biological son, Alamgir, become seriously injured a car accident and are taken to the hospital. The doctor attending them immediately recognizes Alamgir and cries out "Oh god! Please save my only son". Which of the following is the most likely explanation?
A) The doctor is hallucinating as result of Nitrons oxide overdose.
B) The doctor is actually an escape from the lunatic Ward.
C) Mr. Rahaman is the biological son of the doctor.
D) Dr. is the mother of Alamgir.
E) None of the above.

IBA এর ভর্তি পরীক্ষায় Analytical section এ কিছু প্রশ্ন করা হয় যেগুলো critical reasoning, puzzle বা **IQ-** কোনো categoy তেই পড়ে না। এসব প্রশ্ন গুলো মুলতঃ Maths এর basic idea-র উপর করা হয়। এ ধরনের কিছু প্রশ্ন নীচে দেওয়া হলোঃ

## MATHEMATICAL QUESTIONS

1. Which of the following expressions is closest to 1?

$A)\ \frac{5}{5+0.05}$ $B)\ \frac{5}{(5+0.05)^2}$ $C)\ \frac{5}{5+0.5}$ $D)\ \frac{5}{5+(0.05)^2}$ $E)\ \frac{5}{(5+0.5)^2}$

2. Bidit has Tk. 5 more than Adnan and Adnan has Tk. 2 more than Shoeb. Which of the following exchanges will ensure that each of the three has an equal amount of money?
A) Bidit must give Shoeb Tk. 4 Adnan must give shoeb Tk. 5
B) Shoeb must give Bidit Tk. 1and Bidit must give Adnan Tk.
C) Bidit must give Adnan Tk. 1 and Shieb Tk. 3
D) All of the above E) Either A or B

3. Five people jion an exercise class. X weighs 50 kg. P weighs 46 kg, more than P but 2kg less than A. Again M weigh the same as X. After a month of training m and P each lose I kg and X and A each of lose 2 kg. N, who has been secretly bringing a box of sweets to class, gains 2 kg. After the month of training, which two people weight the same?
A) X and M (B) M and A (C) X and A (D) M and N (E) A and P

4. The local price of a dozen eggs in Bangladesh is Tk. 30, while in India it is Rs. 20. At the current exchange rate of US$ 1= Tk. 40 and US$ 1= RS. 32; so a dozen Indian eggs costs the equivalent of Tk. 25. As eggs are cheaper in India, they are being smuggled into Bangladesh. What rate of Bangladeshi Taka to US Dollar will make the smuggling of India eggs into Bangladesh non-profitable?
A) US$ 1 = Tk. 32 (B) US$ 1 = Tk. 36 (C) US$ 1 = Tk. 40
D) US$ 1 = Tk. 48 (E) US$ 1 = Tk. 56.

5. Which of the following numbers can not be the last digit of a squared number?
A) 0 (B) 1 (C) 2 (D) 4 (E) All.

6. A rectangle is R inches long and S inches wide. Its length is increased by 4 inches. The area (in sq, inches) has increased by –
A) 4 RS (B) 4 R (C) 4 S (D) 16 RS (E) 4 (R + S).

7. Book A costs more than Book B. Book C Costs more than Book D. Book E. costs less than Book D. Book B and Book E cost same. If the above is true, which of the following must also be true?
A) Book A costs more than Book D B) Book A costs less than Book C
C) Book 4 costs less than Book B D) Book C costs more than Book B
E) Book E costs more than Book C.

8. If $x > 2$ and $y > -1$, then.
A) $x < 2y$ (B) $-x > 2y$ (C) $-x < 2y$ (D) $xy > -2$ (E) $xy < -2$.

9. Mr. Reza leaves Dhaka city at 8 a. m. and drives north on the highway at an average speed of 50 mph. Mr. Sabbir leaves Dhaka city at 8:30 a.m. and drives north on the same highway at an average speed of 60 mph. Mr. Sabbir will
A) Overtake Mr. Reza at 9:30 a.m. (B) Overtake Mr. Reza at 10:30 a.m.
C) Overtake Mr. Reza at 11 a.m. (D) Be 30 miles behind at 8:35 a.m.
E) Never overtake Mr. Reza.

10. Bell a rings every 2 minutes and B rings every 3 minutes. If the bells ring simultaneously at 1:00 p.m., what is the total number of times the bells with ring simultaneously between 1:00 p.m. and 2:00 p.m. inclusive.
A) 12 (B) 11 (C) 10 (D) 9 (E) 8.

11. Tanim owes Mehnaz Tk. 2 Mehnaz owes Nasim Tk. 10 and Nasim in turn owes Tanim some moeny. How much does Nasim owe Tanim if all three debts could be settled by having Mehnaz pay Tk. 1 to Tanim and Tk. 7 at Nasim?
A) Tk. 2 (B) Tk. 3 (C) Tk. 4 (D) Tk. 5 (E) Tk. 6.

12. A, B, C, D, E and F are integers such that the sum of the numbers in the three boxes in any row, column or diagonal is an odd number

| | | |
|---|---|---|
| 10 | 11 | A |
| B | C | D |
| E | 13 | F |

Which of the following must be true of the number D?
A) It must be an even number B) It must be an odd number
C) It must be a multiple of 5. D) It must be a multiple of 3.
E) It cannot be determined from the information given.

13. If $w + x + y + z = 35$, then at least n of the number w, x, y, z must be positive where n is
A) 0 (B) 1 (C) 2 (D) 3 (E) 4.

14. X is a positive integer. When $x + 1$ is divided by 6, the remainder is 5. What is the remainder when X is divided by 6?
A) 7 (B) 5 (C) 4 (D) 3 (E) None.

15. If the product of three consecutive integers is 210, then the sum of the two smaller integers is
A) 5 (B) 11 (C) 12 (D) 13 (E) 18.

16. If two numbers have only the number 1 as a common divisor, then they are called "relatively prime". Which of the following are NOT relatively prime?
I) 3 (II) 4 (III) 7 (IV) 12
A) I and II, I and III (B) I and IV, II and IV (C) II and III, II and IV
D) II and IV, III and IV (E) I and II, I and IV.

17. What is the next number in the series : 1, 2, 3, 5, 8 --- ?
A) 11 (B) 10 (C) 13 (D) 15 (E) cannot be determined.

18. The next number in the arithmetic progression 32, 40, 48 ---- is
A) 56 . (B) 18 (C) 38 (D) 24 (E) 33.

19. The closets approximation of $\frac{72.27 \times 0.005}{0.04}$ s

A) 0.082 (B) 0.82 (C) 8.2 (D) 82 (E) 820.

20. Fill in the blank space with the appropriate number: 2,3,5,7 – ,13.17.
A) 10 (B) 9 (C) 11 (D) 12 (E) None.

## ANSWER KEY

**IQ Questions:**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1. E | 2. D | 3. B | 4. B | 5. C | 6. A | 7. E | 8. D | 9. B |
| 10. A | 11. C | 12. E | 13. E | 14. D | 15. D | | | |

**Mathematical Questions:**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1. D | 2. C | 3. D | 4. D | 5. C | 6. C | 7. D | 8. C | 9. C |
| 10. B | 11. B | 12. B | 13. B | 14. C | 15. B | 16. B | 17. C | 18. A |
| 19. C | 20. C | | | | | | | |

# Chapter 5
# Written English

Essay / Short Note / Paragraph Writing

Thematic Writing

Sentence Re-Writing

Logical Writing

Data Interpretation / Presentation

Dialogue Writing

# ESSAY /SHORT NOTE / PARAGRAPH WRITING

IBA (MBA) Admission Test এর Written English Section এ অন্যতম গুরুত্বপুর্ন এবং challenging অংশ হচ্ছে writing short notes, essays and paragraphs. পরীক্ষার এই পর্যায়ে examinee কে above mentioned pattern এ at least written composition করতে হয়. Of course এই কাজটি করা প্রয়োজন একটি tight time restriction এর ভেতরে. Which means এই section এ examinee কে prompt analysis এবং composition skills এর পরিচয় দিতে হয়. Following are the task types যা পরীক্ষায় আসতে পারে :

- Short Note Writing এবং Essays [মূলত একই কাজ ]
- Paragraph Writing

## Essays:

Essays, by definition, are independent compositions, which make, on their own, *propositions* (প্রস্তাব) and *deduce* (সিদ্ধান্তে পৌছানো ) conclusions by the use of relevant facts, examples and descriptions.

The essay quarries in the IBA (BBA) Admission Tests, lately, have been as following:

1. *... What makes a good teacher different from others and why do you think so?* (2000-2001)
2. *Write a short essay on "The best way to prepare for a test" ...* (2001-2002)
3. *... write an essay on one of the qualities you like most about yourself.* (2002-2003)
4. *... describe the most terrifying experience you had in your life.* (2003-2004)
5. *... describe an event where you have proved your managerial skills.* (2004-2005)

So, it can be seen that at times examinees are asked to propose opinions and defend them and at other times are required to present ideas that have to be then elaborated or clarified. Thence, answers to these questions have to meet the following requirements, which really are elementary to essays:

a. A "Thesis" is to be introduced *at the helm of* (সামনের দিকে) the composition.
b. Details, supportive/elaborative of the "Thesis", are then to follow.
c. Lastly, a "Conclusion" is to be drawn in accordance to the supporting details.

Also, by rule, essays must be structured in the original 3-part format. Of course, all answers should be grammatically accurate and logically *coherent* (সঙ্গতিপুর্ন)

### Structural Elements of a Generic Essay

- Mandatory Elements:

| | |
|---|---|
| **Thesis Statement** | *Illustration of the main idea or **thesis** of the essay. Must be included in the introduction.* |
| **Supporting Details** | *(Descriptions, facts, examples that elaborate and/or support the thesis. Must be accommodated in the **Body** part of the essay.* |
| **Conclusion** | *(Transliteration of the thesis to an assertive judgment drawn from, and by the power of, the supporting details. Must be encased within the ultimate paragraph)* |

- Optional Elements:

| | |
|---|---|
| **Attention Grabber** | *(The statement[s] often used at the head of Introduction and, less frequently, Body Paragraphs, to engross the "attention" of readers.* |
| **General Statements** | *(Relatively neutral (i.e. non-assertive), superficial, and, sometimes, purely rhetorical, statements drafted for the purpose of providing initiation of, and/or continuation among, paragraphs and/or illustrations of ideas within wherever necessary in essays)* |

## Writing Paragraphs

Since several paragraphs make an essay, writing *sovereign* (সার্বভৌম) paragraphs may seem likely to pose only a third of the task-load of essay writing. In the IBA (BBA) Admission Test, however, the paragraph writing section brings about several genuine challenges and is not mathematically correct in its level of difficulty. This is because –

i. Firstly, a *solitary* (একা/নিসঙ্গ) paragraph must be self-explanatory, as it is not preceded or followed by other introductory or supportive paragraphs, and, hence, is equally demanding of completeness as are essays.

ii. Secondly, if prompted to write several (e.g. two) paragraphs, the *composite* (যৌগিক) response of the examinee to a writing prompt is to be divided logically among the *requisitioned* (প্রয়োজনীয়/আনুষ্ঠানিক ভাবে চাওয়া) paragraphs and elaborated within respectively. This becomes problematic, especially, for a pair of paragraphs.

iii. Also, the paragraphs should be more *verbose* (শব্দ-বহুল) than they may be within essays, obviously for assignments requiring less than 3 paragraphs (any composition that may have 3 or more paragraphs can be drafted as essays unless instructed explicitly otherwise).

iv. The usual structural requirements of paragraph writing, of course, are moreover applicable.

### Structural Elements of a Generic Paragraph

- Mandatory Elements:

  **Topic Sentence** (*The sentence that illustrates the subject topic of the paragraph – main focus*)

  **Supporting Details** (*Descriptions, facts, examples that elaborate and/or support the subject topic of the paragraph*)

- Optional Elements:

  **Initiator** (*Words, phrases, sentences written physically ahead of and for making grounds for the Topic Sentence*)

  **Connectors** (*Words, phrases, sentences written to express connection/transition to the adjacent paragraph[s]*)

**A comparison of Essay and Paragraph writing may seem as follows:**

i. Number of Paragraphs –
   a. Essay Writing: Default (3 minimum), therefore, can be *pre-empted* (পূর্বে ধারনা কৃত).
   b. Paragraph Writing: Variable, is dictated within the question stem.

ii. Presenting Ideas –
   a. Essay Writing: Paragraphs assume specific roles and cooperatively address the task at hand.
   b. Paragraph Writing: The task has to be forcefully *integrated* (সংযুক্ত) or *disintegrated* (বিচ্যুত) as dictated by the question stem.

iii. Inter-relationship of paragraphs –
   a. Essay Writing: Commonly has 3 paragraphs, which serve default functions, that do not additionally require *delineation* (চিত্রায়ন) of inter-relationship.
   b. Paragraph Writing: Sovereignty of and inter-relationship between paragraphs have to be carefully *crafted* (দক্ষতার সংগে তৈরী) by applying proper transitional phrases or sentences.

# The Writing Process: Essays

1. **The Structure –**
   a. Introduction:
      - Generally consists of 1 paragraph.
      - Primarily hosts the Thesis Statement, along with general, *engrossing* (আকর্ষণীয়), connective, and transitional statements.
      - Not required to be self-explanatory as it is immediately followed by at least 1 paragraph of supporting details.
      - Transition to the following part using transitionals is not *mandatory* (বাধ্যতা মূলক).
   b. Body:
      - Hosts all the supporting details in 1 or several paragraphs, each elaborating 1 supporting point.
      - Each Body paragraph should be clearly connected to its surroundings.
      - Each Body paragraph must have its own topic sentence, a supporting point to the Thesis.
      - If structured in 1 paragraph, the topic sentence should be an over-all reference to all supporting details to be cited.
   c. Conclusion:
      - Generally written in 1 paragraph.
      - Should have a judgment or over-all viewpoint deduced from the supporting details.
      - Should have a tone of ending, which, in practice, is achieved by use of conclusion indicators such as "In conclusion", "To conclude" etc.

2. **Elementary Qualities –**
   a. Precise and Presentable Thesis Statement:
      - Must be included in the introduction.
      - Must definitively illustrate the main idea of the essay.
      - Must be independent, not relying on references to the question stem or any other exterior entity.
      - May be presented in 1 or several sentence(s).
      - Better if constructed in knowledgeable fashion, by use of formal, written language.
      - May be written in simple or complex-compound sentence(s). But language should be effective and impressive.
   b. Organization:
      - The *components* (গাঠনিক উপাদান) of the essay must be properly organized, Introduction being the first and Conclusion the last paragraph. Also, the content of the components have to be properly selected, meaning, the introduction should not be *encumbered* (বোঝা/বাধা গ্রস্থ) with supporting details and the body may not make new propositions and so on.
      - Each paragraph should be written in language, style and *rationale* (যুক্তি) that are consistent with other paragraphs.
      - Supporting details should be presented in order of importance/effect.
      - All details included must be supportive of the Thesis of the essay.
      - Word usage should be economized, meaning, the number of words used should be set according to the optimization of effectiveness of the composition. In other words, while volume is not directly correlative with quality, and any excess may lead to degradation of the essay, lack of words, where additional clarification or elaboration is clearly necessary, makes the essay *premature* (অপরিপক্ক).
      - Dramatization, like potentially shocking examples, frequent questions targeted to the reader, *redundant* (অতিরিক্ত) verbal-ornamentation or even exclamations are rarely *warranted* (চেয়ে নেয়া) in the contemporary essay.

c. Accurate Construction:
- All sentences must be put together maintaining accuracy of grammar. Misspelled words are taken as invalid words and will always disrupt the grammatical *cohesion* (অনুকূল করা) of sentences, also.
- Thesis, supporting details and Conclusion of the essay must point at the same logical direction. The body must support the Thesis statement in the introduction, and, together, they must lead to the conclusion.

3. **Approach to Task Fulfillment –**

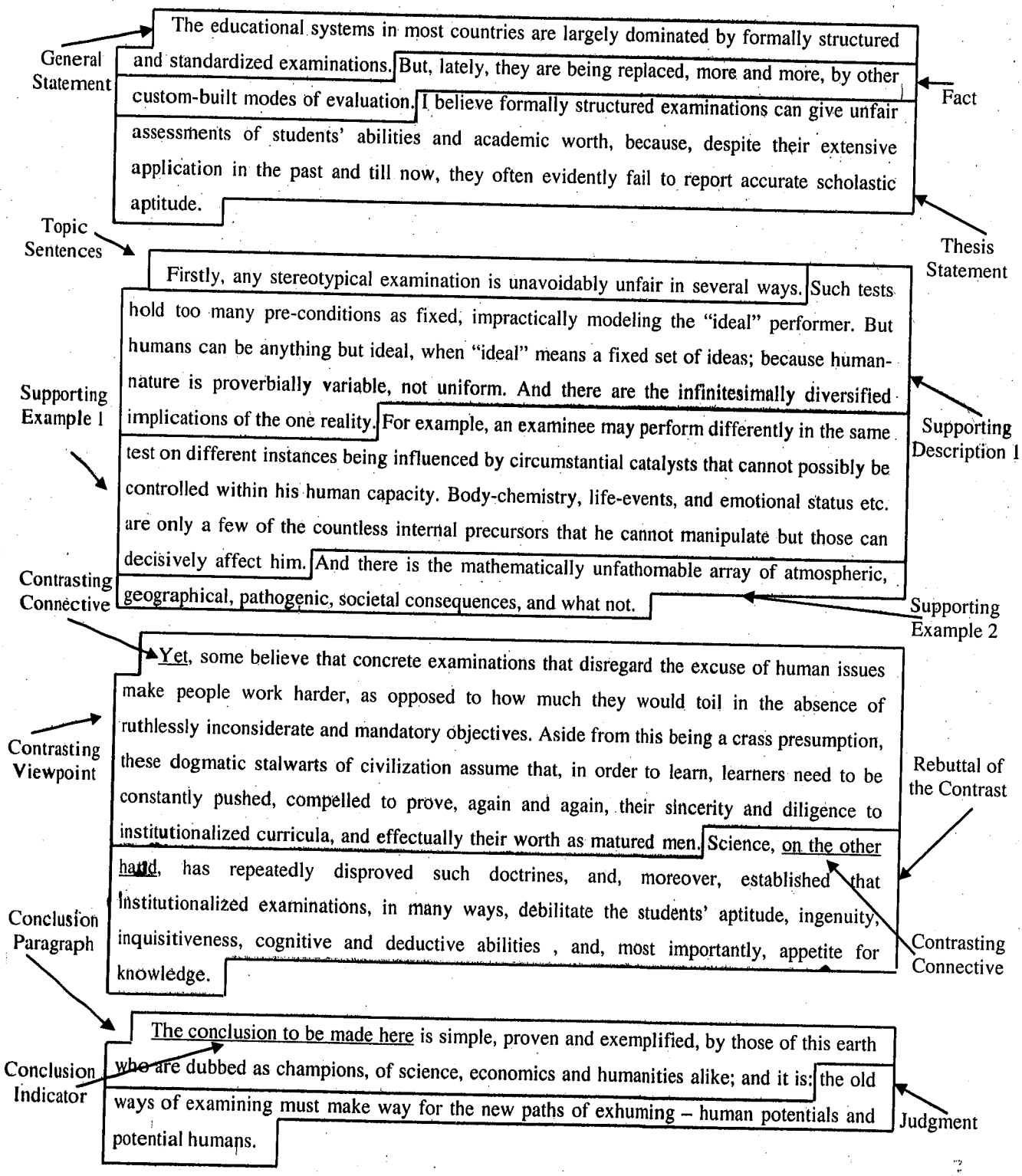
a. Target Setting:
- Read the topic carefully, understand clearly what is being asked for in the question, then plan your essay only to fulfill the task requirement.
- Express, to the reader, the point of argument or description as clearly as it has to be comprehended.
- Write a clear and precise Thesis Statement to exhibit the intended point of view of the essay accurately.

b. Thought Development:
- *Brainstorm* (বিচ্ছিন্ন ভাবে চিন্তা করা) for ideas to support the Thesis. Then sort, select and organize your thoughts for presenting the best possible support.
- Create an outline of the essay before starting to draft the essay for *ascertaining* (নিশ্চিত করা) focus and objectivity.
- Take caution while selecting ideas for the support and when considering ideas that evolve during the writing process and were not included in the original outline.
- Avoid ideas that may be too *expansive* (সুপরিসর) to hold within the scope of the task requirement, both in length of elaboration and depth of consideration. Also keep away from all potential *controversies* (বিতর্কিত বিষয়).
- Always keep ideas on a thin line of relevance.

c. Careful Composition:
- Every paragraph should be first played out in mind before composing it. Body paragraphs should have distinguished topics, thereby, clear topic sentences, and proper transitional sentences.
- Plan each sentence before putting it on paper. Sentences should be written following rules of Grammar and with a purpose. All the sentences should be focused on the topic sentences of their paragraphs.
- Select words to be used in sentences carefully. While use of academically and formally rich words will increase the weight of the essay, misused words will discredit it. Do not use words that you are not perfectly comfortable with and apply and spell each and every word accurately.
- It is very easy to get carried away within the writing process. Do not drift away from the frame of the essay outlined at the beginning. Always maintain focus on accuracy, method and the original plan of the essay. Instinctive writing is frequently incorrect.
- What is written on paper should reflect what you have planned to say in response to the question initially. Do not write expressions just because you "think" they are usually found in essays.

**Sample Task:** E-1

Prompt: *Do you think standardized examination systems, structured formally, are the best ways of academic evaluation?*



## Myths and Facts about Essay Writing

- **Attention Grabbers** are overestimated. The academic essay does not have to have an appealing opening line. Rather an economic approach to the thesis statement is better *appraised* (মান নির্নয়কৃত), saving the examiner from redundant reading.
- **Over-informative introduction** is also pointless. Inclusion of relevant facts within the introductory paragraph should be limited only within context building.
- **Decorating of the thesis statement** should always be second to its clarity and definitiveness.
- **Hesitant or *tentative*** (আপাতত) expressions should be avoided. For example, "I believe" is more assertive, thereby more effective, than "I think" as an initiation of the thesis.
- The reader should not be **"among 'you',"** rather **"within 'us'."** For example: "if you consider the societal impact of ..." is not as reader-friendly as "if we ...".
- Using **personal examples** is not the best option. Still, if used as last resort, don't make your story unbelievable just because it may not be cross-checked.
- **Complex-compound sentences** are good for illustrating un-detachable strings of thoughts and impressing the examiners. But they should be used cautiously as their construction is also complex. Use them whenever needed, not *pre-meditatively* (পূর্ব পরিকল্পিত ভাবে).
- **Punctuation and capitalization** errors are equally fatal as misspellings.
- Distinguishing **British and American** styles of construction is really not a big deal anymore. Try to maintain one consistent style but don't be *frantic* (উত্তেজিত) over it.
- **Conclusions** do not have to be "unforgettable". As in everywhere in the essay, accuracy is better valued than dramatization.
- **Be practical** at all times. The fruit of your essay is only, yet all-importantly, the mark it may get from the examiner.

## The Writing Process: Paragraphs

1. **The Structure –**
   a. Text Grouping:
      - Sentences are physically *pigeonholed* (শ্রেনী কৃত) in a paragraph on the basis of topic.
      - All included sentences must be thematically *familial* (একই পরিবারের) forming 1 unitary block of text.
      - Such unit of texts must qualified to be *sustained* (বেঁচে থাকা/বাঁচিয়ে রাখা) individually or in succession with (an) other paragraph(s).

   b. Topic Sentence
      - There must be at least a sentence that conveys, to the reader, the subject topic of the paragraph.
      - The writing scope of a paragraph, therefore, should be determined by the conceptual broadness of the topic sentence.

   c. Supporting Details
      - The physical volume of a paragraph should primarily be constructed with words, phrases, and sentences that elaborate and/or support the subject topic.
      - Any and/or all contradictory texts will be held "*in-contempt*" (অবজ্ঞা করে এমন) to the respective topic sentence and, thereby, invalidated.

   d. Initiators
      - Are optional components, options that should not be *dwelled upon* (চিন্তা করা) too seriously.
      - If present, but in incorrect formation, may potentially discredit the paragraph.

e. Connectors
- They become applicable and essential when multiple paragraphs are composed together.
- Are used for transition, of focus, to and/or from, ideas housed in neighboring paragraphs.

**2. Elementary Qualities –**

a. Single Paragraphs:
- Again, must have sovereign sustenance – should dwell only within and unto itself
- Should be self-explanatory-evident-supportive-dependent, radicals behaving like essays.

b. Paired Paragraphs:
While "a pair" nakedly means "2 in number", two paragraphs being written *in-pair* means
- two thematically successive blocks of text
- are *co-uterine* (সহজাত) of, and co-host, the 1 composite thesis
- in mutual bondage, though not necessarily in *harmony* (সৌহার্দ্য), with none but each other
- complementary to, only, themselves
- together, not needy of *augmentation* (বৃদ্ধি করা)

c. Trio of Paragraphs, or better:
- If made in to essays, the writing process must accurately be of essays
- If left as multiple paragraphs co-habiting, connectors or transitional phrases and sentences must be carefully put in.
- Paragraphs orphaned, by mistake, not having being properly inter-connected to the series, may very well be discounted

**3. Approach to Task Fulfillment –**

a. *Transfiguration* (শারীরিক রুপান্তর) for Solitary Paragraphs:

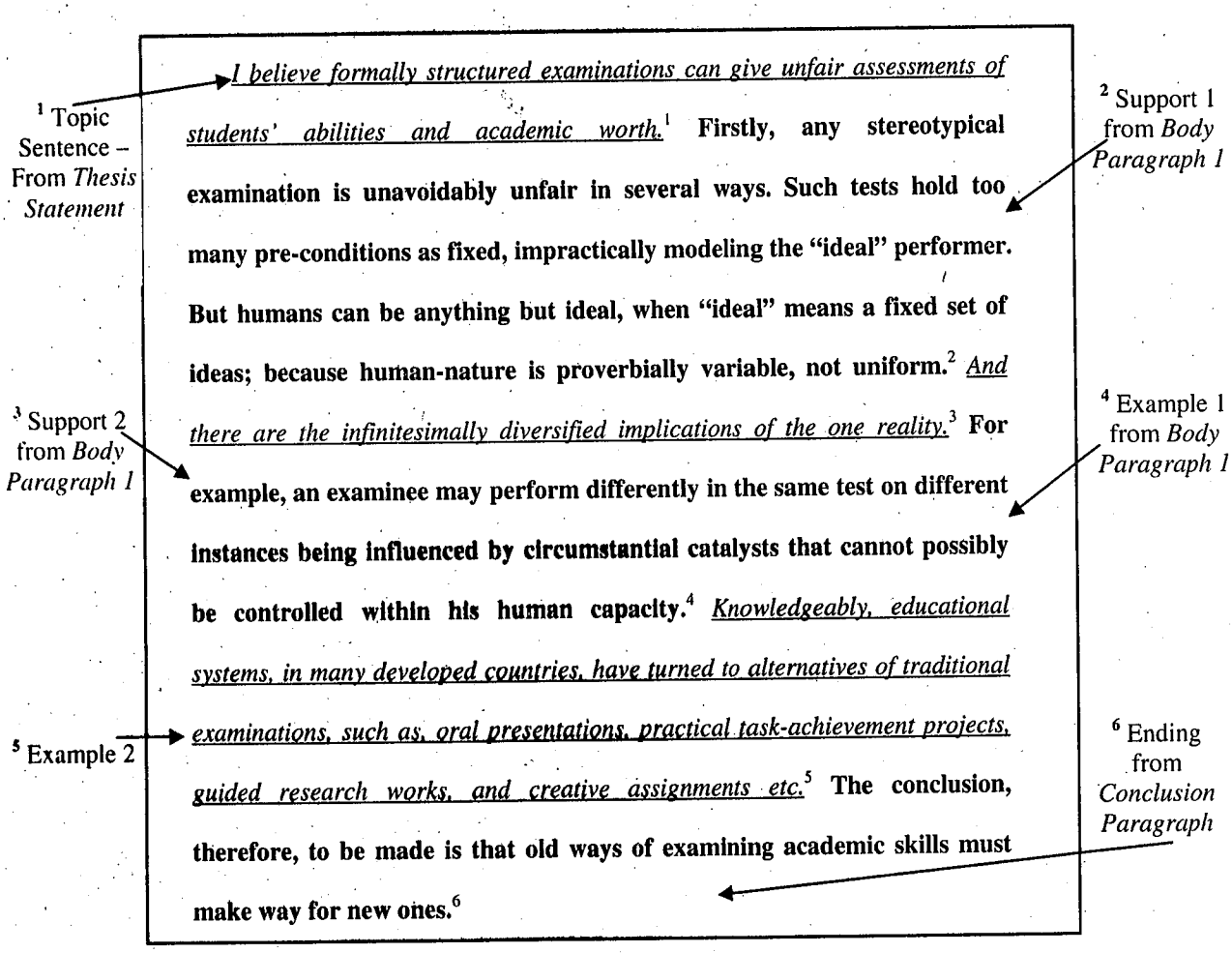
As said before, Paragraph Writing, in general, is not the "lesser" composition task in terms of difficulty. Curiously, though, a *solitary* paragraph has *resemblance* (সাদৃশ্য) with, and may be imaged as, if not *caricatured* (ব্যঙ্গ করা), an *abridged* (সংক্ষিপ্ত) and "unparagraphed" essay.

*"... if the fore-words (প্রাথমিক শব্দাবলী), topic sentence and hind (শেষাংশ) of the singular paragraph are connoted (সমার্থক ধরে নেয়া) with a syndicate (একই স্বার্থে মিলিত) of Introduction, Body and Conclusion respectively."*

Such an approach, as corrupt as it may sound, does deliver a *self-sustaining* paragraph granting that *transfiguration* of the essay elements has been done appropriately and, of course, the *fabricator* (নির্মানকারী) (i.e. the examinee) is knowledgeable of the general process of essay writing.

*"It must be said at this point that students, especially of High School and College, generally are accustomed (পরিচীত), though – regretfully – not always equipped (প্রস্তুত), to writing essays, a task that they have repeatedly attempted to fulfill for years."*

**Sample Task: P-1** (*"Transfigured from Sample Task E-1*):




*I believe formally structured examinations can give unfair assessments of students' abilities and academic worth.*[1] **Firstly, any stereotypical examination is unavoidably unfair in several ways. Such tests hold too many pre-conditions as fixed, impractically modeling the "ideal" performer. But humans can be anything but ideal, when "ideal" means a fixed set of ideas; because human-nature is proverbially variable, not uniform.**[2] *And there are the infinitesimally diversified implications of the one reality.*[3] **For example, an examinee may perform differently in the same test on different instances being influenced by circumstantial catalysts that cannot possibly be controlled within his human capacity.**[4] *Knowledgeably, educational systems, in many developed countries, have turned to alternatives of traditional examinations, such as, oral presentations, practical task-achievement projects, guided research works, and creative assignments etc.*[5] **The conclusion, therefore, to be made is that old ways of examining academic skills must make way for new ones.**[6]

b. Thought Differentiation for Pairs:

The principle task for paired paragraphs is forging a complementary pair of topic sentences differentiated from the same thesis, *impregnated* (ধারণ করা) by the examinee as an ideal response to a task prompt. This process of *bisecting* (দুই টুকরো করা) a composite response to obtain a couple of *co-uterine* sub-responses, paragraph topics in this case, may be sketched, in steps, as the following:

i. The initial thesis should be promptly *though-out* () after the task prompt is carefully read, like is done for essay assignments. A Thesis Statement may even, and perhaps should, be drafted. This hopefully will have been *in mom's kitchen* (পরিচীত ) being so *flaunted* (জাহির করা) by essays.

ii. The *generic* (সামগ্রীক) thesis then has to be *analyzed* (বিশ্লেষণ করা). The analysis, in other words – logical *defragmentation* (টুকরো গুলো একসাথে করা), can be done by "hitting" the thesis statement with any, some or all – whenever applicable – of the following "info graphic" questions for obtaining micro-concepts:
Quarries on –

- **preconditions** (i.e. *precedential* (পূর্ব দৃস্টান্ত) considerations leading to the thesis)
- **consequences** (i.e. *descendant* (পরবর্তি ফলাফল) arguments/scenarios)
- **psycho-segments** (i.e. *unitary* (ঐকিক) ideas – here: of the Thesis Statement).

iii. These *micro-concepts* (ক্ষুদ্র চিন্তা) then have to be *bi-classified* (দুই শ্রেনীতে ভাগ করা), in other words *polarized* (মেরু বিন্যস্ত). Determining the *criterion* (মানদন্ড) of bi-classification can seldom be *pre-empted* (আগে করা). In gross terms, the two generic concepts, being mutually exclusive, that *entail* (জড়িত করা), by *interpretation* (ব্যাখ্যা করা) and/or *inference* (অনুমান করা), all unitary propositions, derived from analyzing the initial thesis, may be *dubbed* (নাম করন) as the two components, or *poles* if we may, of that thesis.

iv. The "poles", once *populated* (অধ্যুষিত করা), are to be put in words thus forming two mutually complementing and co-uterine Topic Sentences.

v. Each Topic Sentence then has to be wrapped or followed by supportive texts tightened as a block thereby forming a paragraph. The supportive texts are, of course, verbalization of the subordinate unitary concepts of the concurrent topic.

vi. The pair of paragraphs thus *forged* (গড়ে তোলা) must then be *married* (সংযুক্ত) by the use of *connectors* or *transitional words, phrases* or *sentences* within either or both of the paragraphs.

Having the complex *analytics* (বিশেণ্ডষন প্রক্রিয়া) above considered, there are, ironically, the so *benevolent* (উপকারী) task prompts that *simultaneously* (সম-সাময়ীক ভাবে) offer two familial topics already paired and *bilaterally* (দ্বি-পাক্ষিক ভাবে) assigned.

*Write 2 paragraphs on* "**Teenagers are seldom understood by their elders.**" *The 1st paragraph should outline special behavioral characteristics of the teenagers, while 2nd paragraph should highlight the difference leading to the generation gap.* (1998-99)

Here above, for example, the question stem is accommodating a *bi-ঢ়ড়ঃবহঃ* (দ্বি-সম্ভাবনাময়) task prompt, which means all the *mind-bending* (জটিল/ যা সহজে বোঝা যায় না) and, more importantly, time-consuming *psycho-drills* (মানষিক অনুশীলন) can be restfully set aside and the writing process started. Fortunately, especially for the *truants* (ফাঁকীবাজ), such pre-disposed task prompts *frequent* (প্রায়ই উপস্থিত থাকা) the IBA (BBA) Admission Test question papers and it will not be wrong to say that they are more common than the other.

c. Task conversion for Trios and such:

Also as said above, if prompted to write 3 or more paragraphs, the examinee may simply write an essay. For example, if 4 paragraphs have to be written, merely writing an essay, on the subject topic, with 2 body paragraphs *suffices* (যথেষ্ঠ হওয়া/থাকা)..

If paragraph-roles have been pre-assigned in the question, then simply comply therewith.

# Dialogue Writing

Dialogue writing বলতে basically দুজন মানুষের কথোপকথনের written expression কে বোঝায়। যে কোন একটি situation বা topic দেয়া থাকবে এবং দুজন ব্যক্তির পারস্পারিক সম্পর্কে বলা থাকবে- আপনার কাজ হবে ঐ পরিস্থিতিতে বা ঐ বিষয় নিয়ে উল্লেখিত ব্যক্তিদ্বয়ের মধ্যে কি ধরনের কথাবার্তা হতে পারে তা নিয়ে লেখা। মোট কয়টি dialogue লিখতে হবে তা question এ mention করা থাকবে।

Dialogue writing এর কিছু general rules নিচে দেওয়া হলো। এই rules গুলো follow করে লিখলে আপনার এই section এ ভাল করার সম্ভাবনা থাকবে।

## Method of Procedure

1. Carefully think over the subject given, and jot down briefly the arguments or opinions about in which might reasonably be expressed by the imaginary persons who are supposed to the talking.
2. Arrange these ideas in a logical order, so that one will arise naturally from another in the course of the conversation.
3. Try to imagine what would be the way in which each character in the dialogue would express his views.
4. Keep in mind that your dialogue, when completed, should read like a real, spontaneous conversation. So try to make your imaginary characters talk in an easy, familiar and natural manner.
5. Don't let any of your characters monopolize the conversation.
6. The dialogue should begin in an interesting way, so that the reader's attention may be arrested from the very first.
7. In real conversation, one person sometimes interrupts the other, or breaks in on what he saying. A sparing use of such interruption is quite permissible, and adds to its naturalness.

**Note:** *Keeping these points in view, write your dialogue in as natural, interesting and realistic a manner as possible. The whole conversation should be brief and the questions and reply as concise and pinpointed as possible.*

**AN EXAMPLE: A dialogue between a countryman and townsman, bringing out the comparative advantages of town and country life. Mr. Shohag met Mr. Faruk in town, Mr. Faruk is a man from the countryside.**

**Shohag:** Good morning, Faruk. It is a long time since I saw you in town. Are you staying long?

**Faruk:** Good morning. No, Shohag. I only came up on business for a few hours and hope to get home again this evening.

**Shohag:** Running away so soon? Why not stay a few days and enjoy yourself?

**Faruk:** I don't find much enjoyment in the smoky air of a town and all its noise and racket. Give me the clean air, the sunshine and the quiet of the country.

**Shohag:** Well, I grant you have the advantage of purer air in the country but as for noise you soon get used to it. In fact, I could not stand your quiet and it would drive the crazy. I like to feel plenty of life and movement about me.

**Faruk:** Really? Why, I could not get a wink of sleep in a noisy town. And towns are so ugly & nothing to see but ugly smoke grimed houses, dirty streets, hideous advertisements on every hoarding, factory chimneys belching smoke and a dull smoky sky. I have the beauty of the green field you have seen all green field and shady woods and flowery meadows of the country.

**Shohag:** Ah! My friend, but do not forget what Dr. Anam said. "When you have seen one green field you have seen all green fields come with me down Fleet Street and study man.

**Faruk :** Well all I can say is that Dr. Anam never saw a green field in his life, or he would have know that there is an infinite variety in nature if you have the eyes to see it.

**Shohag:** But what in the world do you do with yourself in your village ? It must be a very dull and slow life, with no theatres, no concerts, no cinemas, no public lectures, and no exciting political meetings. You must lead a stupid vegetables life like a cabbage.

**Faruk:** Not as stupid and dull as you imagine. I have my garden, which is a great source of pleasure; there is fishing, and a little hunting. And then I love tramping over the hills and seeing the beautiful scenery. And in the evenings I have my books.

**Shohag:** Well, every man to his taste; but to me yours would be a dull life.

**Faruk:** Dull or not, it is much healthier. In the pure country, we do not get the epidemics and dirt-produced diseases you have in the towns. And our quiet habits give us longer lives.

**Shohag:** Yes, you may live longer in the country. But you don't get so much out of life as we do in town. A short life and a merry one, I say.

**EXERCISE :**

1. Write a dialogue between two friends discussing their hobbies.

2. Write a dialogue between two friends on the choice of a profession of business executive or doctor.

3. Write a dialogue between a father and his son about the son's current educational performance.

4. Write a dialogue between a boy and his girlfriend with their future career plan.

5. Write a dialogue between a teacher and a student on the choice of a subject economics or history.

## Logical Writing

এ ধরনের question এ একটি statement দেয়া থাকে এবং ঐ statement এর পক্ষে বিপক্ষে তিনটি বা পাঁচটি argument লিখতে বলা হয়। এটা অনেকটা Analytical Ability section এর strengthen/weaken questions এর মত। আমরা '96-97 এর question টি দেখি-

**Direction:** Write three arguments against the statement given below:

*"If I score 80% marks in this written test of BBA Admission, I would be selected for admission into the program".*

**Argument -1:** The number of students scoring 80% marks in the written test of BBA Admission may be more than the number of seats of the BBA program.

**Argument -2:** Score in the written test of BBA Admission may not be the only criterion for selection in the BBA program.

**Argument -3:** One may fail in one of the sections or subsections in written test even after scoring 80% marks in total.

এবার নিশ্চয়ই বুঝতে পারছেন কিভাবে এ ধরনের question answer করতে হয়। এই section answer করার সময় আপনাকে যা যা করতে হবে তা হচ্ছে-

⇒ *Read the stimulus carefully*

⇒ *Apprehend the claim of the stimulus*

⇒ *Find out the flaw/loopholes of the given statement if you are asked to write against the statement. If you are asked to support of the argument, look out for the strong points.*

⇒ *Organize your points against/ in favor of the statement.*

⇒ *Write your points down in the space given. Be careful of grammatical/ spelling errors.*

⇒ *Don't make your argument so long that the reader gets confused.*

এবার exercise গুলো solve করুন।

### EXERCISE

1. Write 3 statements against the following argument - "If I can pass the BBA program. I will get a good job".
2. Write 3 statements supporting the statement given- "The satellite culture is causing lots of damages to our cultural development."
3. Write 3 statements against the stimulus given below:
   "The only cause of generation gap is the difference of age".

# Data Interpretation / Presentation Questions

এ ধরনের প্রশ্ন দু'ভাবে করা হয়ে থাকে। একটি category হচ্ছে-প্রদত্ত Data/information এর উপর পাঁচটি sentence লেখা এবং অপর category হচ্ছে একটি paragraph এ প্রদত্ত information থেকে একটি Table তৈরী করা।

IBA Admission Test 96-97 এর একটি question দেখি-

**Information on Rickshaws in Dhaka City**

| | 1994 | 1995 |
|---|---|---|
| No of licensed Rickshaws | 30,000 | 40,000 |
| No of unlicensed Rickshaws | 20,000 | 40,000 |
| No of accidents involving Rickshaws | 800 | 1000 |

Write 5 (five) complete sentences using the above data or information.

আমরা এটা করার চেষ্টা করি-

1. In Dhaka City the no. of Rickshaws both licensed and unlicensed increased in one year from 1994 to 1995.
2. No. of unlicensed Rickshaws increased more than that of licensed Rickshaws.
3. In 1995, no of licensed & unlicensed Rickshaws were equal, though licensed Rickshaws were more in no. in '94.
4. There were more accidents involving Rickshaws in 1995 that it was in 1994.
5. Increased accidents involving Rickshaws could be due to increased no of Rickshaws.

নিচের exercise গুলো practice করলেই আপনি এ section টি ভালভাবে answer করতে পারবেন।

**Exercise 1:**

"In an admission test, no. of students applied was 3200 and 3600 respectively in 1995 and 1996. But the no of students who took the admission tests was slightly less than the no. of applicants. In 1995, 2900 students took the test and the no. of students who took the test in 1996 was 3500. In 1995, 200 students were called for personal interview and out of which only 70 students were finally selected for admission. In 1996, 80 students were selected for admission from a group of 310 students who were called for personal interview".

**Question:**

a) Present the information in a table form.

b) Write a suitable title for the table.

**Exercise 2:**

Write 5 (five) sentences based on the following information

| | 1997 | 1998 |
|---|---|---|
| No of BBA graduates in Bangladesh | 130 | 350 |
| No of BBA s employed | 105 | 308 |
| No of BBA s studying MBA | 20 | 40 |
| No of institutions offering BBA program | 14 | 29 |

## Thematic Writing

Thematic writing questions are aimed at judging the student's imagining capability and theme construction power. Suppose you just hear glimpse of a dialogue between two persons. Hearing just a few words, you will be able to guess what they are talking about. In answering thematic writing questions, you have to utilize this simple skill of yours.

You will be given some words/phrases, and be asked to establish the link and then write paragraph (s) on that theme. The following conditions apply:

- √ Read the words/phrases, assume the link, and decide on a topic or heading for the paragraph (s).
- √ Give a title/heading to the work.
- √ Use the words/phrases at least once in your writing.
- √ Write down on a unified theme that will have coherent sentences.
- √ You can use the words as many times as you wish to.
- √ The last word/phrase of the given list can come at the beginning of your work. You don't have to follow the word sequence given in the question paper.
- √ Follow general guidelines to write a good paragraph, use topic sentence, supporting sentences, and thesis statement.

**Sample Question and Answer**

**Write a paragraph using the following words/phrases:**

| | | | | |
|---|---|---|---|---|
| Sonar Bangladesh | Motherland | Millennium | Autocratic | Calamities |
| Dreams | Brave | Corruption | Cricket | Pollution |

**Bangladesh: with hope, with despair**

Bangladesh is our motherland. This country was liberated in lieu of three million lives. Our brave freedom fighters defeated the Pakistani aggressors on the 16th December in 1971. We are yet to become a developed and self-dependent country in the world. Since the very birth as an independent nation, Bangladeshi people have fought natural calamities, autocratic regime, and economic hardship. On the verge of the new millennium they are looking forward with great hope and colorful dreams. Our economy is suffering due to corruption and absence of farsighted policies. Pollution, low literacy rate, frequent, natural calamities have given us a peevish image all over the world. Yet we have a lot to be proud of. The natural scenery and mineral resources prove that nature has decorated her darling child with all possible resources. Our culture, our cricket, and our arts & crafts have earned us an honored place in the globe. If we all work hard together to build a happy and wealthy nation, this will definitely pave the way to the building of Sonar Bangladesh.

**Now practice with the following words/phrases**

| | | | | |
|---|---|---|---|---|
| Bangladesh | Population | Education | Employment | Poverty |
| Third world | Underdeveloped | Corruption | Natural disaster | Politics |

*(Try to use a different theme from the sample example)*

| | | | | |
|---|---|---|---|---|
| Internet | Website | Browsing | Networking | E-mail |
| Information | E-commerce | Online Selling | Infrastructure | ISP |

## Sentence Making

In IBA admission test, you might have to face questions regarding 'sentence making'. To answer these questions, all you have to do is to construct a sentence with the words given in the question. Keep in mind that your sentences should be precise and, of course, grammatically correct. While using the words, be careful so that each word appears to be necessary in the sentence. Do not form a sentence that serves the purpose of using the given words only, try to make a meaningful one. In other words, use the words effectively.

**Example:** Player, Discipline, Mind.

**Answer:** A good player must have a disciplined mind.
*Practice with the following groups of words.*

1. Corruption, essential, society
2. Happiness, achievement, life
3. Friend, money, power
4. Politics, honesty, dignity
5. Education, commodity, nation
6. Canteen, smoking, atmosphere
7. Media, broadcast, impartial
8. Math, English, admission
9. IBA, education, difficult
10. Homes, computer, education
11. Determination, patience, virtue
12. Equation, variable, mathematics
13. Preparation, test, failure
14. Pollution, health, environment
15. Terrorist, war, human

## Sentence Re-writing

The sentence re-writing section gives you a number of sentences that may contain errors in grammar, style, or as such. If there is any error in the sentence, you have to correct it. If not, just mention "no error".

**Example:** The salary of the secretary of this company is more than the manager.

**Answer**: The salary of the secretary of this company is more than the manager's.

**Exercise:**

1. Secretaries are usually eligible for higher salaries when they know how shorthand.
2. The first Skylab crew was launched on twenty-fifth May, 1973.
3. During a total eclipse of the sun, that the earth moving into the shadow of the moon.
4. To save on heating and finding cheaper labor are two of the most common reasons that companies give for moving from the Midwest to South.
5. Lotteries are used to rise money for the states that sponsors them.

# Chapter 6
# Model Test

## Model Test 1

## Model Test 2

## Model Test 3

These tests are especially designed after IBA admission tests. Solve these tests after you complete studying this book. Be aware of the time limitations. Be true to yourself. The answers are given after the two tests. Don't look at the answers without trying the questions yourself.

## MODEL TEST 1

| SECTION I | Language and Communication | 20 Marks |
|---|---|---|

Direction: In each of the following sentences, some part of the whole sentence is underlined. Each sentence is followed by five alternative versions of the underlined portion. Select the alternative that you consider most correct. Answer A as the original version; if you think the original version is best, answer A.

1. A teacher at the school acknowledged that, despite government sponsored endeavors to improve classroom performance, an extraordinary high percentage of their students fail to gain admission to higher education.
   A. an extraordinary high percentage of their students fail to gain admission to higher education
   B. an extraordinarily high percentage of its students fail to gain admission to higher education
   C. an extraordinary high percentage of its students fails to gain admission to higher education
   D. the percentage of their students failing to gain admission to higher education is extraordinarily high
   E. a high percentage of its students, extraordinarily high in fact, fails to gain admission to higher education
2. A course of cognitive behavior therapy can be as effective, if not more so, than drug therapy and without the side effects, in helping the elderly to overcome insomnia.
   A. as effective, if not more so, than drug therapy and without the side effects, in helping the elderly to overcome insomnia
   B. more effective than drug therapy and without the side effects, in helping the elderly to overcome insomnia
   C. at least as effective in helping the elderly overcome insomnia as drug therapy, and is without the side effects of drug treatment
   D. at least as effective as drug therapy in helping the elderly to overcome insomnia without side effects
   E. equally effective as drug therapy in helping the elderly to overcome insomnia without side effects
3. It is highly desirable that you furnish evidence of your expenses before you submit your final accounts.
   A. It is highly desirable that you furnish evidence of your expenses
   B. It is highly desirable that you should furnish evidence of your expenses
   C. It is highly to be desired that you furnish evidences of your expenses
   D. You must furnish evidence of your expenses
   E. You should have to supply evidence of your expenses
4. The population of tigers in the National Park is increasing steadily, and this is a source of encouragement to those who have worked so hard to fund the conservation effort.
   A. steadily, and this  B. steadily: which  C. steadily; this trend
   D. steadily, this increase  E. steady, and this
5. In the fine print at the end of the document lies the clauses that make us liable for any expenses that result from civil unrest.
   A. lies the clauses that make us liable for any expenses that
   B. lies the clauses that make us liable for any expenses which
   C. lies the clause that make us liable for any expenses that
   D. lie the clauses that makes us liable for any expenses which
   E. lie the clauses that make us liable for any expenses that

Directions: Each of the following sentences contains a blank space. Select the best answer which completes the sentence and mark your sheet accordingly.

6. The crew of the air balloon ____ the sand bags to help the balloon rise over the hill.
   A. capsized B. jettisoned C. salvaged D. augmented E. enumerated
7. We were not fooled by his ____ arguments; his plan was obviously ____ .
   A. cogent – brilliant B. hackneyed – banal C. convoluted - labyrinthine
   D. specious – untenable E. lucid – intelligible
8. Hawkins is ____ in his field; no other contemporary scientist commands the same respect.
   A. disparaged B. ignominious C. obsolete D. anachronistic E. preeminent
9. Elinor ____ to counteract her negative feelings, but only succeeded in ____ them.
   A. tried – allaying B. hoped – mitigating C. desired - ameliorating
   D. hesitated – deprecating E. endeavoured – intensifying
10. She was roundly condemned for her ____ ; she betrayed the woman to whom she owed her success.
   A. truculence B. perfidy C. serendipity D. pragmatism E. discernment

Directions: Pick the option describing correct usage of the words:

11. i) The CEO was pissed at divulgment of the information.
   ii)I am too much of a gentleman to divulge her age
   iii) Secrecy hath no use than divulgation
   A. i only B. ii only C. ii and iii D. i and iii E. All three
12. i) We have the highest percentage of obesiveness in the industrialised world.
   ii)The only cure to being *obesely* or overweight is will power.
   iii) He was rejected because of his obeseness.
   A. i only B. ii and iii C. i and iii D. iii only E. All three
13. i) Her example alone should *suffice* to show that anything is possible.
   ii) The energy plant is self sufficient.
   iii) You don't need to write a letter, a phone call would suffete.
   A. i only B. ii and iii C. i and ii D. ii only E. All three
14. i) Leaders of ethnic communities protested against such law.
   ii) Leaders of several ethnicities were present in the meeting.
   iii) It is important to note, however, that language and *ethnics* are not the same.
   A. i only B. ii and iii C. i and ii D. ii only E. All three
15. i) The system's manifest failings were evident.
   ii) One deity manifested in the form of a bird
   iii) Every passenger is manifested at the point of departure.
   A. i only B. ii only C. ii and iii D. i and iii E. All three

Directions: Choose the SYNONYM of the underlined words

16. Garrulous
   A. Talkative B. Quiet C. Reserved D. Silent E. Introvert
17. Frivolous
   A. Mature B. Solemn C. Somber D. Playful E. Wise
18. Expedite
   A. Delay B. Accelerate C. Hinder D. Curtail E. Survey
19. Debacle
   A. Miracle B. Beautiful C. Disaster D. Assemble E. Corrupt
20. Impeccable
   A. Defective B. Flawless C. Omnipotent D. Ardent E. Resilient

Directions: Choose the ANTONYM of the underlined words

21. Lethargic
A. Apathetic B. Slow C. Indifferent D. Slothful E. Energetic
22. Sadist
A. Masochist B. Chauvinist C. Misandry D. Misogynist E. Feminist
23. Embellish
A. Decorate B. Beautify C. Disfigure D. Augment E. Unite
24. Reprimand
A. Scold B. Ignore C. Admire D. Insult E. Deceive
25. Adroit
A. Smart B. Careful C. Evil D. Gullible E. Inept

Directions: Choose the correct prefix to go with the underlined word

26. Conspicuous
A. un B. dis C. im D. in E. none of them
27. Paralleled
A. un B. dis C. in D. im E. none of them
28. Corrigible
A. un B. dis C. in D. im E. none of them
29. Reverence
A. ir B. dis C. in D. im E. none of them
30. Embowel
A. in B. dis C. un D. im E. none of them

| SECTION 3 | Mathematics | 20 Marks |
|---|---|---|

1. The profit earned by selling an article for Tk. 832 is equal to the loss incurred when the same article is sold for Tk. 448. What should be the sale price for making 50% profit?
a. Tk. 920 b. Tk. 960 c. Tk. 1060 d. Tk. 1200
2. A number is as much greater than 36 as the less than 86. Find the number.
a. 51 b. 61 c. 71 d. 81
3. The difference between a number and its two-fifth is 510. What is 10 percent of that number?
a. 12.75 b. 85 c. 204 d. None of these
4. What mathematical operation should come at the place of '?' in the equation: 2 ? 6 – 12 + 4 + 2 = 6.
a. + b. – c. × d. ÷
5. An athlete runs 200 meter race in 24 seconds. His speed is:
a. 20 km/hr b. 2
4 km/hr c. 28.5 km/hr d. 30 km/hr
6. A boy was asked to multiply a number by 25. He instead multiplied the number by 52 and got the answer 324 more than the correct answer. The number to be multiplied was:
a. 12 b. 15 c. 25 d. 32
7. At what rate of compound interest per annum will a sum of Tk. 1200 become Tk. 1348.32 in 2 years?
a. 6% b. 6.5% c. 7% d. 7.5%
8. The L.C.M. of two numbers is 48. The numbers are in the ratio 2 : 3. The sum of the numbers is:
a. 28 b. 32 c. 40 d. 64

9. How many times the hands of a clock coincide in a day?
   a. 20 b. 21 c. 22 d. 24
10. The ratio between the present ages of P and Q is 6: 7. If Q is 4 years older than P, what will be the ratio of the ages of P and Q after 4 years?
   a. 3 : 4 b. 3 : 5 c. 4 : 3 d. None of these
11. Pipe A can fill a tank in 5 hours, pipe B in 10 hours and pipe C in 30 hours. If all the pipes are open, in how many hours will the tank be filled?
   a. 2 b. 2.5 c. 3 d. 3.5
12. Reena took a loan of Tk. 1200 with simple interest for as many years as the rate of interest. If she paid Tk. 432 as interest at the end of the loan period, what was the rate of interest?
   a. 3.6 b. 6 c. 18 d. None of these
13. The difference between the place value and the face value of 6 in the numeral 856974 is:
   a. 974 b. 6973 c. 5994 d. None of these
14. In a 100 m race, A covers the distance in 36 seconds and B in 45 seconds. In this race, A beats B by:
   a. 20 m b. 25 m c. 22.5 m d. 9 m
15. A two-digit number becomes five-sixth of itself when its digits are reversed. The two digits differ by 1. The number is:
   a. 45 b. 54 c. 56 d. 65
16. How long does a train 110 meters long running at the speed of 72 km/hr take to cross a bridge 132 meters in length?
   a. 9.8 sec b. 12.1 sec c. 12.42 sec d. 14.3 sec
17. A does a work in 10 days and B does the same work in 15 days. In how many days they together will do the same work?
   a. 5 days b. 6 days c. 8 days d. 9 days
18. In a school, the ratio of boys to girls is 3: 7. If there are 150 boys and girls in the school, how many boys are there?
   a. 45 b. 75 c. 90 d. 105
19. The value of (1 + .1 + .01 + .001) is:
   a. 1.001 b. 1.011 c. 1.003 d. 1.111
20. The ratio of three numbers is 3 : 4 : 7 and their product is 18144. The numbers are:
   a. 9, 12, 21 b. 15, 20, 25 c. 18, 24, 42 d. None of these
21. The average of 2, 7, 6, and x is 5 and the average of 18, 1, 6, x and y is 10. What is the value of y?
   a. 5 b. 10 c. 20 d. 30
22. In one hour, a boat goes 11 km along the stream and 5 km against the stream. The speed of the boat in still water (in km/hr) is:
   a. 3 b. 5 c. 8 d. 9
23. The length a of a room is 5.5 m and width is 3.75 m. Find the cost of paving the floor by slabs at the rate of Tk. 800 per sq. meter.
   a. Tk. 15,000 b. Tk. 15,500 c. Tk. 15,600 d. Tk. 16,500
24. P and Q started a business investing Tk. 85,000 and Tk. 15,000 respectively. In what ratio the profit earned after 2 years be divided between P and Q respectively?
   a. 3 : 4 b. 3 : 5 c. 15 : 23 d. None of these
25. Three-fifth of the square of a certain number is 126.15. What is the number?
   a. 14.5 b. 75.69 c. 145 d. 210.25
26. If a and b are odd numbers, then which of the following is even?
   a) a + b b) a + b + 1 c) ab d) ab + 2
27. The greatest number that exactly divides 105, 1001 and 2436 is :
   a) 3 b) 7 c) 11 d) 21

28. 0.213 + 0.00213 = ?
    a) 1 b) 10 c) 100 d) None of these
29. Two-fifth of one-fourth of three-seventh of a number is 15. What is half of that number?
    a) 94 b) 96 c) 188 d) None of these
30. A sum of Tk. 312 was divided among 100 boys and girls in such a way that each boy gets Tk. 3.60 and each girl Tk. 2.40. the number of girls is :
    a) 35 b) 40 c) 60 d) 65

| SECTION 3 | Aptitude and Analytical Ability | 20 Marks |
|---|---|---|

**Questions 1 - 3 are based on the following information**

All 0's are D's
No R's are D's
Some D's are A's
Some N's are 0's
Some A's are R's

1. Given the statements above, which of the following must be true?
   a.. Some N's are D's b. Some 0's are not N's
   d. Some R's are not A's e. Some 0's are A's
   c. Some A's are N's

2. If all N's are A's which of the following can be inferred?
   a. Some R's are N's b. All A's are D's c. Some 0's are A's
   d. All R's are D's e. Some R's are O's

3. If all T's are 0's which of the following is NQT possible'
   a. All T's are A's b. Some T's are D's c. All T's are N's
   d. No T's are A's e. No T's are D's

**Questions 4-7**

Eight of the integers from I to 16 have been arranged in the 4 by 4 grid shown on the right. The remaining integers are to be arranged in the grid according to the following conditions :

1. The first and third horizontal rows will contain only even numbers.
2. All multiples of 'three will be place in the First or second vertical columns.
3. All multiples of four will be placed in the second and third vertical columns
4. The sum of the numbers in the first vertical column will be 34.
5. The sum of the numbers in the fourth vertical column will be 28.
6. The sum of the numbers in the fourth horizontal row will be

| | | 4 | 2 |
|---|---|---|---|
| 3 | 9 | | |
| 10 | 8 | | |
| | 1 | | 5 |

4. The two numbers which should be added to the second horizontal row are
   a. 7 and II b. 7 and 13 c. II and 23 d. II and 15 e. 13 and 15

5. When the grid is completely filled in the numbers in which horizontal row will add up to the highest sum?
   a. Row 1' b.Row2 c.Row3 d.Row4
   e. It cannot be determined from the information provided.

6. When the grid is completely filled in, the numbers in how many horizontal rows will add up to sums which are odd?
   a. 0 b. I c. 2 d. 3 e. 4

7. Which of the conditions provides information which is not needed to accurately fill in the grid?
   a. Condition I b. Condition 2 c. Condition 4 d. Condition 5 e. Condition 6

8. The new English film "Brave Heart", the historical movie of a heroic character, is clearly the best foreign film of the year, since the 'box office receipts show that even more people are going for the movie than 'Aguner Parashmoni' the highly acclaimed Bangladeshi film on similar them. The argument above is based on which of the following assumption.
   A) "Aguner Parashmoni" is the best Bangladeshi film.
   B) Foreign films should be judged by standards different from those used for Bangladeshi films.
   C) Foreign Films should be judged by the same standards used for Bangladeshi films.
   D) Historical stories make best films.
   E) The quality of a Film can be measured by the number of people who go to see it.

9. Bobby - 'Only general council members sit on the president's cabinet',
   Hillol - That's not true. Dr. Rab is a general council member and he is not on the president's cabinet.
   Hillols response implies" that he incorrectly interpreted Bobby's statement to mean that
   A. all cabinet members are on the general council
   B. Dr. Rab sits on the president's cabinet.
   C. All members of the general council sit on the president's cabinet
   D. No general council members are on the president's cabinet.
   E. None of the above.

10. Five people join an exercise class. X weighs 50 kg. P weighs 46 kg. N weighs I kg. more than P but 2 kg less than A. Again M weigh the same as X. After a month of training M and P each lose I kg and X and A each of lose 2 kg. N, who has been secretly bringing a box of sweets to class, gains 2 kg. After the month of training, which two people weigh the .same?
    A. X and M B. M and A C. X and A D. M and N E. A and P

11. Donors are almost never offended being asked too much (in fact they are usually flattered). And if you ask for too much, your donor can always suggest a smaller amount. On the other hand, donors are frequently offended by being asked for too little.
    A common question is "So that is all they think I'm worth."
    The statement assumes that
    A. Donors are usually asked enough
    B. A good fund raiser will value the worth of the donor.
    C. It is worth the gamble to ask for large donations
    D. Fund raisers often think that donors are incapable of giving much.
    E. Donors are seldom offended by fund raisers.

12. If 3 <x< 5, then which of the following must be wrong.
    a. x == 3 b) x = 5 c. x = 4 d. $x = 3^1/_2$ e. $x = {}^{14}/_3$

13. Although there is no physical distance between the visual organs of the two groups, the inhabitants of the Nijhum Island and that of Dhaka. when a spectrum of colours is shown they differ in perceiving the number of colors. Which of the following can we conclude?
A. Human color perception is at least partly determined by factors other than the physical structure of the visual organs.
B. The Nijhum Islanders are probably taught in childhood to recognize 'fewer colors than are persons in Dhaka.
C. Differences in social structure probably affects color perception
D. Color perception in humans is influenced by differences in physical environment.
E. Nij'hum Islanders may have fewer terms denoting colors in their language than do the people of Dhaka.

14. Bidyut Must be a circketer I saw him with a cricket hat.
The conclusion above is valid only if it is true that
A. Cricket players often hold cricket bat.
B. All circketers hold cricket bats.
C. Circketers never hold any kind of bat other than cricket bat.
D. Circketers are required to hold cricket bats.
E. Only circketers hold cricket bats.

15. Demi and Wills are each older than both Dyana and Charles. If the statement above is true then which of the following statement ensures the truth of the conclusion. 'Arnold is older than Charles?"
A) Arnold is younger than Demi
B) Willis is older than Demi
C) Wills is younger than Demi
D) Arnold is older than Dyana
E) Amold is older than Willis

16. Why the flash of a thunder is seen first, then the sound is heard a little later?
A) Because it is distant B) Because of air resistance -
C) Because of clouds D) Because light travels much faster than sound.
E) Because the eye works faster than the ear.

17. Watch is to time, as barometer is to —.
A) thermometer B) temperature C) atmospheric pressure
D) Chemical energy E) solar' energy

18. As tomorrow is to yesterday, so Tuesday is to—-
A) Sunday B) Staurday C) Monday D) Wednesday E) Friday

19. Book A costs more than Book B: Book C Costs more than Book D. Book E costs less than Book D. Book B and Book E cost same. If the above is true. which of the following must also be true?
(A) Book A costs more than Book D (B) Book A costs less than Book C
(C) Book 4 costs less .than Book B (D) Book C costs more than Book B
(E) Book E costs moe than Book C

20. If $x > 2$ and $y > -1$, then
(A) $x < 2y$ (B) $-x > 2y$ (C) $-x < 2y$ (D) $xy > -2$ (E) $xy < -2$

| SECTION 4 | Written English | 30 Marks |
|---|---|---|

1. Write a short essay on the following topic- 10
"The role of Youth in our Politics."

2. Write a paragraph for the following topic : " Down and out " 10

3. Put commas wherever needed in the following paragraph 5
The commas are the most useful and usable of all the stops. It is highly important to put them write in places as you go along. If you try to come back after doing a paragraph and slick them in various talk that tempts you will discover that they tent to swarm like minnows. Better to use them sparingly and with affection.

4. Write 5 arguments against the following topic. 5
" Extroverts can only be leaders ."

## Model Test 1

**Section 1: Language and Communication**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1.B | 2.C | 3.C | 4.C | 5.A | 6.B | 7.D | 8.E | 9.E | 10.B |
| 11.E | 12.B | 13.C | 14.C | 15.E | 16.A | 17.D | 18.B | 19.C | 20.B |
| 21.E | 22.A | 23.C | 24.C | 25.E | 26.D | 27.A | 28.C | 29.A | 30B |

**Section 2: Mathematics**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. B | 2. B | 3. B | 4. C | 5. D | 6. A | 7. A | 8. C | 9. D | 10. D |
| 11. C | 12. B | 13. C | 14. A | 15. B | 16. B | 17. B | 18. A | 19. D | 20.C |
| 21. C | 22. C | 23. D | 24. D | 25. A | 26. A | 27. B | 28. D | 29. D | 30. B |

**Section 3: Analytical**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. A | 2. C | 3. E | 4. B | 5. C | 6. A | 7. C | 8. E | 9. C | 10. D |
| 11. C | 12. B | 13. A | 14. E | 15. E | 16. E | 17. C | 18. A | 19. D | 20. C |

# MODEL TEST: 2

| SECTION I | Language and Communication | 20 Marks |
|---|---|---|

Directions: Each of the following sentences contains a blank space. Select the best answer which completes the sentence and mark your sheet accordingly.

1. He is much too ..... in his writings; he writes a page when a sentence should suffice.
   A. devious B. lucid C. verbose D. efficient E. pleasant
2. Each occupation has its own ____ ; bankers, lawyers and computer professionals, for example, all use among themselves language which outsiders have difficulty following.
   A. merits B. disadvantages C. rewards D. jargon E. Ambivalence
3. The term lead pencil is a ____; pencils are filled with graphite not lead.
   A. misnome B. misdemeanor C. peccadillo D. euphemism E. metaphor
4. The progress of the disease is ____; it spreads stealthily without any symptoms in the early stages.
   A. dramatic B. acute C. blatant D. insidious E. inexorable
5. The two artists differed markedly in their temperaments; Palmer was reserved and courteous, Frazer ____ and boastful.
   A. phlegmatic B. choleric C. constrained D. tractable E. stoic

Direction: In each of the following sentences, some part of the whole sentence is underlined. Each sentence is followed by five alternative versions of the underlined portion. Select the alternative that you consider most correct. Answer A as the original version; if you think the original version is best, answer A.

6. Trying to keep her balance on the icy surface, the last competitor's ski-tip caught the pole and somersaulted into the soft snow.
   A. the last competitor's ski-tip caught the pole and somersaulted into the soft snow.
   B. the ski-tip of the last competitor caught the pole and somersaulted in the soft snow.
   C. the last competitor caught the pole with the tip of her ski, and somersaulted into the soft snow.
   D. the last competitor caught the pole with her ski-tip, which made her somersault into the soft snow.
   E. the last competitor somersaulted into the soft snow when the tip of her ski was caught by the pole.
7. The impostor eluded detection for so long because she conducted herself as though she were a licensed practitioner.
   A. as though she were a licensed practitioner.
   B. as though she was a licensed practitioner.
   C. like she was a licensed practitioner.
   D. like as if she was a licensed practitioner.
   E. as if she was a practitioner with a license.
8. Being abandoned by our friends is the cause of great sorrow for us.
   A. Being abandoned by our friends is the cause of great sorrow for us.
   B. Our being abandoned by our friends is the cause of great sorrow.
   C. Being abandoned by our friends, we feel great sorrow.
   D. Abandoned by our friends, sorrow is the result.
   E. We feel great sorrow when our friends abandon us.

9. Among the many reasons for his defeat in the election was his arrogant assumption that his constituents were incapable of understanding economic conditions, and his unwarranted attack on his chief opponent.
   A. was his arrogant assumption that his constituents were incapable of understanding economic conditions
   B. were his arrogant assumption that his constituents were incapable of understanding economic conditions
   C. were his arrogant assumptions that his constituents were incapable of understanding economical conditions
   D. were his arrogant assumption that his constituents would be incapable of understanding economics
   E. was the arrogant assumption that his constituents was incapable of understanding economic conditions
10. More and more holidaymakers are choosing to fly to remote islands in search of the perfect beach; seeking sand, sun and palm trees, rather than centers of entertainment.
   A. ; seeking sand, sun and palm trees, rather than centers of entertainment.
   B. ; seeking sad, sun, palm trees and not entertainment.
   C. , with sand, sun, palm trees and no entertainment.
   D. , they seek sand, sun and palm trees, rather than entertainment centers.
   E. ; they seek sand, sun and palm trees, rather than centers of entertainment.

Directions: Pick the option describing correct usage of the words:

11. i) Don was convicted of crime in 11 countries.
   ii) He convicted that I did all these.
   iii) "The Shawshank Redemption" depicts a convict's life brilliantly.
   A. i only B. ii only C. ii and iii D. i and iii E. All three

12. i) It is animal nature to horde food for the winter.
   ii) He came back to rescue his little hoard of gold
   iii) Thousands of antiques horded by a compulsive collector were being displayed.
   A. i only B. ii only C. ii and iii D. i and iii E. All three

13. i)The practice is of *dubious* legality
   ii) The recent rumbles and ruptures in the financial markets are finally making people reassess the dubious systems of credit that have arisen in the past few years.
   iii) Some highly *dubitable* "evidence" show that the stone tower was built by the Vikings
   A. i only B. ii only C. ii and iii D. i and iii E. All three

14. i) The person appointed has fully justified our confidence
   ii) The fact that we are at war does not *justify* treating innocent people as criminals
   iii) The project is not financially justifiable
   A. i only B. ii only C.ii and iii D. i and iii E. All three

15. i)He smiled indulginly.
   ii) The audience broke into *indulgent* laughter, humoring the rube savant
   iii) Rapp hasn't done himself any favors by directing his own work, which would have benefitted from a crisper, less *indulgent* hand.
   A. i only B. ii only C. ii and iii D. i and iii E. All three

Analogy: Choose the best possible answer option:

16. KLUTZ : CLUMSY
   A. priest: evil B. cold: contagious C. car: broken D. vegetable: green

17. CARNIVAL:ENTERTAINMENT
A. poster : propaganda B. handout : welfare
C. encyclopedia : information D. statement : persuasion
18. INCONCEIVABLE:DOUBTFUL
A. healthful : beneficial B. credible : plausible
C. indecent : lustful D. sickening : repugnan
19. EXHAUSTING:REJUVENATING
A. disturbing : soothing B. cruel : ruthless
C. pitiful : miserable D. vexing : irritating
20. CORPSE:DECEASED
A. infant : nascent B. prophet : skeptical C. tyrant : easygoing D. athlete :sluggish

Direction: Each of the following sentences contains four underlined words or phrases. Select the one that is incorrect and mark your Answer Sheet accordingly. If the sentence is correct as it stands, then mark (E) on your answer sheet.

21. Illiteracy is an enormous problem (A), it affects (B) millions of people worldwide (C), and is an impediment to (D) social progress. No error (E).
22. If you are sure that (A) you are in the right (B), you would not (C) mind an independent examination of (D) the case. No error (E)
23. The union insisted (A) on an increase in their (B) members' (C) starting pay, and threatened to call a strike if the company refused to (D) meet the demand. No error (E).
24. Television viewers claim that (A) the number of scenes depicting (B) alcohol consumption have (C) increased dramatically over (D) the last decade. No error (E).
25. The three richest men in America have (A) assets worth more than (B) the combined assets (C) of the sixty poorest countries of (D) the world. No error. (E)

Directions: Choose the proper idiom.

26. Police was instructed to ___ the matter.
A. look into B. mean to C. Look forward to D. take actions E. make up

27. She made __ taking a walk each day
A. habitual B. a point of C. ends meet D. her mind to E. next to nothing

28. the twins were so identical that it was impossible to __
A. turn around B. look over C. tell them apart D. try out E. think over

29. Oh please, don't ask me to cook today, I'm a bit ___
A. turned off B. under the weather C. warmed up D. choleric E. wasted away

30. Ever since she heard the news, she's been ___
A. walking on air B. wearing out C. making up D. making a point E. looking on

| SECTION II | Mathematics | 20 Marks |
|---|---|---|

1. If the number 91876 * 2 is completely divisible by 8, then the smallest whole number in place of * will be:
   A. 1 B. 2 C. 3 D. 4
2. Two numbers are in the ratio of 15:11. If their H.C.F. is 13, Find the numbers.
   A. 195 and 143 B. 190 and 143 C. 195 and 145 D. None of these
3. How many digits will be there to the right of the decimal point in the product of 95.75 and .02554?
   A. 5 B. 6 C. 7 D. None of these
4. In a race of 200 m, A can beat B by 31 m and C by 18 m. In a race of 350 m. C will beat B by :
   A. 22.75 m B. 25 m C. 19.5 m D. 7 m
5. The value of $\sqrt{10+\sqrt{25+\sqrt{108+\sqrt{154+\sqrt{225}}}}}$ is:
   A. 4 B.6 C. 8 D. 10
6. The average of all the two-digit numbers, which remain the same when the digits interchange their positions, is:
   A. 33 B. 44 C. 55 D. 66
7. The difference of two numbers is 11 and one-fifth of their sum is 9. Find the numbers.
   A. 28 and 17 B. 28 and 18 C. 28 and 19 D. None of these
8. The total age of A and B is 12 years more than the total age of B and C. C is how many years younger than A?
   A. 12 B. 24 C. 26 D. None of these
9. The largest number among $\sqrt{2}$, $\sqrt[3]{3}$ and $\sqrt[4]{4}$ is:
   A. $\sqrt{2}$ B. $\sqrt[3]{3}$ C. $\sqrt[4]{4}$ D. All are equal
10. Sixty-five percent of a number is 21 less than four-fifth of that number. What is the number?
    A. 140 B. 142 C. 144 D. 145
11. An article when sold at a gain of 5% yields Tk. 15 more than when sold at a loss of 5%. Its cost price would be:
    A. Tk. 150 B. Tk. 200 C. Tk. 250 D. Tk. 300
12. A sum of Tk. 53 is divided among A, B, C is such a way that A gets Tk. 7 more than what B gets and B gets Tk. 8 more than what C gets. The ratio of their shares is:
    A. 16 : 9 : 18 B. 25 : 18 : 10 C. 18 : 25 : 10 D. 15: 8 : 30
13. Three partners A, B, C start a business. Twice A's capital is equal to thrice B's capital and B's capital is four times C's capital. Out of a total profit of Tk. 16,500 at the end of the year, B's share is :
    A. Tk. 4000 B. Tk. 6000 C. Tk. 7500 D. Tk. 6600
14. If 18 pumps can raise 2170 tones of water in 10 days working 7 hours a day, in how many days will 16 pumps raise 1736 tones of water, working 9 hours a day?
    A. 6 B.7 C. 8 D. 9
15. Two workers A and B are engaged to do a work. A working alone takes 8 hours more to complete the job than if both worked together. If B worked along, he would need 4.5 hours more to complete the job than they both working together. What time would they take to do the work together'?
    A. 4 hours B. 5 hours C. 6 hours D. 7 hours

16. Two pipes A and B can fill a tank in 20 and 30 minutes respectively. If both the pipes are used together, then how long will it take to fill the tank?
A. 12 min B. 15 min C. 25 min D. 50 min

17. An express train travelled at an average speed of 100 km / hr, stopping for 3 minutes after every 75 km. How long did it take to reach its destination 600 km from the starting point?
A. 6 hrs 21 min B. 6 hrs 24 min C. 6 hrs 27 min D. 6 hrs 30 min

18. The simple interest on a sum of money will be Tk. 600 after 10 years. If the principal is trebled after 5 years, what will be the total interest at the end of the tenth year?
A. Tk. 600 B. Tk. 900 C. Tk. 1200 D. Tk. 1500

19. If the compound interest on a sum for 2 years at 12.5% per annum is Tk. 510, the simple interest on the same sum at the same rate for the same period of time is :
A. Tk. 400 B. Tk. 450 C. Tk. 460 D. Tk. 480

20. The reflex angle between the hands of a clock at 10:25 is:
A. 180° B. 192.5° C. 195° D. 197.5°

21. The greatest number that exactly divides 105, 1001 and 2436 is:
A. 3 B. 7 C. 11 D. 21

22. The value of 1001 ÷ 11 ÷ 13 is:
A. 7 B. 91 C. 143 D. 169

23. To fill a tank, 25 buckets of water is required. How many buckets of water will be required to fill the same tank if the capacity of the bucket is reduced to two-fifth of its present?
A. 10 B. 35 C. 62.5 D. None of these

24. If $x = 1 + \sqrt{2}$ and $y = 1 - \sqrt{2}$, find the value of $(x^2+y^2)$.
A. 6 B. 8 C. 10 D. 12

25. The average of the first nine prime numbers is:
A. 9 B. 11 C. $11\frac{1}{9}$ D. $11\frac{2}{9}$

26. If the sum of two numbers is 33 and their difference is 15, the smaller number is:
A. 9 B. 12 C. 15 D. 18

27. Tanya's grandfather was 6 times older to her 16 years ago. He would be 3 times of her age 8 years from now. Eight years ago, what was the ratio Tanya's age to that of her grandfather?
A. 1 : 4 B. 1 : 5 C. 3 : 13 D. None of these

28. If $a^x = b$, $b^y = c$ and $c^z = a$, then the value of xyz is:
A. 0 B. 1 C. $\frac{1}{abc}$ D. abc

29. 0.01 is what percent of 0.1?
A. $\frac{1}{100}$ B. $\frac{1}{10}$ C. 10 D. 100

30. A man can do a piece of work in 5 days. But with the help of his son, he can do it in 3 days. In what time can the son do it alone?
A. 6.5 days B. 7 days C. 7.5 days D. 8 days

| SECTION III | ANALYTICAL ABILITY | 20 Marks |
|---|---|---|

1. Monopoly is characterized by an absence of or decline in competition. The ABC company realizes that its operations are in competitive industries.
   Which of the following conclusions may be inferred from the above?

   a) ABC'S market is not monopolistic.
   b) Monopoly is defined as one seller in the market.
   c) The ABC company has no domestic competitors.
   d) The ABC company is in a service industry.
   e) The ABC company is publicly owned.

2. Sazid walks 10 miles towards North, then turns right and walks 5 miles; again turns right and walks 2 miles. In which direction is he walking?
   a) East b)West c) North d) South e) No definite direction

3. "If birds are singing, then it must be spring." - then which of the following must be true?
   a) Birds are singing; (b) It is spring'. (c) Birds sing only during spring.
   d) Birds do not sing unless they are happy. (e) During spring, birds make their nests.

4. A rectangle is R inches long and S inches wide. If the length is increased by 4 inches, the Area (in sq, inches) will be increased by-
   a) 4RS; b) 4R; c) 4S; d) 16RS; e) 4(R+S)

5. A If x, y, z are consecutive positive inkgers greater than I, not necessarily in that order, then which of the following is (are) true?"
   i) x > z ii) x+y> z iii) yz> xy iv) xy > yz.
   a) I only b) II only c) II & III d) III & IV e) II & IV.

6. Rumi is the most talented person in the class. He scored the highest mark in the exam. The above argument assumes that -
   a) Exam score is the only scale to measure one's talent.
   b) No other boy is as talented as Rumi is.
   c) No other boy recorded as high as Rumi did.
   d) One's highest score, in the exam, doesn't necessarily mean that he is the most talented person. (E) None.

7. At a political rally at Purana-Paltan, Candidate Latif exclaimed-"Nearly everyone at the rally is behind me. It looks like I am going to be elected."
   Which of the following statements, if true; best supports the above conclusion?
   a) Latits opponent also appeared at the rally.
   b) Almost all the resident of Latifs constituency attended the rally.
   c) Latif was never defeated in an election.
   d) The local mayor supported Latif.
   e) People always vote their emotions.

8. Among the people standing in a line, Shiplu is just in the middle. Which of the following can be the total number of the people in that line?
   a) 4; b)10; c) 18; d) 13; e) None of these.

9. On a swimming team,
All freestyle swimmers are Olympic winners. No blue- eyed swimmer is an Olympic winner
All Olympic winners go on to lucrative careers.
If the above statements are true, then which of the following must be true?
a) All those who, go on to professional careers are free style swimmers.
b) Only freestyle swimmers go on to professional careers.
c) Some blue - eyed swimmers go on to lucrative professional careers,
d) No blue-eyed swimmers is a free-style swimmer.
e) Only blue-eyed swimmers don't go on to lucrative careers.

10. Bell A rings every 2 minutes and Bell B rings every 3 minutes. If the bells ring simultaneously at 1:00 pm. What is the total number of times the bells will ring simultaneously between 1:00 pm & 2.00 pm inclusive?
a) 12 b) ll c) 10 d) 9 e) 8

11. Imad & Rajib are each older than both Arif & Tanmay. If the statement above is true then which of the following statement ensures the truth of the conclusion, "Shumon is older than Tanmay"?
a) Shumon is younger than Imad. (b) Rajib is older than Imad.
c) Rajib is younger than Imad. (d) Shumon is older than Arif.
e) Shumon is older than Rajib.

12. Mr. X is the brother of Mr. Z. Mr. Y is the father of Mr. P. If Ms A is sister of Mr. N and Mr. N is the son of Mr. Y, who is actually the brother of Mr. Z, then which of the following must be true?
a) Mr. Z is the brother of Mr. P. (b) Mr. X is the uncle of Ms. A.
c) Ms A & Mr. Y are cousins. (d) Mr. Y is the brother of Mr. X.
e) None of the above.

13. If "Birthday" stands for 26745081, then "BAD" stands for-
a) 280 b) 852 c) 208 d) 282 e) 216

**Question (14 - 16)**
A group of six people -D, E, F, L, M, S- ran a series of races, S finished last in every race. L finished some where between D & F in every race. E finished before D in every race M finished before F in every race.

14. Which of the following is a possible order, from first to lust?
A) F,M,L,E,D,S B) M,D,L,F,E,S C) M, E, D, L, F, S
D) M, F, L, D, E. S E) None of these

15 Which of the following cannot be the order of finish of a race, from first to last?
A) E,D,L,M,F,S; B) E,M,F,L,D,S;
C) M,E.F,L,D,S; D) M,E,L,F,D,S; E) M,F,L,E,D.S

16. If M finished second in a race, then which of the following must be true of that race?
A) D finished 1st B) F finished 1st C) D finished 3rd
D) L finished 4th E) F finished 5th.

17. If x2 = 68; which of the following could be true?
A) 0-9 <x < -8; B) –8 < x <- 7 C) –8 < x <8 D) 7 < x < 8 E) 9 < x < 10

18. What is the 10th number in the series? 1,5,9,13.....
A) 23 B) 24 C) 35 D) 37 E) 36

**Question (19-20)**

5 executives of a European corporation hold a conference in London.
Mr. A converses in Spanish and Italian.
Mr. B converses in Spanish and English.
Mr. C converses in English and Italian.
Mr. D converses in French and Spanish.
Mr. E, a native Italian, can also converse in French.

19. Which of the following can act as an interpreter when Mr. C. and Mr. D wish to confer?
A) None B) Only Mr. B C) Only Mr. E D) Mr. A or Mr. B.
E) Any of the other three- executives.

20. Which of the following cannot converse between them without an interpreters?
a) Mr. B & Mr. E; b) Mr. A & Mr. B
c) Mr. A & Mr. C ; d) Mr. B & Mr. D; e) Mr. A & Mr. E.

| SECTION 4 | WRITTEN ENGLISH | 20 Marks |
|---|---|---|

1. Write an essay on the follow topic " Violence" (10)
2. Write a sentence with each of the following words/phrases.
Bring about. Call on, drastic, obnoxious. Verbatim. (5)
3. Correct the following sentences (5)
a. I am a student and so Kashem is.
b. I like cycling, rowing and play football.
c. Rahim went to school and, attended the classes.
d. Smoking is injurious for health.
e. Rahat, along with Wasi and Naudini are going to the market.

## Answer Key

### Model Test 2

**Section 3: Language and Communication**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. C | 2. D | 3. A | 4. B | 5. B | 6. A | 7. E | 8. A | 9. C | 10. A |
| 11. D | 12. B | 13. E | 14. E | 15. C | 16. B | 17. C | 18. D | 19. A | 20. A |
| 21. B | 22. A | 23. E | 24. A | 25. E | 26. A | 27. B | 28. C | 29. | 30. A |

**Section 1: Mathematics**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. C | 2. A | 3. B | 4. B | 5. A | 6. C | 7. A | 8. A | 9. B | 10. A |
| 11. A | 12. B | 13. B | 14. B | 15. C | 16. A | 17. A | 18. D | 19. D | 20. D |
| 21. B | 22. A | 23. C | 24. A | 25. C | 26. A | 27. C | 28. B | 29. C | 30. C |

**Section 2: Analytical ability**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. A | 2. C | 3. C | 4. C | 5. B | 6. A | 7. B | 8. D | 9. D | 10. B |
| 11. E | 12. D | 13. A | 14. C | 15. D | 16. D | 17. C | 18. D | 19. E | 20. A |

# MODEL TEST: 3

| SECTION I | Language and Communication | 20 Marks |
|---|---|---|

Questions (1 to 6): *select the correct spelling of the word in capital letters*

1. ACCELARATE
   a) Accilerate b) Accelarate c) Accillarate d) Accelerate e) None of them
2. STUNAMI
   a) Tsunami b) Tsuname c) Tsunamee d) Stunamt e) None of them
3. HUMOURIUS
   a) Humirious b) Humorous c) Humourius d) Humirus e) None of them
4. SUPERCEED
   a) Superceed b) Supersede c) Superseed d) Supercede e) None of them
5. VOLANTORY
   a) Volantory b) Vantary c) Voluntery d) Voluntary e) None of them

Questions (6 to 10): *Choose the word which is most nearly opposite in meaning to the word in capital letters*

6. SLY
   a) Clever b) Detect c) Artistic d) Artless e) None of them
7. AMIABLE
   a) Faithful b) Insulted c) Unfriendly d) Indecent e) None of them
8. EQUITY
   a) Uprightness b) Insulted c) Integrity
   d) Indecent Amiable e) None of them
9. WHIMSICAL
   a) Fanciful b) Justice c) Impulsive d) Bias e) None of them
10. NATIVE
    a) Exotic b) Rustic c) Elegant d) Local e) None of them

*Questions 11-15):* Find out the correct answers

11. Choose the one that best expresses the meaning of the given word: OMNIPOTENT
    a) Feeble b) Impotent c) Supreme d) Vulnerable e) None of them
12. Choose the one that best expresses the meaning of the following term: 'White elephant'
    a) An elephant of white color b) A hoarder c) Worthless
    d) A very costly or troublesome possession e) None of them
13. "Pass away" means
    a) Disappear b) Die c) Erase d) Fall Pass away e) None of them
14. Choose the one which can be substituted for the given words/sentence: 'A song embodying religion sacred emotions'
    a) Lyric b) Ode c) Hymn d) Ballad e) None of them
15. Choose the one that best expresses the meaning of the following idiom: 'To read between the lines'
    a) To concentrate b) To grasp the hidden meaning
    c) To read carefully d) To suspect e) None of them

Questions *(16 to 20)*: *Find the similar relationship expressed in the pair in capital letters*

16. TIGER: ZOOLOGY
    a) Politics: Policy b) Sound: Music c) Mars: Astronomy
    d) Friend: Family e) None of them
17. HANGER: AIRPLANE
    a) Stable: Horse b) Canal: Ship c) Bed: River
    d) Lobby: Administrator e) None of them
18. FRIGHTENED: SCREAM
    a) Cry: Hurt b) Angry: Shout c) Clear: Cloudy
    d) Laugh: Hate e) None of them
19. STUDIO: ARTIST
    a) Play: Dramatist b) Blackboard: Professor c) Quarry: Sculpture
    d) Laboratory: Chemist e) None of them
20. HEAVY: WEIGHT
    a) Warlike: Force b) Brief: Clarity c) Bulky: Strength
    d) Ancient: Age e) None of them

Questions (21 to 25) :

Instruction: *Each of the following sentences has blank spaces which indicate words omitted. Choose the best combination to words which fits into the meaningful structure within the context to the sentence.*

21. To save their lives, the sailors had to_____ the sinking ship.
    a) fill up b) keep c) abandon d) stop e) None of them
22. He said that he_____ be unable to come.
    a) will b) shall c) should d) would e) None of them
23. He advised me
    a) giving up b) to give up c) in giving up
    d) from giving up full marks every time e) None of them
24. At least one of the students---------- full marks every time.
    a) get b) are getting c) gets d) have got e) None of them
25. She was ----------success and eager to create a name for herself
    a) sated by b) impatient for c) impassive to
    d) complaining about e) None of them

| **SECTION II** | **Mathematics** | **20 Marks** |
|---|---|---|

26. If the length of rectangle A is one-half of the length of rectangle B, and the width of rectangle A is one-half of the width of rectangle B, what is the ratio of the area of rectangle A to the area of rectangle B?
    a) 1/4 b) 1/2 c) 1/1 d)2/1 e) None of them
27. If a+2b=6 and ab = 4, what is 2/a+ 1/b?
    a) 1/2 b) 1 c) 3/2 d) 2 e) 5/2

28. The population of a certain town increases by 50 percent every 50 years. If the population in 1950 was 810, in which year was the population 160?
a) 1650 b) 1700 c) 1750 d) 1800 e) None of them

29. Next number in the sequence 3, 6, 11, 18, 27,..... is
a) 34 b) 36 c) 38 d) 40 e) None of them

30. A man loses Tk. 55.50 yearly when the annual rate of interest falls from 11.5% to 10%. His capital is:
a) Tk. 3700 b) Tk.7400 c) Tk. 8325 d) Tk. 11,100 e) None of them

31. The number of different signals which can be given from 6 flags of different colors taken one or more at a time is:
a) 1958 b) 1956 c) 16 d) 64 e) None of them

32. If $xy = 2$ and $xy^2=8$, what is the value of x?
a) 1/2 b) 2 c) 4 d) 8 e) 16

33. If a and b are integers greater than 100 such that a + b = 300. Which of the following could be the exact ratio of a to b?
a) 9 to 1 b) 5 to 2 c) 7 to 3 d) 4 to 1 e) 3 to 2

34. What is the H.C.F. of the numbers 36, 54 and 90?
a) 6 b) 9 c) 12 d) 18 e) None of them

35. If m and p are positive integers and (m+p) m is even, which of the following must be true?
a) If mis odd, then p is odd. b) both are odd numbers
c) If m is even, then p is odd. d) both are even numbers e) p must be even

36. Bus fare recently was increased from Taka 0.85 to Taka 1.00. What was the approximate percentage of increase?
a) 16% b) 15% c) 15.5% d) 18.6% e) None of them

37. The average of three numbers is v. If two numbers are x and y. which is the third number?
a) xy-v b) x/v-y c) 3x-v-y d) 3v-x-y e) None of them

38. If both x and y are prime numbers, which of the following CANNOT be the product of x and y?
a) 6 b) 10 c) 35 d) 27 e) None of them

39. Which of the numbers below is not equivalent to 4%?
a) 1/25 b) 4/100 c) 0.4 d) 0.04 e) 2/50

40. If 10% of x is equal to 25% of y, and y =16, what is the value of x?
a) 4 b) 6.4 c) 24 d) 40 e) 64

41. A tree increases annually by 1/8 of its height. By how much will it increase after 2 years, if it stands 64 cm high now?
a) 72 cm b) 74 cm c) 75 cm d) 81 cm e) None of them

42. If the diagonal of a square measures $16\sqrt{2}$ cm, what is the area of the square in sq. cm?
a) $32\sqrt{2}$ b) $64\sqrt{2}$ c) 128 d) 256 e) 512

43. If two fair coins are flipped, what is the probability that one will come up head and the other will come up tail?
a) 1/4 b) 1/3 c) 1/2 d) 3/4 e) None of them

44. A shopkeeper buys a box of candles for Tk. 18.00. If he wants to make a profit of 45%, how much should he sell them for?
a) Tk. 28.10 b) Tk. 29.90 c) Tk.25.90 d) Tk. 26.10 e) None of them

45. The angles of a triangle are in the ratio 5:4:3. How many degrees are there in the largest angle?
a) 45 b) 60 c) 75 d) 37.5 e) None of them

46. Every 3 minutes, 4 liters of water are poured into a 2,000-litre tank. After 2 hours, what percent of the tank is full?
a) 0.4% b) 4% c) 8% d) 12% e) 16%

47. At the beginning of a class period, half of the students in a class go to the library. Later in the period, half of the remaining students go to the computer lab. If there are 8 students remaining in the class, how many students were originally in the class?
a) 12 b) 16 c) 24 d) 32 e) 40

48. The area of circle A is 6.25π sq. in. If the radius of the circle is doubled, what is the new area of circlein sq. inches?
a) 5 π b) 12.5 π c) 25 π d) 39.0625 π e) 156.25 π

49. The total number of parallelograms that can be formed from a set of four parallel lines intersecting a set of three parallel lines is:
a) 6 b) 9 c) 12 d) 18 e) None of them

50. If w is 10% less than x, and y is 30% less than z, then wy is what percent less than xz?
a) 10% b) 20% c) 37% d) 40% e) None of them

| **SECTION III** | **Analytical Ability** | **20 Marks** |
|---|---|---|

Questions (1 to 5): *Choose the correct answer.*

1. Father is aged three times more than his son Ronit. After 8 years, he would be two and a half times of Ronit's age. After further 8 years, how many times would he be of Ronit's age?
a. 2.2 times b. 2.5 times c. 3.5 times d. 3 times

2. The average age of husband, wife and their child is 30 years and that of wife and the child 5 years ago was 20 years. The present age of the husband is:
a. 35 years b. 40 years c. 45 years d. 50 years

3. How many 3 digit numbers can be formed from the digit 2, 3, 5, 6, 7 and 9, which are divisible by 5 and none of the digits is repeated?
a. 5 b. 10 c. 15 d. 20

4. If one-third of one-fourth of a number is 15, then three-tenth of that number is–
a. 35 b. 36 c. 45 d. 54

5. How many seconds will a 500 meter long train take to cross a man walking with a speed of 3 km/hr in the direction of the moving train if the speed of the train is 63 km/hr?
a. 25 b. 30 c. 40 d. 45

Questions (6 to 10): *Read the following information and answer the questions:*

Seven students Farida, Juli, Keya, Mita, Rozy, Shirin, and Tuli are eligible to enter the currently running School Spelling Bee contest. From these seven, two teams must be formed - a red team and a green team, each team consisting of exactly three of the students. No student can be selected for more than one team. Team selection is subject to the following restrictions:

If Mita is on the red team, Keya must be selected for the green team.
If Farida is on the red team, Rozy, if selected, must be on the green team.
Rozy cannot be on the same team as Shirin. Juli cannot be on the same team as Keya.

6. Which of the following can be the three members of the red team?
(A) Farida, Juli, and Keya (B) Farida, Rozy, and Tuli
(C) Juli, Keya and Tuli (D) Keya, Mita, and Rozy
(E) Mita, Rozy, and Tuli

7. If Mita and Farida are both on the red team, the green team can consist of which of the following?
(A) Juli, Keya, and Rozy (B) Juli, Shirin, and Tuli (C) Keya, Rozy, and Shirin
(D) Keya, Rozy, and Tuli (E) Rozy, Shirin, and Tuli

8. If Mita is on the red team, which of the following, if selected, must also be on the red team?
(A) Farida (B) Juli (C) Rozy (D) Shirin (E) Tuli

9. If Farida is selected for the red team and Tuli is not selected for either team, then which of the following CANNOT be a member of the green team?
(A) Juli B) Keya (C) Mita (D) Rozy (E) Shirin

10. If both Mita and Farida are in the red team, which of the following must be included in the green team?
(A) Shirin (B) Tuli (C) Juli (D) Rozy (E) any of these

Questions (11 to 15): *Choose the correct answer.*

11. Which number replaces the question mark?
1, 4, 9, ? , 25, 36.
a. 11 b. 12 c. 16 d. 20

12. Which number should come next in the series?
1-1-2-3-5-8-13
a. 15 b. 21 c. 26 d. 31

13. If you rearrange the letters "LNGEDNA" you have name of a(n):
a. country b. animal c. city d. ocean

14. Ralph likes 25 but not 24; he likes 400 but not 300; he likes 144 but no 145. which does he like:
a. 10 b. 50 c. 200 d. 1600

15. If 194 means AID, BBEF means what?
a. 2254 b. 2256 c. 2846 d. 2988

Questions 39 to 42: *Study the following information carefully and answer the questions.*

*P*, Q, R, S, T, V, W and Z are sitting around a circle facing at the center. R is third to the right of Z, who is second to the right of P. S is not an immediate neighbor of Z and R. T is third to the left of S. Q is third to the right of W, who is not an immediate neighbor of S.

Now answer the following:

16. Which of the pair of persons are the immediate neighbors of P?
a) V,Q b)V,W c) V,S d)S,R e) None of these

17. What is Q's position with respect to Z?
a) Fourth to the right b) Fourth to the left c) Third lo the right
d) Either (a) or (b) e) None of these

18. Who is second to the right of T?
a) Z b) Q c) W d) cannot be determined e) None of these

19. In which of the following pairs, the second person sitting is on the immediate left of the first person?
a) RP b) TZ c) QR d) cannot be determined e) None of these

| WRITTEN ENGLISH | 20 Marks |
|---|---|

Write an essay on the follow topic :

1. "Fighting against the storm" (10)
2. "বাংলাদেশের ক্রিকেট এ নবজাগরণ" (10)

# Answer Key

## Model Test 3

### Section 1: Language and Communication

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. D | 2. A | 3. B | 4. B | 5. D | 6. D | 7. C | 8. D | 9.D | 10. A |
| 11. C | 12. D | 13. B | 14. D | 15. B | 16. C | 17. A | 18. B | 19. D | 20. D |
| 21. C | 22. D | 23. A | 24. C | 25. B | | | | | |

### Section 2: Mathematics

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. A | 2. C | 3. C | 4. C | 5. A | 6. B | 7. A | 8. E | 9. D | 10. E |
| 11. D | 12. D | 13. D | 14. C | 15. D | 16. D | 17. D | 18. C | 19. D | 20. C |
| 21. C | 22. D | 23. C | 24. D | 25. C | | | | | |

### Section 3: Analytical ability

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. A | 2. B | 3. D | 4. D | 5. B | 6. E | 7. D | 8. B | 9. E | 10. B |
| 11. C | 12. B | 13. A | 14. D | 15. B | 16. C | 17. D | 18. B | 19. C | |

# Chapter 7
# Real Questions

## Real Questions of IBA (1996-2015) with Solution

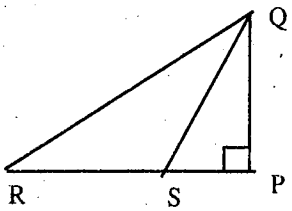
# BBA (IBA)

## Admission Test Question (1996-97) with Solution

**30 Questions** **Section I: Mathematics** **30 marks**

**Direction:** *Solve each of the following problems and mark the correct answer on your Answer Sheet.* ***DO NOT USE CALCULATOR.*** *Geometric diagrams are not drawn to scale.*

1. You buy equal number of two types of chocolate at the rate of Tk. $^1/_9$ and Tk $^1/_{11}$ respectively. If you now sell them at the rate of Tk. $^1/_{10}$ what will be your profit/loss?
   (A) 2% loss (B) 2% profit (C) 0 (D) 1% loss (E) 1% Profit
2. There are 18 bananas on a tree. If one monkey eats 1/3 of the bananas and another monkey eats 1/3 of the rest. How many bananas are still on the tree?
   (A) 16 (B) 10 (C) 8 (D) 6 (E) 4
3. What must be added to x/y to make 2y/x?
   (A) $2x^2/y$ (B) $(xy-y^2)/xy$ (C) $(2y^2-x^2)/xy$ (D) x/y (E) none of these
4. In making a Radio set. the cost of labour and materials are in the ratio of 3:2. A manufacturer sells a set for Tk. 1,500 to make a gain of 25% on the cost. What is the cost of the materials for the set?
   (A) Tk. 72 (B) Tk. 60 (C) Tk. 54 (D) Tk. 48 (E) Tk. 40
5. If three angles of a quadrilateral are x, y and z, express the fourth angle in terms of x, y and z.
   (A) 360-(x-y-z) (B) 360-x-y-z (C) 180-(x-y-z) (D) 180-x-y-z (E) none of these
6. If the product of (1+2), (2+3) and (3+4) is equal to one half the sum of 20 and x, then x = ?
   (A) 210 (B) 190 (C) 105 (D) 85 (E) 10
7. What is the value of $(\sqrt[3]{2^6})^2$?
   (A) 16 (B) 12 (C) 8 (D) 4 (E) 2
8. 2 men and 5 women completed only 1/4th portion of a job in 3 days. After 3 days another man was included in the team and in 2 days they completed another 1/4th portion of the job. How many men (with no women) can complete the whole job in 4 days?
   (A) 12 (B) 8 (C) 6 (D) 4 (E) none of these
9. Sharif ran a 2 mile race at an average speed of 8 miles per hour. If Arif ran the same race at an average speed of 6 miles per hour. how many minutes longer than Sharif did Arif take to complete the race?
   (A) 20 (B) 15 (C) 12 (D) 9 (E) 5
10. If x = 3 and y = $^1/_6$ then the value of x in terms if y is
    (A) 2y (B) $^1/_2$ y (C) $6^2/_3$ y (D) $3^1/_6$ y (E) 18y
11. The area of the following right angle triangle PQR is 36 units. If PQ = 4 and SQ = 5. what is the area of the traingle SQR?




    (A) 30 (B) 24 (C) 20 (D) 18 (E) 16
12. A football team had a ratio of win to loss of 3:1. After winning 6 games in a row. the team's ratio of win to loss became 5.1. How many games had the team won before it won the six games?
    (A) 24 (B) 12 (C) 9 (D) 6 (E) 3

13. The sides of a triangle are 6 cm. 7 cm and 8 cm. The shortest side of a similar triangle is 2 cm. What would be the length of the other two sides?
(A) 3, 4 (B) $5/3$, $7/3$ (C) $7/3$, $8/3$ (D) $9/3$, $11/3$ (E) none of these

14. If $9b = 81$, then $3 \times 3b = ?$
(A) 729 (B) 243 (C) 81 (D) 27 (E) 9

15. A jar contains 10 pencils. Some sharpened and some unsharpened. Each of the following could be the ratio of sharpened to unsharpened pencils except.
(A) 9:1 (B) 5:1 (C) 4:1 (D) 3:2 (E) 1:1

16. If $(a + b + c)/4 = (a + b)/3$. then what is the value of c?
(A) (a+b)/3 (B) (a+b)/4 (C) (a+b)/8 (D) (a+b)/12 (E) none of these

17. If $a/x + b = 1$, what is the value of x?
(A) (1-a) (B) (b-1) (C) (1-a)/b (D) a/(1-b) (E) none of these

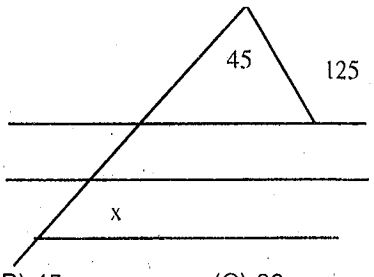
18. If each angle of a regular polygon is 162∞. how many sides does it have?
(A) 20 (B) 16 (C) (1-a)/b (D) 10 (E) none of these

19. If $x^2-y^2 = 27$. then $3 (x+y)(x-y) = ?$
(A) 81 (B) 36 (C) 27 (D) 24 (E) 9

20. A bicycle has two wheels (one large and one small) of 120 cm and 40 cm in diameters. When the large wheel makes 10 revolutions. How many revolutions does the small wheel make in that time?
(A) 30 (B) 25 (C) 20 (D) 15 (E) none of these

21. What is the value of (x-2). when $3x-5 = 1$?
(A) $5/3$ (B) 1 (C) $2/3$ (D) $1/3$ (E) 0

22. In the following diagram. all the angles are expressed in degrees. What is the value of x?




(A) 55 (B) 45 (C) 80 (D) 100 (E) 125

23. What is the length of a chord which is 5 cm distant from the centre of a circle whose radius is 13 cm?
(A) 24 (B) 18 (C) 16 (D) 12 (E) none of these

24. A man invested in a life insurance policy. He paid the insurance company an annual premium of Tk. 20 for insurance of every thousand taka. His insurance was for Tk. 4,500. The man died after making 27 annual installments. Total sum paid by the insurance company was Tk. 7,800. By how much the sum paid by the insurance company exceeded the total amount of premium that the man paid to the insurance company?
(A) 5370 (B) 4750 (C) 4500 (D) 3300 (E) none of these

25. In a class, 25% of the students voted for Mr. X. Two thirds of the remaining students voted for Mr. Y. The remaining 11 students didn't cast their votes. How many students are there in the class?
(A) 64 (B) 44 (C) 36 (D) 22 (E) 16

26. After 30 years, Zaman will be four times as old as he is now. Find out his present age.
(A) 10 (B) 11 (C) 7.5 (D) 30 (E) none of these

27. If a < b and c < d, then which of the following must be true?
(A) - c-a > - b - d (B) a + b < c + d (C) a = c (D) b = d (E) none of these

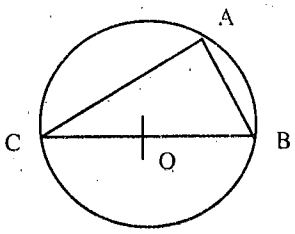
***Answer Questions 28 and 29 using the information given below:***

| Merchandise Sales Items | Amount of Sales | % of Total Sale |
|---|---|---|
| Shoes | Tk.. 12,000 | 15% |
| Coats | Tk. 20,000 | 25% |
| Shirts | Tk. X | 40% |
| Pants | Tk. Y | 20% |

28. According to the table above, what were the sales (in Tk.) of shirts and pants combined?
(A) 80,000 (B) 68,000 (C) 60,000 (D) 48,000 (E) 39,000

29. If sale of shirts is decreased by 10%, pants' sale is increased by 30%, shoes' sale is increased by 20% and coats' sale is decreased by 20%, what will be the increase/decrease in total sales?
(A) 0 (B) 96,000 decreases (C) 2,400 increase
(D) 1,600 increase (E) none of these

30. OB, the radius of the circle given below, equals to 2.5 cm and AB = 3 cm. What is the area




(in sq. cm) of the triangle ABC?
(A) 8 (B) 6 (C) 5 (D) 4.5 (E) 4

**Section 1I : Apitude & Analytical Ability** **30 Questions** **30 marks**

**Direction :** *Answer this section in the* ANSWER SHEET. *Select the choice that best answers the question in each problem or situation. Mark your answer sheet for the correct answer.*

1. Of the following fractions, which is the least?
(A) $^{19}/_{24}$ (B) $^{13}/_{20}$ (C) $^{35}/_{71}$ (D) $^{15}/_{20}$ (E) $^{17}/_{22}$

2. If P>0, Q < 0, R > 1 and S < 1, which of the following must be true?
(A) PR > QS (B) Q > S (C) (P+Q)/(R+S)>1 (D) Q < S (E) none of these

3. A man walks 10 miles towards North, then turns right and walks 5 miles, again turns right and walks 2 miles. In which direction he is walking?
(A) East (B) West (C) North (D) South (E) definite direction

4. If 4.83 kilometers are equivalent to 3 miles, then 7 miles are equivalent to how many kilometers?
(A) 8.83 (B) 9.67 (C) 10.57 (D) 11.27 (E) none of these

5. What is the percentage equivalent of 4.5?
(A) 450% (B) 45% (C) 4.5% (D) 0.45% (E) none of these

6. Which one of the following words fits best to hours, minutes, and seconds?
(A) decade (B) year (C) month (D) week (E) day

7. If $n \neq 0$, which of the following would be true?
(I) $2n < n^2$ (II) $n^2 < -n$ (III) $2n < n$
(A) I only (B) I and II only (C) I and III only (D) I, II, and III (E) none of these

8. What will be the mathematical sign (s) between the numbers in the following to complete the equation?
8 6 7 = 7
(A) (+ and +) (B) (- and - ) (C) - and + ) (D) (+ and - ) (E) none of these

9. Car is to wheel as Horse is to —?
(A) belly (B) body (C) tail (D) leg (E) none of these

10. Words are 'friends' if they have at least two letters in common. Which of the following is not a friend?
(A) creek (B) wreck (C) seek (D) week (E) all of them are friends

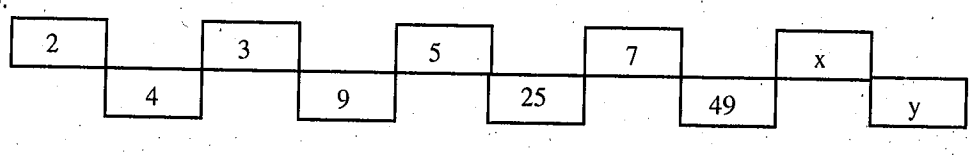
11. If two halves of $2\frac{1}{2}$ are added to $2\frac{1}{2}$, the result is :
(A) $5\frac{1}{2}$ (B) $3\frac{3}{4}$ (C) 5 (D) 3 (E) $2\frac{1}{2}$

12. Which is the odd one out?
(A) pen (B) paper (C) dagger (D) ink (E) pencil

13. Taka 4 is 20 percent of which amount?
(A) 25 (B) 20 (C) 15 (D) 10 (E) 5

14. If X and Y are different integers and both are divisible by 7, then which of the following is not necessarily true?
(A) X - y is divisible by 7 (B) XY is divisible by 49 (C) x+y is divisible by 14
(D) X + y is divisible by 7 (E) $X^2+Y^2$ is divisible by 49

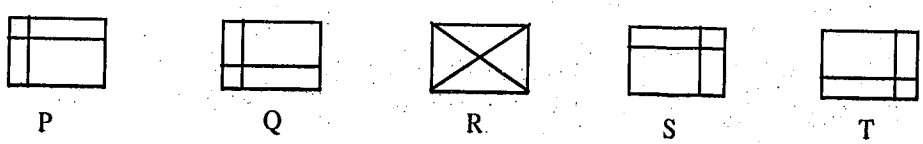
15.




In the above figure. What are the values of X and Y?
(A) 11, 121 (B) 8, 64 (C) 9, 81 (D) 8, 121 (E) none of these

16. 10% of r = 20% of s. 20% of s = 30% of t. 100% of r = x% of t. x = ?
(A) 300 (B) 40 (C) 30 (D) 20 (E) none of these

17. Which one is different from the others?




(A) P (B) Q (C)R (D) S (E) T

18. If the letters BAD stand for 214 then CAD stand for what?
(A) 132 (B) 122 (C) 214 (D) 314 (E) none of these

19. If a man was 'r' years old 's' years ago. how many years old will he be 't' years from now?
(A) r + s + t (B) s - r + t (C) rs + t (D) rst (E) r - s + t

20. If 5 students run a mile in 5 minutes, how much time will 50 students take to run a mile?
(A) 0.1 minutes (B) 5 minutes (C) 10 minutes (D) 50 minutes(E)250 minutes

***The following information serves as a basis for Questions No. 21 to 25***

Grading & Academic Standing of students

i. Five letter grades, viz. A, B, C, D & F may be assigned to evaluate a student's course performance. Following is the explanation:

| Letter Grades | A | B | C | D | F |
|---|---|---|---|---|---|
| Value or Grade Point | 4.00 | 3.00 | 2.00 | 1.00 | 0 |

ii. Grade Point Average or GPA is calculated at the end of the semester and on the basis of courses taken. The formula used to calculate GPA is
GPA = (Total Grade Point Earned ÷ Number of Courses Taken)

iii. To remain in a good standing a student must maintain a minimum GPA of 2.5

iv. If a student's GPA in any semester falls below 2.00, he/she will be dismissed.

v. If a student having a GPA of 2.0 or more but less than 2.5 fails to raise it to 2,5 in the next semester, he/she will be dismissed from the program.

vi. In each semester, a student is required to take 5 courses.

21. In the first semester, Javed scored "B" in English, "C" in Physical Science, "B" in Biological Science, "A" in Mathematics and "A" in Computer. Javed's GPA in the first semester is :
(A) 3.2 (B) 3. 50 (C) 3.00 (D) 2.50 (E) 2.00

22. (Please refer to Question 21). Which of the following is true about Javed?
(A) Javed will be on probation (B) He will be dismissed
(C) He is on good standing
(D) To remain on good standing, in the second semester he should score at least 2.50
(E) none of these"

*Further information for Question 23 and 24*

The following represents Rahim's performance in the first two semesters

| | First Semester | | | | | Second Semester | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Course number | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Grade Scored | A | A | B | C | B | B | B | A | C | B |

23. If Rahim wants to raise his GPA (cumulative) to 3.20 after 3rd Semester, what should be his GPA in the 3rd Semester alone?
(A) 3.40 (B) 3.30 (C) 3.20 (D) 3.10 (E) none of these

24. (Please refer back to Question 23). If Rahim's GPA in the 3rd Semester alone is 3.7, what would be his cumulative GPA after three semesters?
(A) 3.1 (B) 3.7 (C) 3.3 (D) 3.4 (E) none of these

25. After the first semester Saber is placed on probation with a GPA of 2.3. If he wants to avoid dismissal his GPA in the second semester alone should be at least :
(A) 2.70 (B) 2.50 (C) 2.30 (D) 2.00 (E) none of these

26. "What should be the role of the Government? What should be its nature? How best can the Government serve its citizens? How can the government promote private sector?" Suppose that these are the issues addressed in report ? For that report which of the following title suits best?
(A) Education in Bangladesh (B) Government that works (C) Business in Bangladesh
(D) Role of private sector (E) Politicis in Bangladesh

27. Point X is North of point Y and point Y is East of point Z. To which direction is point X with respect to Z?
(A) South-West (B) South-East (C) North-East (D) North-West (E) none of these

28. How many three-Kg. weight are needed to balance twelve four-Kg. weight?
(A) 48 (B) 36 (C) 24 (D) 16 (E) 8

29. Abahani has more points than the Brothers. The Mohammedans has less points than Arambag. The Brothes and the Muktijhoddhas have the same number of points. The Muktinhoddhas has more points than the Mohammedans.
If all the above is true, which of the following must also be true?
(A) The Brothers have fewer points than Arambagh (B) Arambag has more points than the Muktijhoddas
(C) Abahani has more points than the Mohamedans (D) Arambag has more points than Abahani
(E) The Brothers have fewer points than the Mohammedans

30. Pioneers of the motor car industry realized that if they were going to meet the growing demand for their product, they had to adapt the labour force used in the productive process. Instead of many men working to complete all the processes of one car at a time, they assigned defined taks to each man which they would repeat on every car. Which of the following can be more appropriately concluded from the above passage?
(A) The car workers became disgruntled because they were assigned monotonous, repetitive tasks on the assembly line.
(B) Early motor car manufacturers intended to increase productiveity by applying the principle of division of labour.
(C) The new production process enabled the labour force to become spcialists in the job to which they were engaged.
(D) A bad worker would perform the same tasks badly on each car, leading to many more rejects.
(E) Economics of scale enabled early motor companies to expand.

## Section III : Language and Communication

***This section has two sub-sections : Sub-section 1 and Sub-section 2. Sub-section 2 consists of five parts : A, B, C, D, and E***

**Sub - section 1 : vocabulary and Comprehension [30 Multiple Choice Questions, 15 Marks]**

**Directions :** Answer this part in the ANSWER SHEET. Each question is followed by five alternative answers. Select the correct one and mark your answer sheet.

1. The word "sanction" means
(A) verify (B) prohibit (C) plan (D) authorization (E) none of these

2. Which of the following is a meaning of the word "realistic"?
(A) Repressible (B) relevant (C) pragmatic (D) forlorn (E) fatal

3. Which of the following is a meaning of the word "entrance"?
(A) constrict (B) mature (C) unearth (D) access (E) disgust

4. The word "relevant" means:
(A) constrict (B) tough (C) consistent (D) rigid (E) none of these

5. If there is enough of something to go around, this means that there is enough for :
(A) those who arrive early (B) everyone (C) only a few
(D) those who will go early (E) none of these

6. Which of the following is not a meaning of the word "mean"?
(A) bad-tempered (B) resolve (C) intend (D) average (E) shabby

7. The plurals of letters, numerals, signs, symbols, abbreviations, and individual words are formed by adding
(A) s (B) es (C) 's (D) all of these (E) none of these

8. An adverb usually answers which of the following questions?
(A) when (B) where (C) how (D) to what degree (E) all of these

9. The word integrate means :
(A) unite (B) tolerate (C) assure (D) separate (E) none of these

10. Saturn has a family of nine satellites, _____
(A) the largest is Titan (B) which is Titan, the largest (C) the largest of which is Titan
(D) Titan is the largest (E) largest is the Titan

11. Your teacher _____ me when I was a boy.
(A) had taught (B) has taught (C) have taught (D) taught (E) did taught

12. The plane has not yet arrived, and I wonder when _____
(A) it comes (B) it has come (C) it came (D) it will be coming (E) it will come

13. The opposite of the word "flexible" is :
(A) changing (B) plastic (C) rigid (D) elastic (E) none of these

14. After a quarrel two friends have made up. Here " made-up" means that they :
(A) come to blows (B) become reconciled (C) hate each other
(D) never speak to each other again (D) none of these

15. Which of the following has the correct form of a sentence?
(A) She is considering not to going (B) She is considering not going
(C)She is considering not to go (D) She is considering to not go
(E) She is considering to not going

16. To express a complete thought every sentence must include :
(A) something or someone to talk about (B) some unanswered question
(C) something to say about the person or thing (D) both a and b (E) both a and c

17. Which of the following uses of "except" is not correct?
(A) He is good - looking except when he smiles. (B) Except for Javed, nobody came.
(C) Except for your help, I would have failed. (D) Everybody understands except me.
(E) Except for the noise of Louise typing, the room was quiet.

18. If something doesn't make sense, it is not :
(A) nice (B) logical (C) experience (D) funny (E) none of these

19. which of the following words is plural?
(A) anybody (B) nobody (C) everyone (D) each (E) none of these

20. 'Between' is a preposition that is used when — people are involved.
(A) two (B) three (C) four (D) many (E) no hard and fast rule

21. There are — parts of speech.
(A) four (B) five (C) six (D) many (E) eight

22. Which of the following is meaning of the word "innovate"?
(A) invent (B) buy (C) choose (D) copy (E) none of these

23. The — of a sentence will tell us what the subject is or does.
(A) object clause (B) structure (C) subject (D) object (E) sentence fragment

24. Which of the following construction is not correct?
(A) The meeting is at 10, isn't it? (B) Nobody phoned, did they?
(C) Open the door, would you? (D) Are you the new secretary, aren't you?
(E) He is your brother, isn't he?

25. If I say he made up that story, I mean that he:
(A) invented it (B) told it well (C) narrated it nicely (D) repeated it several times
(E) none of these

**Reading Comprehension**

*Read the following passage carefully. Based on what is stated or implied,* ***answer question*** *No.s 26-30.*

Pundits persist in arguing that present information technology (IT) is different in kind from earlier technologies and will therefore have vastly different economic consequences. The first distinguishing characteristic is its sheer pervasiveness. Not only can it be applied across all sectors of the economy, but it can affect every function within a firm. To take just a few examples, IT can improve the performance of a tractor on the farm, the design, manufacture and marketing of a car, and diagnosis as well as administration in health care. Unlike steam power or electricity. IT can be both an input and a final product: It is capable of revolutionizing the production and distribution of other industries and services, and also offers a vast range of new products and services of its own.
A second important feature is the sharp decline in the price of computer-processing power, which has fallen by an average of around 30% a year in real terms over the past couple of decades. On one estimate, computer power now costs only one hundredth of 1% of what it did in the early 1970s. Most experts expect price to continue to drop rapidly for at least the next decade. If cars had developed at the same pace as microprocessor over the last decades, a typical car would now cost less than $S and do 250.000 miles to the gallon.

**Questions:**

26. According to the passage, which of the following is not true :
(A) IT can contribute a lot in the marketing of goods and services.
(B) Information Technology (IT) can be both an input and an output.
(C) IT can bring revolution in the production sector.
(D) Steam power or electricity can not both be an input and output.
(E) Microprocessors and car technology have grown at the same pace.

27. In the third line of the passage the term "its sheer pervasiveness" is used to mean :
(A) No earlier invention can be applied across all sectors.
(B) Only electricity can be applied across all sectors.
(C) IT can be used in all sectors of the economy. (D) Price of IT has fallen drastically.
(E) Steam power and electricity are inputs.

28. According to the estimate mentioned in the passage, how much does the computer power cost now which was say $5000 in 1970s?
(A) $0.5 (B) $5 (C) $50 (D) $500 (E) $5000

29. According to the passage, which of the following is not true?
(A) The price of computer processing (power) is expected to decline in the next decade.
(B) The price of computer processing (power) has declined over the last two decades.
(C) A car can run 250,000 miles with a gallon of fuel.
(D) IT grew faster than the car technology.
(E) Now the price of a typical car is not less than $5.

30. Which of the following would be the best title for the passage?
(A) Economics of Technology (B) Technology and Productivity
(C) Technology and Marketing (D) Information Technology: Growth and Impact
(E) History of Technological Change

**Sub-section 2 : This sub-section must be answered inthis Test Booklet.**

**Part A : Structured Writing [5 Marks]**

**Direction :** *Answer this part in the* ***space given below.*** *Write 5 (five) complete sentences using the following data or information.*

**Information on Rickshaws in Dhaka City (hypothetical)**

| | 1995 | 1994 |
|---|---|---|
| Number of licensed Rickshaws in Dhaka City | 40,000 | 30,000 |
| Number of unlicensed Rickshaws in Dhaka City | 20,000 | 40,000 |
| Number of accidents involving Rickshaws | 800 | 1,000 |

**Part B : Sentence Re-writing** **[8 Questions, 4 Marks]**

**Direction :** (Answer this part in the **blank space** given for each question. The following sentences contain lengthy expressions. Re-write the sentences to make it more concise by using short expressions).

**Original sentences** **(Write the sentences in concise or short form)**

1. Will you be so kind as to reply before February 21, 1997.
2. There are many colleges in Dhaka city.
3. He who is a patriot loves his country.
4. We want to be of assistance and service to you.
5. The child, who is ten years old, has been missing for a week.
6. Please return the book at an early date.
7. Due to the fact that the amount is long overdue, you are requested to pay the bill immediately
8. In the event that you cannot attend the meeting, will you please send some one as your representative.

**Part C : Sentence Correction** [ 6 Questions, 3 Marks]

***Direction :*** *Answer this part in the* ***space given below,*** *Write the correct sentence for each original sentence.*

| Original sentences | Write correct sentences here |
|---|---|
| 1. I saw five times that move. | |
| 2. I went to bed. Because I was tried. | |
| 3. He is here since last June. | |
| 4. A large number of students have attend the seminar. | |
| 5. I am anxious to see my friend tomorrow. | |
| 6. It is 9 o'clock a.m. | |

**Part D : Logical Writing** [3 Marks]

**Direction :** (Answer this part in the **space given below.** Write three arguments against the statement given below ):

**"If I score 80% marks in this written test of BBA Admission. I would be selected for admission into the program."**

**Part E : Essay Writing** [ 10 marks]

**Direction :** (Answer this part in the **space given below**. Write short sentences and use familiar words and phrases).

**Question :** Write, an essay (consisting of three paragraphs) on ***"Good Health".***
[**Total words limit :** Minimum 100 : Maximum 150 ]

## Answer Key

**Section I: Mathematics**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. D | 2.C | 3. C | 4. D | 5. D | 6. B | 7. A | 8, C | 9. E | 10. E |
| 11. A | 12. C | 13. C | 14. C | 15. B | 16. A | 17. D | 18. A | 19. A | 20. A |
| 21. E | 22. C | 23. A | 24. A | 25. B | 26. A | 27. A | 28. D | 29. A | 30. B |

**Section II: Analytical and Ability**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. C | 2.E | 3. D | 4. D | 5. A | 6. E | 7. E | 8, D | 9. D | 10. E |
| 11. C | 12. C | 13. B | 14. C | 15. A | 16. A | 17. C | 18. D | 19. A | 20. B |
| 21. A | 22. C | 23. A | 24. C | 25. A | 26. B | 27. D | 28. C | 29. C | 30. B |

**Section III: language and communication**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1.D | 2. C | 3. D | 4. C | 5. B | 6. B | 7. C | 8, E | 9. A | 10. C |
| 11. A | 12. E | 13. C | 14. B | 15. B | 16. E | 17. C | 18. B | 19. E | 20. E |
| 21. E | 22. A | 23. A | 24. D | 25. A | 26. E | 27. C | 28. A | 29. C | 30. D |

## BBA (IBA) Admission Test (1996-97) Solution

### Section I: Mathematics

1. (D) ১ম type এর chocolate = x টি হলে মল্য = x/9 Tk. দ্বিতীয় type এর x টি chocolate এর মল্য = x/11 Tk.

   ∴ total cost = x/9 + x/11 = $\frac{20x}{99}$ Tk মোট 2x টার বিক্রয় মল্য = $\frac{2x\times1}{10}=\frac{x}{5}$ ∴ loss = $\frac{20x}{99}-\frac{x}{5}=\frac{x}{99\times5}$; ∴% loss = $\frac{loss}{cost}=\frac{99\times5}{20x}$ = 1% loss.

2. (C) প্রথম monkey $\frac{1}{3}$ অর্থাৎ $\frac{18}{3}$ = 6 টি banana খেয়ে ফেললে বাকী থাকে 18 – 6 = 12 টা। দ্বিতীয় monkey $\frac{1}{3}$ অর্থাৎ$\frac{12}{3}$ = 4 টা খায়। ∴ বাকী = 12 – 4 = 8 টা।

3. (C) $\frac{2x}{x}-\frac{x}{y}=\frac{2y^2-x^2}{xy}$

4. (D) 25% gain (লাভ) হওয়াতে বিক্রয়মল্য = 125 টাকা। ∴ 12 টাকা বিক্রয়মুল্য হলে cost = 100
   150 টাকা বিক্রয়মল হলে cost = $\frac{100\times150}{125}$ = 120, ∴ material cost = $\frac{120}{5}$ = 48 টাকা।

5. (D) x + y + z + fourth angle = 360°; ∴fourth angle = 360°-x – y – z

6. (B) (1 + 2) (2 + 3) (3 + 4) = $\frac{20+x}{2}\Rightarrow 105\times2=20+x\Rightarrow 210-20=x\Rightarrow x=190$

7. (A) (26)2/3 = (26/3)2 = (22)2 = 42 = 16.

8. (C) 2 men + 5 women 3 দিনে করে $\frac{1}{4}$ অংশ
   " " " " 1 দিনে করে 1/12 অংশ ----- (1); নতুন লোক আসার পরে
   3 men + 5 women 2 দিনে করে 1/4 অংশ
   3 men + 5 women 1 দিনে করে 1/8 অংশ ------ (2), (2) – (1) থেকে পাওয়া যায়,
   1 men 1 দিনে করে = 1/8 – 1/12 = (3 – 2)/24 = 1/24 অংশ
   ∴ 1/24 অংশ দিনে করে = 1 men
   ∴ 1 অংশ 1 দিনে কর 24 "
   ∴ 1 " 4 " "24/4 = 6 "

9. (E) Sharif এর সময় লাগে, $\frac{60\times2}{8}$ = 15; Arif এর সময় লাগে $\frac{60\times2}{6}$ = 20, Answer = 20 – 15 = 5 minutes
10. (E) x = 3 = (1/6) × 18 = 18y
11. (A) ΔPQS - এ PQ = 4 এবং SQ = 5 হওয়াতে PS = 3, $\frac{1}{2}$ PQ. PR = 36 ⇒ $\frac{1}{2}$ 4. (PS + RS) = 36

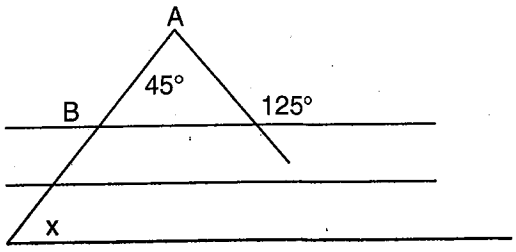
    ⇒ 3 + RS = 18RS = 15 ΔQRS = $\frac{1}{2}$ × base × height = $\frac{1}{2}$ × RS × PQ = $\frac{1}{2}$ × 15 × 4 = 30
12. (C) মনে করি, 6 games জেতার পর্বে team টা x games খেলেছিলো।

    $$\frac{\frac{3x}{4}+6}{\frac{x}{4}}=\frac{5}{1}\Rightarrow\frac{3x+24}{4}=\frac{5x}{4}\Rightarrow x=12;\ \therefore \text{Answer}=\frac{12\times3}{4}=9$$
13. (C) 2/6 = y/7 = z/8 ∴ y = 7/3, Z = 8/3
14. (C) 9b = 81; ∴ b = 9 ∴ 3 × 3b = 81
15. (B) 10 ‡Kvb msL¨v‡K (G‡¶‡Î) †Kv‡bv ration তে ভাগ করতে হলে ratio এর সব অংশের যোগফল দিয়ে সংখ্যাটি বিভাজ্য হতে হবে। এক্ষেত্রে,

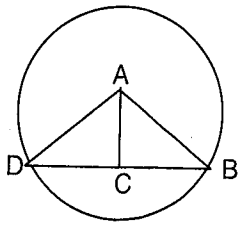
    A. 9 : 1 থেকে 9 + 1 = 10 দ্বারা 10 বিভাজ্য হচ্ছে; B. 5 : 1 থেকে 5 + 1 = 6 দ্বারা 10 বিভাজ্য নয়;

    C. 4 : 1 থেকে 4 + 1 = 5 দ্বারা 10 বিভাজ্য হচ্ছে; D. 3 : 2 থেকে 3 + 2 = 5 দ্বারা 10 বিভাজ্য হচ্ছে;

    E. 1 : 1 থেকে 1 + 1 = 2 দ্বারা 10 বিভাজ্য হচ্ছে;
16. A. (a + b + c)/ 4 = (a + b)/3 ⇒ 3a + 3b + 3c = 4a + 4b ⇒ 3c = a + b ∴c = (a + b)/3
17. (D) a/x + b = 1 ∴x = a/(1-b)
18. (A) Formula for total of interior angles of polygon = 180 (n-2) ∴162 × n = 180 (n-2) ⇒ 180n – 162n = 180 × 2 ⇒ 18n = 180 × 2 ∴ n = 20
19. (A) x2 – y2 = 27 ⇒ ( x + y) (x – y) = 27 ⇒ (x + y) (x – y) = 3.27 = 81
20. (A) For large wheel, diameter = 120cm ∴ circumference = πd = 120π ∴ প্রতি revolution = πd = 120π দরত্ব ∴10 revolution এ যায 120 × 10 = 1200π এখানে, দেখতে হবে এই 1200π যেতে 40cm diameter এর wheel টার কতটা revolution দেয়া লাগে। 40cm এর diameter এর wheel এর circumference = d = 404 answer = 1200π / 40π = 30
21. (E) 3x – 5 = 1 ⇒ x = 2 ⇒ x – 2 = 0
22. (C) Question এ ভুল হলো যে, ছবিতে যদিও তিনটা রেখাকে parallel দেখা যাচেছ, আসলেই ওগুলো parallel নাকি, question এ সে ব্যাপারে কিছুই বল হয়নি। অথচ, parallel না ধরে এগুলো solve করাও মুশকিল। প্রথমে ΔABC এ 125° = B + 45° ∴B = 80° অনুরূপ কোন হওয়ার কারণে x = b1 ∴ x = 80°.



23. (A) ছবি একে নিলে সুবিধা হবে। ΔACB হলো সমকোণী ত্রিভুজ। AB = 13, AC = 5 হওয়াতে BC = 12 (পীথাগোরাস অনুসারে) ∴chord BD = 24




24. (A) 1000 টাকায় premium 20 টাকা
∴ 4500 টাকায় premium ((20 × 4500)/1000 = 90 টাকা ∴ 27 বৎসরে প্রদত্ত premium = 90 × 27 = 2430 টাকা ∴ উত্তর = 7800 – 2430 = 5370 টাকা।

25. (B) মনে করি total students = x ∴ 25% of x + 2/3 (x – 25% of x) + 11 = x ⇒ x/4 + 2/3 (x – x/4) + 11 = x ⇒x/4 + 2/3 (3x/4) + 11 = x ⇒x/4 + x/2 + 11 = x ⇒ x – x/4 – x/2 = 11 ⇒ 4x – x –2x = 44 ∴ x = 44

26. (A) Say, present age = x ∴ x + 30 = 4x ⇒ x = 10

27. (A) (a +c) < (b + d) ⇒ (-a –c) > (-b –d)

28. (D) Coats এর sales এর হিসেব থেকে পাওয়া যায়, 25% of total sales = 20000 Tk.
∴100% of total sales = 80000Tk. অর্থাৎ total sales = 80000 Tk. ∴ X = 40% of 80000 = 32000 Tk.
Y = 20% of 80000 = 16000 Tk. ∴ X + Y = 48,000

29. (A) Total sales = 80000 Tk. ; Shirts = 40% of 80000 = 32000 Tk. ; Pants = 20% of 80000 = 16000 Tk.
For 10% decrease in sales of shirts, change = - 3200
For 30% increase in sales of pants, change = + 4800
For 20% increase in sales of shoes, change = +2400
For 20% decrease in sales of coats, change = - 4000

∴ Overall change = + 7200 – 7200 = 0

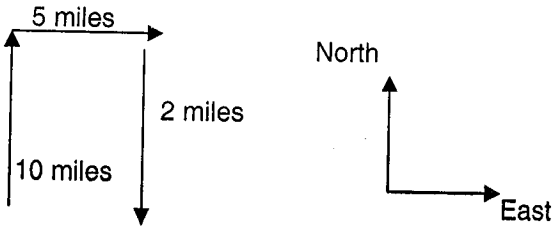
30. (B) OB = 2.5; ∴ BC = 5; Δ ABC হলো right angle triangle. ∴AC = 4
∴ area = ½ × AC × AB = ½ × 4 ×3 = 6

## Section II : Aptitude & Analytical Ability

1. (C) অংকটা বেশ সোজা। (C) এর লব (35) হর (71) এর অর্ধেকেরও কম। কিন্তু অন্য ভগ্নাংশগুলোর প্রত্যেকটাতে লবগুলো হর গুলোর অর্ধেকের চেয়ে বড়।

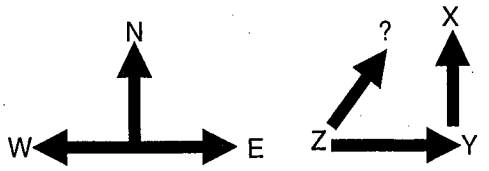
2. (E) P > R > 1 > S এবং O > Q ∴ কোনোটাই must be true হয় না।

3. (D) প্রশ্নে প্রদত্ত direction অনুসারে ছবি আঁকলে সহজেই answer পাওয়া যায়ঃ




4. (D) 3 miles = 4.83 kilometers. ∴ 7 miles = (4.83 ×7)/3 = 11.27 kilometers
5. (A) 4.5 = 4.5 × 100% = 450%
6. (E) day
7. (E) কোনটাই নয়
8. (D)

9. (D) car চলে wheel দিয়ে horse চলে leg দিয়ে।
10. (E) wreek এর e এবং k অক্ষর দুটো অন্য শব্দগুলোতেও আছে। আবার, creek, seek এবং week এর মধ্যে তিনটা করে অক্ষর (e, e, এবং k) common আছে।
11. (C) two halves of $2\frac{1}{2} = 2 \times \frac{1}{2} \times 2\frac{1}{2} = 2\frac{1}{2}$ $\therefore 2\frac{1}{2} + 2\frac{1}{2} = 5$
12. (C) dagger
13. (B) $4/x = 20\% \Rightarrow x = 20$
14. (C) মনে করি, $x = 7m$; $y = 7n$
    A. $x - y = 7(m - n)$, এটা 7 দিয়ে divisible
    B. $xy = 49mn$, এটা 7 দিয়ে divisible
    C. $x + y = 7(m + n)$; এটা 14 দিয়ে divisible নাও হতে পারে।
    D. $x + y = 7(m + n)$; এটা 7 দিয়ে divisible
    E. $x^2 + y^2 = 49m + 49n$; এটা 49 দিয়ে divisible
15. (A) উপরের ঘরের সংখ্যাগুলো হলো মৌলিক সংখ্যা (prime numbers) এবং নীচের ঘরের সংখ্যাগুলো হলে মৌলিক সংখ্যাগুলোর square (বর্গ) $\therefore X = 11, Y = 121$
16. (A) 10% of $r$ = 20% of $s \Rightarrow 0.1r = 0.2s$; 20 of $s$ = 30% of $t \Rightarrow 0.2s = 0.3$
17. (C) সহজেই বোঝা যাচ্ছে R different.
18. (D) BAD = 214 হওয়াতে B = 2, A = 1, D = 4, $\therefore$ C = 3 হবে; $\therefore$ CAD = 314
19. (A) এখন তার বয়স = $r + s$, $\therefore$ t বৎসর পরে তার বয়স = $r + s + t$.
20. (B) এটা একটা বেশ মজার ধাধা। একমাইল দৌড়াতে 5 জনের যে সময় লাগবে, 50 ৫০ জনেরও সেই একই সময় লাগবে!!
21. (A) GPA = (3 + 2 + 3 + 4 + 4) = 3.2
22. (C) GPA 3.2 হওয়াতে (iii) নম্বর শর্ত অনুসারে Javed এর standing is good.
23. (A) 3rd semester শেষ হওয়ার পর তিন semester এর মোট নেয়া course এর সংখ্যা = $3 \times 5 = 15$s. GPA 3.2 হওয়াতে grade point এর sum = $3.2 \times 15 = 48$ প্রথম দুই semester এ total grade point = (4 + 4 + 3 + 2 + 3) + (3 + 3 +4 + 2 +3) = 31, $\therefore$ 3rd semester এ পেতে হবে (48-31) = 17, $\therefore$ GPA = 17/5 = 3.4
24. (C) 3rd semester এ total GPA = $3.7 \times 5 = 18.5$, $\therefore$ তিন semester এ total = 31 + 18.5 = 49.5 $\therefore$ GPA = 49.5/15 = 3.3
25. (A) iv অনুসারে GPA 2.00 এর নীচে হলে student dismiss হবে। $\therefore$ Saber কে কমপক্ষে 2.00 পেতে হবে।
26. (B) POE (Process of Elimination) এর মাধ্যমে A.B.D এবং E কে title হিসেবে সহজেই eliminate করা যায়, যেহেতু বর্ণিত issue গুলোর সাথে এগুলো খাপ খায় না।
27. (C) ছবি দেখুন ঃ




28. (D) $3x = 4 \times 12 \Rightarrow x = 16$
29. (C) দেয়া আছে, Ab > Br; Ar > MO; and Br = Mu; Mu > Mo $\therefore$ Ab > Mu > Mo
30. (B) division of labor অর্থ শ্রমের (তার মানে, কাজের) বিভাগ; অর্থাৎ কেউ শুধু করছে গাড়ী রঙ করার কাজ, কেউ শুধু করছে welding এর কাজ, কেউ শুধু tire (টায়ার-গাড়ীর চাকা) লাগানোর কাজ প্রভৃতি।

## Section III : Language & Communication

1. (D) Sanction -অর্থ মঞ্জুর করা , Authorization অর্থ ও মঞ্জুর করা । অতএব, (D) উত্তর ।
2. (C) Realistic অর্থ "বাস্তব" Pragmatic অর্থ যা বাস্তবে সম্ভব । (C) উত্তর ।
3. (D) Entrance এবং Access দুটো শব্দই ব্যবহৃত হয় প্রবেশ পথ বুঝানোর জন্য । Answer (D).
4. (C) Relevant অর্থ প্রাসঙ্গিক । যেহেতু কোন উত্তরেই এরকম কোন ইঙ্গিত নেই । কিন্তু probably এখানে Printing mistake রয়েছে । consistent না হয়ে Consistent অর্থাৎ সামঞ্জস্যপূর্ণ হবে । কাজেই (C) উত্তর ।
5. (B) There is enough of something to go around
   অর্থ কোন কিছু প্রত্যেকের জন্য পর্যাপ্ত রয়েছে । কাজেই (B) উত্তর হবে ।
6. (B) "Mean" শব্দের অনেকগুলো অর্থ রয়েছে । যেমন ঃ (bad – tempered) রূঢ় ঃ the boy was really mean with me (Intend ) উদ্দেশ্য ঃ I do not mean any harm.(Average ) গড় ঃ Find the mean of these two numbers. (Shabby) জীর্ণ ঃ Your old school uniforms are in a mean state. কিন্তু **Restore**
   অর্থ নিষ্পত্তি । এর সাথে mean এর কোন সম্পর্ক নেই । কাজেই (B) উত্তর হবে ।
7. (C) সাধারণ ক্ষেত্রে s অথবা es যোগ করে plural হয় । যেমন ঃ students, Heroes ইত্যাদি । কিন্তু কোন abbreviations থাকলে তার সাথে plural করার জন্য -s যোগ হয় । যেমন ঃ- MBA's. Answer is (C)
8. (E) Adverb বুঝায় কোনকিছু কখন, কোথায়, কিভাবে এবং কি মাত্রায় ঘটে । কাজেই (E) উত্তর হবে ।
9. (A) Integrate অর্থ যুক্ত করা । এজন্য unite (A) উত্তর হবে । tolerate অর্থ সহ্য করা, assure অর্থ নিশ্চিত করা, separate অর্থ আলাদা, এজন্য এগুলো হবে না ।
10. (C) উত্তর হবে । যেহেতু largest superlative কাজেই এর আগে the এবং নয়টার মধ্যে বৃহত্তম বুঝাতে of which হবে ।
11. **(A)** এখানে যেহেতু tense হচ্ছে Simple Part কাজেই (D_) হলো না কারণ, অতীতের দুটো কাজের মধ্যে একটি আগে ও একটি পরে ঘটেনি ।
12. (E) যেহেতু I wonder আছে কাজেই কাজটা Simple future এ ঘটবে । এজন্য (E) will come উত্তর হবে ।
13. (C) Flexible অর্থ "নমনীয়" কাজেই এর বিপরীত শব্দ অনমনীয় হবে । Rigid (C) অর্থ অনমনীয় অথবা শক্ত ।
14. (B) Making up for something অথবা Making up a quarrel
    অর্থ ঝগড়াঝাটি মিটিয়ে ফেলা বা মনোমালিন্যের অবসান ঘটানো । কাজেই (B) উত্তর হবে ।
15. (B) Consider এর পরে Gerund হয় । কাজেই কোনভাবেই to বসবেনা । (B) উত্তর ।
16. (E) একটি বাক্য সম্পূর্ণ হতে গেলে Subject এবং Predicate দরকার হয় । বাক্যে যার সম্বন্ধে কিছু বলা হয় সে- subject আর subject সম্বন্ধে যা বলা হয় তা Predicate । এজন্য (E) উত্তর হবে ।
17. (C) Except ব্যবহৃত হয় ব্যতিক্রম বুঝাতে । এখানে - তে তোমার সাহায্য ছাড়া আমি ব্যর্থ হতাম" বুঝাতে without your help I would have failed হওয়া উচিত ছিল । Answer is (C)
18. (B) Doesn't make sense অর্থ যার কোন প্রকৃত মানে দাঁড়ায় না । logical না হলে কোনকিছু অযৌক্তিক হয় । কাজেই (B) উত্তর হবে ।
19. (E) এ গুলোর সবই Singular (E).
20. (E) প্রচলন হচ্ছে between এর জন্য দুইজন এবং দুই এর বেশি হলে among ব্যবহার করা । কিছু Grammar -এ এজন্য কোন ধরাধরি নিয়ম পাওয়া যায় না । (E) উত্তর ।

21. (E) আটটি Parts of speech -হলো Noun, Pronoun , Adjective, verb, Adverb, Preposition , Conjunction, Interjection.
22. (A) Innovate এবং Invent দুটো অর্থই উদ্ভাবন বা নতুন কিছু তৈরী করা । (A) উত্তর ।
23. (A) Subject কে বা কি করে বুঝার জন্য Sentence এর structure লক্ষ্য করতে হবে । কারণ object এবং object clause আমাদের subject সম্বন্ধে না object -সম্বন্ধে বলে । Sentence Fragment বলতে Sentence এর যেকোন অংশকে বুঝায় ।
24. (D) "Are you the new secretary" already একটি question তাই এর tag question হবেনা।
25. (A) Making up a story অর্থ কোন মিথ্যা গল্প বানিয়ে বলা । কাজেই (A) উত্তর হবে ।
26. (E) শেষ লাইনে বলা হয়েছে যদি Microprocessor এবং গতি it-র মতো একই গতিতে আগাত, তবেগাড়ির দাম হতো 5 ডলার এবং তা এক গ্যালন তেলে আড়াই লক্ষ মাইল যেতো । এখান থেকে বুঝা যাচ্ছে এই ব্যাপার গুলো বাস্তবে ঘটে নাই । এজন্য (E) উত্তর হবে ।
27. (C) ৩য় লাইনে " its sheer pervasiveness বলতে Economy -র সব ক্ষেত্রে it -র ব্যাপক ব্যপ্তিশীলতার কথা বলা হয়েছে । (C) উত্তর ।
28. (A) 1% of 5000 = 50; 1/100 of 50 = 0.5
29. (C) শেষে লাইনে বলা হয়েছে (c) সত্য নয় ।
30. (D) উত্তর কারণ সারাটা passage it এর বৃদ্ধি ও প্রভাব এর উপর ।

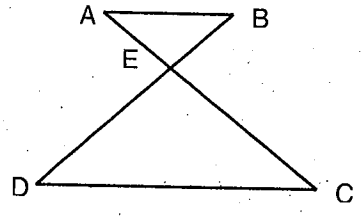
# BBA (IBA)

## Admission Test Question (1997-98) with Solution

## Section 1 — Mathematics — 30 marks

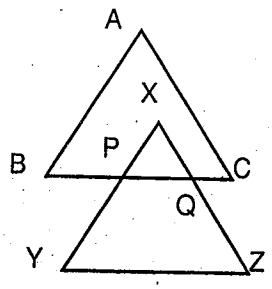
**Direction:** *Solve each of the following problems and mark the correct answer on your Answer Sheet.* **DO NOT USE CALCULATOR.** *Figures are not drawn to scale.*

1. A certain pole casts a shadow 24 ft. long. At the same time another pole which is 3 feet high casts a shadow 4 feet long. How high is the first pole, given that the heights and shadows are in proportion?
   (A) 21 (B) 20 (C) 19 (D) 18 (E) none of these
2. During a cricket match, Akram scored a century in just 40 deliveries. The number of boundaries he hit was twice that of over boundaries. He couldn't score from 6 deliveries and he could take singles from rest of the deliveries. How many boundaries did he score?
   (A) 16 (B) 14 (C) 12 (D) 10 (E) none of these
3. In the figure CD = 2AB and AB is parallel to CD. If the area of ABE is 3, what is the area of CED?
   (A) 12 (B) 9 (C) 6
   (D) 2 (E) none of these




4. When $x^2 - 3x + 2 = 0$ and $x^2 - x - 2 = 0$, what is the value of x?
   (A) -2 (B) 2 (C) 3
   (D) 1 (E) 4
5. Given that $(p + 7q)/4p = 19/20$, what is the ratio q:p?
   (A) 2:7 (B) 2:5 (C) 2:4 (D) 1:3 (E) 1:2
6. Due to booming business, a company increased its staff salary by 25%. By what percent must it now decrease the salary to return to the original amount?
   (A) 22.5 (B) 20 (C) 18 (D) 15 (E) none of these
7. Two trains running on the same route at the rate of 25 and 30 miles per hour. If the first train starts out an hour earlier, how long will it take the second train to catch up with it?
   (A) 5 hrs. (B) 4 hrs. (C) 3 hrs. (D) 2 hrs. (E) none of these
8. The mid-point of a line joining (-3,5) to (-3,-1) is :
   (A) 1, -4 (B) -3, 2 (C) -2, -1 (D) -3, 1 (E) 1, -1
9. A man buys some pen and pencil. The pen costs Tk. 7 each and the pencil costs Tk. 3 each. If the man spends exactly Tk. 81 and buys the maximum number of pen possible under these conditions, what is the ratio of pen to pencil?
   (A) 3:2 (B) 5:2 (C) 4:3 (D) 5:3 (E) none of these
10. In the figure below, triangle ABC and XYZ are equilateral triangles. YZ is parallel to BC. BC=4. QC = 1 and BP =2 unit. The perimeter of the triangle XPQ is:

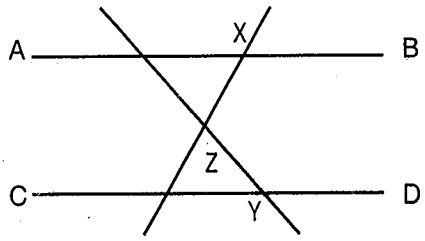
    (A) 5 (B) 4 (C) 3
    (D) 2 (E) none of these.




11. Karim bought a ticket to a cricket match for Tk. 25 and later sold the ticket to Rahim for Tk. 75. What was the percent increase in the price of the ticket?
    (A) 50% (B) 100% (C) 200% (D) 300% (E) 400%

12. Three workers can do a job in 12 days. Two of the workers work twice as fast as the third. How long would it take one of the faster workers to do the job himself?
(A) 36 (B) 32 (C) 30 (D) 24 (E) none of these

13. In the figure, AB is parallel to CD. $\angle x$ is 130° and $\angle y$ is 150°. What is the value of $\angle z$?




(A) 110 (B) 100 (C) 90
(D) 60 (E) none of these

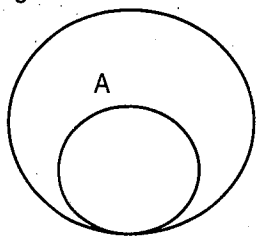
14. In a concert, 100 tickets were sold in two unequal lots at two different rates. First lot was sold at Tk.5 per ticket and the second lot was sold at Tk3.50 per ticket. If the total sales proceeds was Tk.410, how many people got the cheaper tickets?
(A) 75 (B) 60 (C) 50 (D) 40 (E) 30

15. Which of the following information is alone sufficient to find out the value of $4x^2 + 12xy + 9y^2$?
(A) yx = 9 (B) 2x =3y (C) 2x + 3y = 2 (D) x = 4 (E) none of these

16. A company employs 15 men working 44 hours a week. If 4 men are ill, how many hours a week would the rest have to work to make up the time lost?
(A) 45 (B) 48 (C) 50 (D) 55 (E) 60

17. A man travels a certain distance at a rate of 20 miles an hour and returns at the rate of 30 miles an hour. What is his average speed?
(A) 26 (B) 25 (C) 25.5 (D) 24 (E) none of these

18. In the figure below, point A is the center of the larger circle. What is the ratio of the area of the large to the area of the small circle?




(A) 2 (B) 2.25 (C) 3
(D) 3.25 (E) 4

19. Four children aged 11, 9, 7 and 4 share a sum of money in the ratio of their ages. If the youngest child receives Tk.1,200, what is the sum of money?
(A) 8,400 (B) 8,600 (C) 9,000 (D) 9,300 (E) 9,600

20. A cake weighing 750g has three ingredients: flour, sugar, and fruits. There is twice as much flour as sugar and one and a half times as much sugar as fruits. What is the quantity of sugar (in gram) in the cake?
(A) 50g (B) 125g (C) 250g (D) l00g (E) none of these

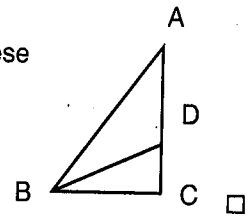
21. If a typist can type 125 pages, 36 lines each, 11 words to each line in 5 days, how many pages of 30 lines each and 12 words to each line can he type in 6 days?
(A) 165 (B) 160 (C) 155 (D) 145 (E) none of these

22. Find the value of K if (x+1) is a factor of $x^3 + Kx+3x^2 - 2$
(A) 6 (B) 5 (C) 4.5 (D) 4 (E) none of these

23. A certain triangle has sides that are respectively 6, 8 and 10 inches long. A rectangle equal in area to that of the triangle has a width of 3 inches. What is the perimeter of the rectangle?
(A) 24 (B) 22 (C) 16 (D) 11 (E) none of these

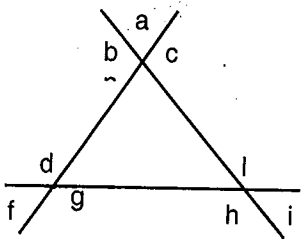
24. The price of sugar in the year 1995 increased by 10% from that of the previous year. In 1996 the price decreased by 5%. In 1996, what was the increase in price with respect to that of 1994?
(A) 5.5% (B) 5% (C) 4.5% (D) 4% (E) none of these

25. In the figure. BD = 2DC and AD = DB. What is the value of AB?
(A) $\sqrt{(BD^2 + DC^2)}$ (B) $\sqrt{3}$ BD (C) BC + DC
(D) 2BC (E) none of these

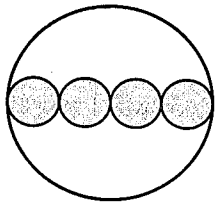



26. In the expression of $(x-y)^3$, the coefficient of $y^2$ is :
(A) $-3a^2$ (B) 3a (C) 3 (D) - 3 (E) none of these

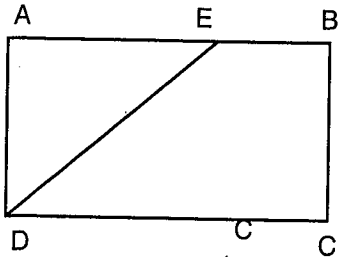
27. In the figure below, what is the sum of the nine angles labeled with letters?
(A) 990° (B) 900° (C) 840°
(D) 720° (E) indeterminate



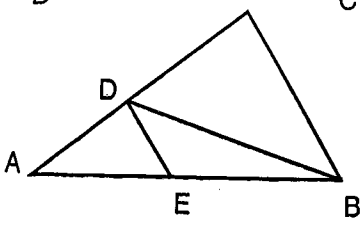

28. In the figure below, the centers of 4 equal circles lie along the diameter of the large circle. If the circumference of the large circle is 64π, what is the area of the shaded portion?
(A) 256π (B) 128 π (C) 64 π
(D) 32 π (E) 16 π



29. ABCDE is a rectangle. Find the area of DEBC, given that AD = 6 unit. CD = 8 unit and AE = m unit.
(A) 24 - 3 (B) 48 + 3m (C) 24 + 3m
(D) 3m + 16 (E) 48 - 3m




30. In the figure below, triangle ADE is an equilateral triangle, If DC = AE + BE and AC=3 inches, what is the value of AB?
(A) 2.5 (B) 2 (C) 1.5
(D) 1 (E) none of these



## Section II — Analytical Ability — 30 marks

**Direction:** *Answer this section in the* **ANSWER SHEET.** *Select the choice that best answers the question in each problem or situation. Mark your answer sheet for the correct answer.*

1. What are the next two terms of the following series?
   (A) $4,4x^2$ (B) 3,3x (C) 4,4x (D) 4,4/x (E) 3,x/3
2. In a class, A and D are equal in height. If B is taller than A and C is taller than B, what can we say about the relationship of C and D in terms of their height?
   (A) D is greater than C (B) C and D are non-comparable in height
   (C) C is greater than D (D) C and D are equal (E) none of these
3. When you join four points on a circle, how many triangles do you get?
   (A) 10 (B) 8 (C) 6 (D) 4 (E) none of these
4. X's score is 10% higher than Y's score and Z's score is 10% lower than X's. Whose score is the lowest?
   (A) Z (B) Y (C) X (D) Y & Z (E) can't be determined
5. As tomorrow is to yesterday, so Tuesday is to
   (A) Thursday (B) Wednesday (C) Sunday (D) Saturday (E) Monday
6. What is the value of $0^0$?
   (A) ±1 (B) 1 (C) -1 (D) 0 (E) undefined
7. In a family, Nasima has as many sisters as she has brothers. Her brother, Nasim has double the sisters than he has brothers. How many boys and girls are there in the family (exclude parents)?
   (A) 4 boys and 4 girls (B) 3 boys and 4 girls (C) 3 boys and 3 girls
   (D) 2 boys and 2 girls (E) none of these combinations
8. Sales of a company in 1994 was 5% higher than of the previous year. It grew at 4% in 1995 and 1996. Which of the following is true?
   (A) Sales was same in 1995 and 1996 (B) Sales was highest in 1995
   (C) Sales was lowest in 1996 (D) Sales was highest in 1994
   (E) none of the above is true
9. What percentage is ¾ of 6/5?
   (A) 90% (B) 80% (C) 75% (D) 60% (E) none of these
10. If I have a number and add 6, I get the same result as if I double the number and subtract 21. Find the number.
    (A) 27 (B) 33 (C) 45 (D) 51 (E) 61
11. The decimal number 0.420 may be written as_____
    (A) $.0042 \times 10^3$ (B) $4.2 \times 10^2$ (C) $4.2 \times 10^{-3}$ (D) $4.2 \times 10^{-1}$ (E) none of these
12. If A = Bat, B = Cat, C = Dat, D = Eat, then E = ?
    (A) Dad (B) Egg (C) Eat (D) Fat (E) Fit
13. Which is not an inequality symbol?
    (A) ≠ (B) ≥ (C) > (D) < (E) all of them are inequality symbols
14. Watch is to time, as barometer is to _____
    (A) solar energy (B) chemical energy (C) thermometer
    (D) atmosphere (E) temperature
15. Given that $2^{2n} = 8$, what is the value of n?
    (A) 3 (B) 1 (C) 4 (D) 2 (E) none of these

16. What is the value of (x,y) in the following series : x, 3, 5, 11, y?
(A) 2, 17 (B) 0, 17 (C) 1, 13 (D) 2, 13 (E) none of these

17. A number that consists of a whole number and a fraction is called a (an) _____ number.
(A) integer (B) rational (C) fractional (D) mixed (E) both A and C

18. Which one is the stranger in the series?
(A) B. Sc (B) B. Com (C) MBBS (D) MBA (E) BBA

19. What comes in the middle?
(A) decameter (B) centimeter (C) kilometer (D) hectometer (E) meter

20. Which one is the real root of the equation, $x^2 + 1 = 0$?
(A) 0 (B) ± 1 (C) -1 (D) -1 (E) it does not have a real root

21. The average of three different positive integers is 150 and the average of the smaller two is 120. What is the largest of these three integers?
(A) 230 (B) 210 (C) 180 (D) 110 (E) none of these

22. The number 0 is a (an)
(A) integer (B) positive integer (C) negative integer (D) both b and c(E) none of these

23. Which of the following fractions is the largest?
(A) 5/9 (B) 7/11 (C) 2/4 (D) 4/7 (E) 3/5

24. PQRS is a rectangle. T is a point on RS. If the area of triangle PST is greater than that of triangle PTR, which of the following information is alone sufficient to justify this?
(A) PR>PT (B) ST>TR (C) SP = QR (D) ST = TR (E) T is the mid-point of SR

25. Find the length of the largest stick which can be put inside an open rectangular box whose sides are 12 cm, 18 cm, and 24 cm?
(A) 24 (B) 26 (C) 30 (D) 32 (E) none of these

***Use information given below in the following table in answering the Questions 26 to 30***

| | SSC | HSC |
|---|---|---|
| Under 18 | 25 | 20 |
| 18 or over | 75 | 80 |

26. What percentage of the total students from SSC aged 18 or over?
(A) 12.5 (B) 15.5 (C) 20.0 (D) 25.0 (E) 37.5

27. What percentage of the SSCs are under 18?
(A) 10.0 (B) 15.0 (C) 20.0 (D) 25.0 (E) 30.0

28. Approximately what percentage of the under-18 are SSCs?
(A) 40.0 (B) 45.55 (C) 50.50 (D) 55.56
(E) none of these

29. What percentage of HSCs are under 18?
(A) 30.0 (B) 25.0 (C) 20.0 (D) 17.5 (E) 10.0

30. Which one is a more appropriate title for the above table?
(A) Proportion of male-female students (B) Age distribution of SSCs & HSCs
(C) Gender distribution of SSCs and HSCs (D) Results of SSCs & HSCs
(E) Both (B) and (C)

## Section III Language and Communication 30 marks

**Direction:** *Answer this part in the* **ANSWER SHEET.** *In the following sentences one word or phrase is missing. You are given five other words or phrases for each missing word and you have to decide which would best keep the meaning of the original sentence if it were substituted for the missing word or phrase.*

1. You should _____ more attention to what the invigilator says in the exam. hall.
   (A) pay (B) put (C) make (D) listen (E) do
2. The sea is _____ the hotel.
   (A) beside (B) besides (C) near by (D) at side of (E) close
3. Our ancestors _____ exchange gifts on Eid Day.
   (A) used to (B) use to (C) used (D) have been used (E) have used to
4. We are _____ next week.
   (A) weekly holiday (B) in vacation (C) on holiday (D) on vacation (E)on holidays
5. When he arrived I was about to _____.
   (A) was going (B) be gone (C) leave (D) leaving (E) left
6. The house was _____ fire, because the heater had overturned.
   (A) on (B) in (C) a (D) at (E) by
7. Our students spent a lot of money _____ gifts when they were on a study tour to Comilla.
   (A) in (B) at (C) for (D) on (E) by
8. You must be very careful if you _____ a bicycle in Dhaka city.
   (A) ride (B) take (C) go (D) drive (E) bring
9. It would be pleasant if we _____ where to go.
   (A) had know (B) had known (C) know (D) known (E) knew
10. He _____ at mid-night.
    (A) wake up (B) awakened (C) awaken (D) awaked (E) awoke up
11. Marry is _____ different from her sister, Miranda.
    (A) quite (B) complete (C) quit (D) quiet (E) total
12. Do you mind to take a _____ on the chair?
    (A) sit (B) sat (C) seat (D) sitted (E) none of these
13. If they _____ see you, you will be in trouble.
    (A) could (B) whenever (C) all ways (D) ever (E) every
14. That day, I got up early, because I _____ guests to the house.
    (A) had invited (B) have invited (C) was invited (D) have invitation (E) got invitation
15. You must arrive early; everyone else _____.
    (A) do (B) does (C) wouldn't (D) are (E) don't
16. The dog was _____ in front of the door.
    (A) laid (B) laying (C) lain (D) lying (E) lied
17. Tell the chairperson of the meeting if you want to _____ any point at the meeting.
    (A) rouse (B) raise (C) arouse (D) arise (E) object
18. Because he was _____ he could not succeed.
    (A) unseen (B) lazy (C) absurd (D) abrupt (E) none of these
19. Here is the letter which I _____ to bring yesterday.
    (A) would supposed (B) suppose (C) was suppose (D) am suppose (E) was supposed

20. People usually _____ late to celebrate the New Year.
(A) keep wake (B) sleep move (C) wake move (D) staying up (E) stay up

21. My broken leg is _____ me.
(A) in pain (B) paining (C) aching (D) hurting (E) wounding

22. I _____ to hospital last Sunday.
(A) had to go (B) have gone (C) have being (D) have to go (E) had go

23. _____ of the story the man and the woman were married.
(A) at last (B) finally (C) at the end (D) at the last (E) in the end

24. He promised me that he _____ to her last night.
(A) will talk (B) would talk (C) have talked (D) have to talk (E) will have to talk

25. While going to the office, take your umbrella _____ it rains.
(A) or else (B) if not (C) perhaps (D) if (E) in case

**Reading Comprehension**

Read the following passage. Based on what is stated or implied in the passage, answer question No.s 26 -30

Despite the wave of privatization that has occurred over the past fifteen years, State Owned Enterprise (SOEs) continue to occupy a central role in many economies in terms of value added relative to GDP, employment, and investment. Yet the performance of SOEs has been largely disappointing with the negative impact on macroeconomic stability. Inefficient public enterprises have undermined the operation of financial system, fuelled inflation, increased public debt while acting as an obstacle to private business.

In advanced economies worldwide and in virtually all economies in transition – the corporation is the defining characteristics of the modern industrial enterprise. The modern corporate form has evolved over four centuries to become the most efficient institution through which large scale commercial activity – in essence the transformation of inputs into outputs – can be carried out. The focus of the analysis is on how SOEs might be reformed, i.e., structured, governed, operated, and financed as modern corporations; what incentives are needed to achieve the goals of the reform program; and, there may be systemic limits to SOE reforms which do not address the role of competition, factor markets, and increased private participation in corporate finance, management, and ownership.

26. Which of the following statements, according to the passage, is wrong?
(A) SOEs performance is not generally satisfactory
(B) Public enterprise is a cause of inflation
(C) SOEs still occupy a central role in many economies
(D) the role of public enterprise is supportive to private business
(E) none of these

27. What are the areas of private participation?
(A) Getting involved with corporate management, ownership, and finance
(B) Exploring options for reform
(C) Defining characteristics of the modern industrial enterprise
(D) Providing incentives for achieving the goals of the reform program
(E) none of these

28. In the passage, what is meant by commercial activity?
    (A) large scale operation
    (B) transformation of inputs into outputs
    (C) the modern corporate form
    (D) characteristics of the economies in transition
    (E) most efficient institution
29. What is meant by SOEs?
    (A) how SOEs be governed
    (B) how SOEs be operated
    (C) how SOEs be financed
    (D) how SOEs be structured
    (E) all of these
30. Which is an appropriate title for the passage?
    (A) Modern Industrial Enterprises
    (B) Value Addition to GDP
    (C) Reforming SOEs
    (D) Employment and Investment
    (E) Efficiency through large scale commercial activity.

**Part B : Sentence Re-writing [6 Questions, 3 Marks]**

*Re-write the following sentences by reducing the unnecessary words :*

| Original sentences | Re-write the sentences here |
|---|---|
| 1. The mist hung life a veil and obscured the top of the mountain | |
| 2. There are so many banks operating in Bangladesh | |
| 3. He who is an intelligent candidate will get the job. | |
| 4. In the early part of the month of October, 1997, there was a bad storm with very high winds that was moving threateningly toward Port Chittagong. | |
| 5. It is 9 o'clock in the morning. | |
| 6. Munir delights in giving parties; entertaining guests is a real pleasure for him. | |

**Part C: Sentence correction [ 6 Questions, 3 Marks ]**

**Direction:** Answer this part in the space given below, Write the correct sentence for each original sentence.

| Original sentences | Re-write the sentences here |
|---|---|
| 1. If you were come to me, I would have helped you. | |
| 2. We should learn to govern ourselves. | |
| 3. I am boring with exams. | |
| 4. Wherever one goes, he hears the same story. | |
| 5. He called at me in my office. | |
| 6. He did went home to see his ailing mother. | |

**Part D : The Thematic Writing [ 5 Marks ]**

**Direction :** *Use the following ten words in writing 5 (five) sentences on a theme (or a topic)which can be best described by these ten words. Sentences should focus on one specific theme. Answer this part in the space given below.*

| **Tree, oxygen, fruits, erosion, money, pollution, Costal area, medicine, environment, next generation** |
|---|

Write sentences here

1.

2.

3.

4.

5.

**Part E : Data presentation [ 4 Marks ]**

**Direction :** Some information on admission is given below in the text form.

*"In an admission test, number of students applied was 3,200 and 3,600 respectively in 1995 and 1996. But the number of students who took the admission test was slightly less than the number of applicants. In 1995, 2,900 students took the test and the number of students who took the test in 1996 was 3,350. in 1995, 290 students were called for personal interview and out of which only 70 students were finally selected for admission. In 1996, 80 students were selected for admission from a group of 310 students who were called for personal interview."*

**Question**

a) Present the information in a table form. [3marks]
b) Write a suitable title for the table [1 marks]

**Part F : Essay writing [ 10 Marks ]**

**Direction :** *Answer this part in the next page. Write short sentences and use familiar words and phrases.*

Write an Essay (consisting of three paragraphs) on "Trees"

## Answer Key

**Section I: Mathematics**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. D | 2.C | 3. A | 4. B | 5. B | 6. B | 7. A | 8, B | 9. A | 10. C |
| 11. C | 12. C | 13. B | 14. B | 15. C | 16. E | 17. C | 18. E | 19. D | 20. E |
| 21. A | 22. E | 23. B | 24. C | 25. B | 26. E | 27. B | 28. A | 29. E | 30. C |

**Section II: Analytical and Ability**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. C | 2.C | 3. E | 4. A | 5. C | 6. E | 7. B | 8, E | 9. E | 10. A |
| 11. D | 12. D | 13. D | 14. E | 15. E | 16. E | 17. D | 18. D | 19. E | 20. E |
| 21. B | 22. A | 23. B | 24. B | 25. E | 26. E | 27. D | 28. D | 29. C | 30. B |

**Section III: language and communication**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1.A | 2. A | 3. A | 4. D | 5. C | 6. A | 7. D | 8, A | 9. E | 10. D |
| 11. A | 12. C | 13. D | 14. A | 15. B | 16. D | 17. B | 18. B | 19. E | 20. E |
| 21. D | 22. A | 23. C | 24. B | 25. E | 26. D | 27. D | 28. B | 29. E | 30. C |

## BBA (IBA) Admission Test (1997-98) Solution

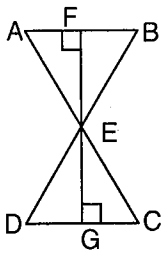
1. (D) মনে করি, first pole এর height = x ft.

   $\therefore \frac{x}{24} = \frac{3}{4} \Rightarrow x = 18$

2. (C) মনে করি, boundaries এর সংখ্যা = x ∴ over boundaries এর সংখ্যা = x/2

   $\therefore 4x + \frac{6x}{2} + (40 - 6 - x - \frac{x}{2}) \times 1 = 100 \Rightarrow 7x + 34 - \frac{3x}{2} = 100 \Rightarrow \frac{11}{2} = 66 \therefore x = 12$

3. (A) ছবিটা আকা যাক, সেখানে GF হলো AB এবং CD এর উপর লম্ব;




   এখন ΔABF ও ΔEGC এর মধ্যে <AFE = EGC = 90°; <FAE = <GCE = একান্তর ∴ ত্রিভুজদ্বয় সদৃশ। $\therefore \frac{EG}{EF} = \frac{EC}{EF} = \frac{EC}{EA}$ ------- (1)

   একইভাবে দেখানো যাবে, ΔABE এবং ΔECD সদৃশ। $\therefore \frac{CD}{AB} = \frac{EC}{EA}$ ---------- (2)

   আবার, দেয়া আছে; $\frac{CD}{AB} = 2$ ---- (3) ∴(1), (2) ও (3) থেকে $\frac{EG}{EF} = 2 \Rightarrow \frac{EG}{2} = EF$,

   আবার, সহজেই বোঝা যায়, AEB এ EF হলো EC থেকে ভূমি AB এর উপর আকা উচ্চতা এবং অদ্রুপ, EG হলো ΔDCE এ ভূমি DC এর উপর উচ্চতা। এখন, দেয়া আছে, ½ × AB ×EF = 3 ⇒ EF × AB = 6 এখন, ΔCED এর area = ½ × EG × CD = (EG/2) × 2AB = 2 × EF × AB = 2 × 6 = 12.

4. (B) $x^2 - 3x + 2 = 0 \Rightarrow (x - 1)(x - 2) = 0 \Rightarrow x = 1, 2$ আবার, $x^2 - x - 2 = 0 \Rightarrow (x + 1)(x - 2) = 0$ $\Rightarrow x = -1, 2; \therefore x = 2$

5. (B) $\frac{P + 7q}{4q} = \frac{19}{20} = 20p + 140q = 76p \Rightarrow 140q = 56p \Rightarrow \frac{q}{p} = \frac{56}{140} = \frac{2}{5}$

6. (B) মনে করি, original salary = 100 টাকা; ∴ বৃদ্ধির পর salary = 125 টাকা; ∴ original পরিমাণে নিয়ে আসতে হলে (125 – 100) = 25 টাকা কমাতে হবে। ∴percentage decrease $\frac{change}{original} = \frac{.25}{125} = 20\%$

7. (A) মনে করি, প্রথম train টা নাগাল পেতে 2nd train এর x ঘন্টা লাগবে। ∴25 (x + 1) = 30x ⇒ x = 5 hours.

8. (B) দুটো বিন্দু যাদের co-ordinates হলো $(x_1 - y_1)$ এবং $(x_2, y_2)$, তাদের মধ্যবিন্দু হলোঃ $\left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right) = \frac{-3+(-3)}{2}, \frac{5+(1-)}{2} = (-3, 2)$ (E) মনে করি, quantity of sugar = s gms ∴ মনে করি flour (ফ্লাওয়ার-ময়দা) = 2s gms.

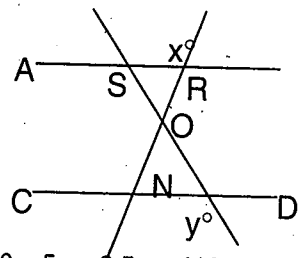
9. (A) লোকটা maximum $\frac{81}{7}$ = 11টা pen কিনতে পারে। কিন্তু, তখন বাকী থাকে $81 - 7 \times 11 = 4$ টাকা, যেটা দিয়ে একটা pencil কেনার পরও কিছু টাকা বাকী থেকে যায়। অথচ exactly 81 টাকাই খরচ করা হয়েছে। ∴ correct উত্তর হবে সেই সংখ্যক pen, যেগুলোর মল্য 81 থেকে বাদ দেওয়ার পর অবশিষ্টটা 3 দিয়ে বিভাজ্য হয়। একটু চিন্তা করলেই দেখা যায়, 9 টা pen এর দাম $7 \times 9 = 63$ কে 81 থেকে বাদ দিলে থাকে $81 - 63 = 18$, যেটা 3 দিয়ে বিভাজ্য (18/3 = 6 টা pencil) ∴ pen : pencil = 9 : = 3 : 2

10. (C) PQ = BC – BP – QC = 4 – 2 – 1 = 4. আবার, <YXZ = 60°; BC || YZ হওয়াতে < XPQ = <PYZ = 60° এবং <XCP = <XZY = 60°. ∴ [কোণগুলি অনুরূপ কোণ] ∴ΔXPQ একটি সমবাহু ত্রিভুজ। ΔXPQ এর perimeter = PQ + QX + XP = 1 + 1 + 1 = 3

11. (C)Percent increase = $\frac{increase}{original} = \frac{75-25}{25} = \frac{20}{25} \times 100 = 200\%$

12. (C) মনে করি; faster worker দ্বয়ের প্রত্যেক কাজটি করতে পারে x দিনে ; ∴ third worker কাজটা করতে পারে 2x দিনে ∴ তিন জন একত্রে প্রতিদিন করে $\frac{1}{x}+\frac{1}{x}+\frac{1}{2x} = \frac{5}{2x}$ অংশ ∴ 5/2x অংশ করে 1 দিনে ∴ 1 দিনে করে 2x/5 অংশ ∴ 2x/5 = 12 ⇒x = 30 দিনে

13. (B) ছবি একে নিনঃ
<PQO = 180° - Y° = 180° - 150° = 30°. <OPQ = <ORS (একান্তর); আবার, <ORS = 180° - x° = 180° - 130° = 50° এখন
<Z + <OQP + <ORS = 180° ⇒ <Z = 180° - 30 - 50° = 100°




14. (B) মনে করি, cheaper tickets পেল x জন, ∴ 5(100-x) + 3.5x = 410 ⇒ 500 – 5x + 3.5x = 410 ⇒1.5x = 90 ⇒ x = 60

15. (C) $4x^2 + 12xy + 9y^2 = (2x)^2 + 2.2x.3y + (3y)^2 = (2x + 3y)^2$. এখন, D থেকে (2x + 3y) = 2 বসালে answer পাওয়া যায়।

16. (E) 15 জনে মোট কাজ করে = 15 × 44 = 660 hours, ∴ (15-4) = 11 জনকে কাজ করতে হবে = $\frac{660}{11} = 60$ hours.

17. (D) মনে করি সে x miles গেল ∴ total time = $\frac{x}{20}+\frac{x}{30} = \frac{5x}{60} = \frac{x}{12}$ ; total distance = 2x

∴ Av. speed = $\frac{distance}{time} = \frac{2x}{\frac{x}{12}} = 24$

18. (E) মনে করি, বড় বৃত্তটির radius = x; ∴ area of larger circle = $\pi x^2$; ছোট বৃত্তটির radius = x/2

∴ছোট বৃত্তটির area = $\frac{\pi x^2}{4}$ Answer = $\frac{\pi x^2}{\frac{\pi x^2}{4}} = 4$

19. (D) যার যত বয়স, সে তত ভাগ পাবে। ∴ মোট কত ভাগ হবে, তা প্রথমে বের করতে হবে = 11 + 9 + 7 + 4 = 31; মনে করি, total = x, ∴ $\frac{x}{31} \times 4 = 1200 \Rightarrow x = 300 \times 31 = 9300$

20. (E) সুগারের পরিমাণ = (3/2) × (quantity of fruits) ⇒ quanitity of fruits = 2s/3, ∴s + 2s/3 = 750 ⇒ 3x + 6s + 2s = 2250 ⇒ 11s = 2250 ⇒ s = 2250/11 = 204.5m

21. (A) 5 দিনে করে প্রতি লাইনে 11 word, প্রতি page এ 36 line বিশিষ্ট 15 pages

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ∴1 | " | " | " | " | " | " | " | 125/5 " |
| ∴6 | " | " | " | " | " | " | " | 25 × 6 " |
| ∴ " | " | " | " | " | " | " | " | 150 × 6 " |
| ∴ " | " | " | " | " | " | " | " | 150 × 11/12 " |
| ∴ " | " | " | " | " | " | " | 1 | $\frac{150\times11\times36}{12}$ " |
| ∴ " | " | " | " | " | " | " | 30 | $\frac{150\times11\times3}{36}$ " = |

165 Pages

22. (E)

23. (B) 6 : 8 : 10 = 3 : 4 : 5 হওয়াতে triangle টা একটা right (সমকোণী) triangle. ∴area = ½ × 6 × 8 = 24. ∴ length of rectangle = 24/3 = 8, ∴ perimeter of rectangle = 2(8 + 3) = 22

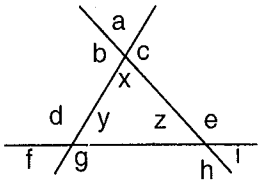
24. (C) মনে করি, 1994 এ price = 100 ∴ 1995 এ = 110 ∴ 1996 এ = 110 – 5% of 110 = 110 – 5.5 = 104.5

∴ increase = 104.5 –100 = 4.5 ∴ percentage increase = $\frac{increase}{original} = \frac{4.5}{100}\times100\% = 4.5\%$

25. (B) BD = 2DC হওয়অতে ΔBCD একটি 30° - 60° - 90° ত্রিভূজ, যার <CBD = 30°; <BDC = 60° এবং BC = √3DC. ∴<BDA = 180° - 60° = 120°; ∴ <DBA = <DAB = $\frac{180^\circ-120^\circ}{2} = 30^\circ$; <CBA = <CHD + <DBA = 30° + 30° = 60° ∴ ΔACB = 0 হলো একটা 30° - 60°-90° ত্রিভূজ। এখন, $AB^2 = BC^2 + AC^2 = BC^2 + (CD + AD)^2 = BD^2 + BD^2 + BD.\ BD = 3.BD^2$ ∴ AB = √3BD

26. (E) $(x-y)^3 = x^3 - 3x^2y + 3xy^2 - y^3$
$Y^2$ এর coefficient হলো 3x.

27. (B) ছবি আকা যাকঃ




a + b + x + c = 360°; d + f + g + y = 360°
z + h + I + c = 360°;
∴(a + b + c + d + e + f + g + h + i) + (x + y + z) = 360° ×3 = 1080°
∴ (a + b + c + d + e + f + g + h + i) = 1080° – ((x + y +z)
= 1080° - 180° - 900°

1. (A) মনে করি, large circle এর radius = r; ∴ 2πr = 64π ⇒ r = 32; মনে করি, ছোট circle এর radius = r1; ∴4r1 = 32 ∴r1 = 8 ∴ Answer = 4 × π412 = 4 × π × 64 = 256π

29. (E) area of DEBC = AD × CD – ½ × AD × AE = 48 – ½ × 6 × m = 48 - -3m

30. (C) DE = AB + BE ⇒ AB = DC – BE = (AC – AD) – (AB – AE) = AC – AD – AB + AE ⇒AB = 3 – AB ⇒ 2AB = 3. ∴ AB = 3/2

## Section II : Analytical Ability

1. (C) 0.5, 1, 2 এবং x/2, x, 2x, উভয় ক্ষেত্রেই প্রতিটা term পর্বের দ্বিগুণ ∴4, 4x হবে।
2. (C) B > A এবং C > B থেকে আসে C > B > A ----(I), আবার, (I) এবং D = A থেকে C>B>D
3. (E) circle এর চারটা point বা বিন্দুকে কিভাবে joint করা হবে, তা না বলে দেয়াতে answer বের করা যাবে না।
4. (A) x = 1.1y; z = 0.9x = 0.9 × 1.1y = .99y
5. (C) ভালভাবে চিন্তা না করলে এখানে ভুল করা সম্ভাবনাঅ tomorrow এবং yesterday র মাঝে একদিন today আছেঅ তদ্রুপ, Tuesday র ঠিক পর্বের একদিন বাদ দিয়ে সেই একদিনের আগের দিন অর্থাৎ Sunday শন্যস্থান হবে।
6. (E) O° = এর মান অনির্ধারিত।
7. (B) মনে করি, boys এর সংখ্যা = b; ∴ girls এর সংখ্যা = b + 1. ∴ Nasima র যত ভাই তত বোন আছে। ∴Nasima কে সহ girls এর সংখ্যা, boys এর সংখ্যার চেয়ে 1 বেশী। Nasim (একজন boy) এর brother এর সংখ্যা হলো (b-1) এখন, Nasim এর Sister এর সংখ্যা = 2 × (তার brother এর সংখ্যা ) ⇒ b + 1 = 2 × (b-1) b + 1 = 2b – 2 ⇒ 3 = b, ∴ sister = b + 1 = 4

8. (E) মনে করি, sales in 1993 = 100, ∴ মনে করি, 1994 = 105, মনে করি, 1995 = 105 + 4% of 105 = 109, মনে করি, 1996 = 109 + 4% of 109 = 114

9. (E) $\frac{this}{of\ that} = \frac{3/4}{6/5} = \frac{3}{4} \times \frac{5}{6} = \frac{5}{8} \times 100\% = 62.5\%$

10. (A) মনে করি, the number = x ∴ x + 6 = 2x – 21 ⇒ x = 27

11. (D) $0.420 = \frac{420}{1000} = 420 \times 10^{-3} = 4.2 \times 10^{-2} = 4.2 \times 10^{-1}$

12. (D) A = Bat, B = Cat, C + Dat , D = Eat, প্রতিটাতে at উপস্থিত, আর শব্দের প্রথম অক্ষর হলো বাদিকের একলা অক্ষরটার পরের অক্ষর ∴E = Fat

13. (E) সবগুলোই inequality symbol

14. (D) barometer দিয়ে বায়ুর চাপ মাপা হয়। এই যন্টার নাম BBA guide এর "Analogy Review" chapter এর Vocabulary অংশে বৈজ্ঞানিক যন্ত্রের কাজ category তে অনেক আগের থেকেই আছে।

15. (E) $2^{2n} = 8 \Rightarrow 2^{2n} = 2^3 \Rightarrow 2n = 3 \therefore n = 3/2$

16. (D) 3, 5, 7, 11 হলো মৌলিক সংখ্যাঅ ∴3 এর আগের মৌলিক হলে 2 এবং 11 এর পরের মৌলিক সংখ্যা 13. এখানে ভুল করাপর সমহ সম্ভাবনা আছে। মনে হতে পারে যে, এটা odd number (বেজোড় সংখ্যার) এর একটা series. কিন্তু 9 (nine) বাদ পড়াতে বোঝা যাচেছ, এটা বেজোড় সংখ্যার series নয়।

17. (D) mixed number বলা হয়।

18. (D) অন্যান্য Course গুলিতে intermediate (HSC) level পাশ করেই ঢোকা যায়।

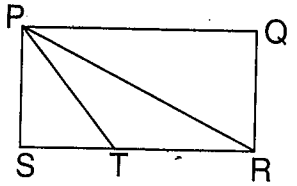
19. (A) 100 centimeter = 1 meter, 10 meter = 1 decameter, 10 decameter = 1 hectometer, 10 hectometer = 1 kilometer

20. (E) x2 + 1 = 0 ⇒x2 = - 1 x = $\sqrt{-1}$ ; negative সংখ্যার square root করলে সংখ্যাটা আর real থাকে না imaginary হয়ে যায়।

21. (B) largest integer = 3 × 150 - 2× 120 = 450 – 240 = 210

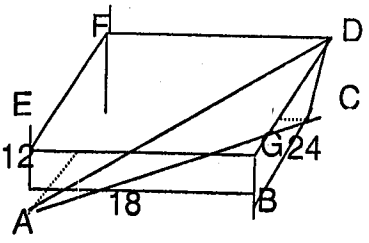
22. (A) 0 (zero) একটা integer.

23. (B) দুটো fraction এর বড়টা নির্ণয়ে নীচের rule use করতে হবে। b ও d উভয়েই positive হলে $\frac{a}{b} > \frac{c}{d}$ if & only if ad > bc; এখন, 3/5 ও 7/3 এর মধ্যে, 3 × 7 > 4 × 5 ∴ $\frac{3}{5} > \frac{4}{7}$; এখন, $\frac{3}{5}$ ও $\frac{2}{4}$ এর মধ্যে, 3 × 11 < 5 × 7 ∴ $\frac{3}{5} > \frac{2}{4}$ তারপর $\frac{3}{5}$ ও $\frac{7}{11}$ এর ক্ষেত্রে 3 ×11 < 5 × 7 ∴ $\frac{3}{5} < \frac{7}{11}$ ∴ $\frac{7}{11}$ ও $\frac{5}{9}$ এর মধ্যে 7 × 9 > 5× 11 ∴ $\frac{7}{11}$ largest




24. (B) ΔPST এর ΔPTR এর উভয়েরই উচচতা PS
∴ΔPST এর area greater হতে হলে এর ভূমি ST
ΔPTR এর ভূমি TR অপেক্ষা greater হতে হবে।
∴ST>TR

25. (E) Largest stick এর দৈর্ঘ্য হবে AD এখন $AD^2 = AC^2 + CD^2$
∴ΔACD হলো সমকোণী
আবার $AC^2 = AB^2 + BC^2$, ∴Δ ABC হলো সমকোণী
$AD^2 = AB^2 = BC^2 + CD^2 =$
$18^2 + 24^2 + 12^2 = 324 + 576 + 144 = 1044 = 32.3$




26. (E) $\frac{SSCs\ aged 18\ or\ over}{of\ total\ students} = \frac{75}{200} = 37.5\%$

27. (D) $\frac{SSCs\ under\ 18}{of\ SSCs} = \frac{25}{100} \times 100\% = 25\%$

28. (D) $\frac{SSCs}{of\ under\ 18} = \frac{25}{45} = \frac{500}{9}\% = 55.56\%$

29. (C) $\frac{HSCs\ under\ 18}{of\ HSCs} = \frac{20}{100} = 20\%$

30. (B) Gender, male-female ও result নিয়ে table এ কিছুই বলা হয়নি।

## Section III : Language & Communication

### Part A : Comprehension – Vocabulary

1. (A) pay attention অর্থ মনোযোগ দেয়া।
2. (A)
3. (A) past habits (অতিত অভ্যাস) এবং states (অবস্থা) যেগুলো এখন নেই, সেই সব সম্পর্কে কথাবলার জন্য used + infinite ব্যবহৃত হয়। I used to smoke, but now I've stopped.
   Sonargoan used to be the capital of Bengal.
4. (D) vacation is preceded by *on*.
5. (C) about + infinitive অর্থ হলো (কোনো কাজ) করতে যাওয়ার মুহর্তেঃ আমি চলে যাওয়ার মুহর্তে সে আসলো, অর্থাৎ যখন সে আসলো, ঠিক তখনই আমি চলে যাচিছলঅম।
6. (A) on fire অথ (কোনো কিছু) পুড়ছে।
7. (D) spend on (something) অর্থ কোন কিছু কিনতে খরচ করা।
8. (A)
9. (E) To talk about unreal or improbable situations now or in the future we use a past tense in the if clause (even though the meaning is present or future) and would + verb word in the other part of the sentence. অর্থাৎ এক কথায়, বর্তমান বা ভবিষ্যতের কোনো ঘটনা, যেটা ঘটার কথা নয়, সেটাকে প্রকাশ করতে if clause এর সাথে verb word (অর্থাৎ, মল verb শব্দটা অপরিবর্তিত আকারে) sentence এর অন্য অংশে ব্যবহৃত হয়।
   I would tell you, if I knew her name. (NOT ...) She would be perfectly happy if she had a car.
10. (B) এটাই best answer
11. (A) যেহেতু different একটি adjective, এর আগে একটি adverb প্রয়োজন, সুতরাং quite একমাত্র correct option
12. (C) Take + noun is used in many common expressions referring to activities. "seat" অর্থ আসন। সুতরাং আসন নেয়া বোঝাতে গেলে এটি best option.
13. (D) অন্য উত্তরগুলো সহজেই বাদ দেয়া যায়।
14. (A) got একটা simple past tense. ∴ শুন্যস্থানে tense টা past perfect আকারে লিখতে হবে।
15. (B) everyone else হলো singular.
16. (D) শুয়ে থাকা = lying
17. (B) raise হলো transitive verb. এখানে এর object হলো any point.
18. (B)
19. (E) be supposed to expresses a contrast between what should happen and what actually happens, অর্থাৎ am/ is/ was/ were/ are supposed to দিয়ে যা ঘটা উচিত ছিলো এবং যা আসলে ঘটেছে, এ দুয়ের মধ্যে contrast করা হয়।
20. (E) stay up অর্থ জেগে থাকা।
21. (D) এখানে একটি transitive verb প্রয়োজন
22. (A) অন্যগুলো পুরোপুরি ভুল।
23. (C) At the end (of something) = কোন কিছুর শেষে For example, at the end of the month; at the end of the film প্রভৃতি; In the end of something ঠিক নয়।
24. (B) অন্যগুলো আদৌ হয় না।

25. (E) Precautions (সতর্কতা) সম্পর্কে কথা বলতে in case ব্যবহৃত হয়; অর্থাৎ ভবিষ্যতে কোনো কিছু ঘটনার সম্ভাবনা থাকায়, সেই সম্ভাবনাকে in case দিয়ে ব্যক্ত করা হয়। I always take an umbrella in case it rains – (= -- because it might rain).
26. (D) 1st para র last line এ আছে যে, private business এর জন্য SOE হলো obstacle (প্রতিবন্ধকতা)।
27. (D) last line এ উত্তর আছে।
28. (B) 2nd paragraph এর 3rd এবং 4th line এ উত্তর আছে।
29. (E) 2nd paragraph এর 5th line এ দেখুন।
30. (C) POE (Process of Elimination) এর মাধ্যমে অন্যগুলো সহজেই eliminate করা যায়।

**Part B : Sentence Re-writing**

1. Like a veil (ঘোমটা, আচ্ছাদন), the mist (কুয়াশা) obscured (এমনভাবে ঢেকে ফেলা যে দেখতে ঝাপসা বা অস্পষ্ট) the mountain-top.
2. Many banks are operating in Bangladesh.
3. An intelligent candidate will get the job.
4. A bad storm with very high winds was moving threateningly toward port Chittagong in early October 1997.
5. It is 9 a.m.
6. Munir delights in giving parties and entertaining guests.

**Part C : Sentence Correction**

1. past এর দুটো ঘটনার মধ্যে যেটা আগে ঘটে বা ঘটতে পারতো, সেটা প্রকাশ করতে past perfect লাগে।
   If you had come to m. I would have helped you.
2. We should learn to govern ourselves
3. I am bored with exams
4. Wherever one goes, one hears the same story
5. He called on me in my office, (call on or upon somebody) অর্থ কারও সাথে অল্পক্ষণের জন্য দেখা করতে যাওয়া
6. He went home to see his ailing mother.

**Part D: Thematic writing**

শব্দগুলো দেখে বোঝা যাচ্ছে, tree এর উপকারিতা হলো sentence গুলোর theme বা topic. এবার আসুন sentence গুলো লেখা যাক।

1. Trees benefit us in many ways which no amount of money can buy.
2. Trees provide us with not only foods but also oxygen & medicine.
3. They also play a significant role in the prevention of erosion & pollution.
4. Even in coastal areas trees help to protect the environment.
5. So, we should plant more trees so that our next generation can also reap the rewards.

**Part E: Data Presentation**

Number of students in different stages of an admission test in 1995 and 1996

| | 1995 | 1996 |
|---|---|---|
| Number of Applicants | 3200 | 3600 |
| No. of Applicants taking the test | 2900 | 3350 |
| No. of students called for interview | 290 | 310 |
| Number of students finally selected | 70 | 80 |

## *Part F : Essay writing*

### *TREES*

Trees are useful and beautiful gifts of nature. Trees help in maintaining the ecological balance which is very essential for preservation of life on this earth. Trees actually dictate and manipulate the existence of mankind on earth.

Trees provide immense wealth and riches for us. They yield timber and fuel wood, bamboo, canes, leaves, fruits, fibers and grasses. The other useful products from trees are shellac, resins, precious herbs and medicine. They are also a great source of material for paper, rubber, gums, etc. Trees have a direct influence on the climate of a region. They induce rains and prevent air pollution. An area devoid of trees will go barren and turn out to be a desert in course of time. The roots of trees bind loose soil. Arrest of soil erosion also prevents silting and rising of river beds and possible overflowing of rivers causing floods. Trees protect us from inclement wind also.

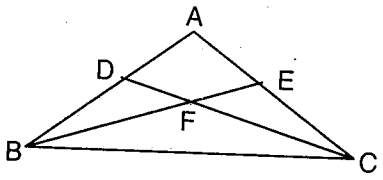
With increase in population & rapid industrialization, random deforestation has taken place. This has resulted in dwindling g rainfall, depletion in ground water level & occurrence of droughts. The rehabilitation & maintenance of trees are therefore the only way left to us for our survival.

# BBA (IBA)

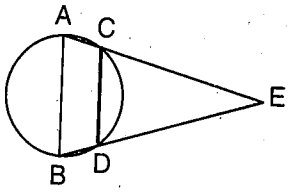
## Admission Test Question (1998-99) with Solution

**30 questions** **Section I: Mathematics** **30 Marks**

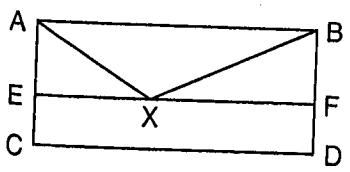
1. In the figure below, D is the mid point of AB and E is the mid point of AC. What is the relation between the area of BFC and the area of ADFE?
   (A) Area BFC > Area ADFE
   (B) Area BFC = Area ADFE
   (C) Area ADFE > Area BFC
   (D) Area ADFE = 1.5 times Area BFC
   (E) Either (A) or (C)




2. The sum of ¼ of the price of a pen and 1/3rd of the price of a pencil is Tk. 11. if 1/8th of the price pen is equal to 1/5th of the price of the pencil, what is the price of the pen in Taka?
   (A) 32 (B) 16 (C) 12 (D) 24 (E) None of these
3. Jalil can do a particular job in 4 days. Karim can do the same job in 5 days. They worked together to complete the job and received a total payment of taka 450. How much payment should Jalil receive?
   (A) 275 (B) 200 (C) 225 (D) 250 (E) None of these
4. In the figure, AB, the diameter of the circle, is parallel to CD. If <AEB = 40º, <ACD = ?
   (A) 100 (B) 105 (C) 115
   (D) 120 (E) None of these




5. An amount of money was divided between some people in such a way that if there had ben 4 more people, everyone would have got Tk 16 less. But if there had been 4 less people, everyone would have got Tk 24 more. How many people were there in the group?
   (A) 32 (B) 24 (C) 20 (D) 16 (E) None of these
6. Mr. Karim traveled to his office from his home at speed of 3 km/hr. if his total traveling time was 5 hours, what is the distance in kms, of his office from his home?
   (A) 15 (B) 5 (C) 6 (D) 9 (E) None of these.
7. Mr. Karim bought 20 mangoes for Tk 55. He found that 10% of the mangoes were damaged and sold the rest at the rate of Taka 54 per dozen. How much profit in Taka did he make?
   (A) 28 (B) 26 (C) 24 (D) 20 (E) None of these
8. The average of four consecutive positive integers is always
   (A) An odd number (B) Divisible by 4 (C) an even number
   (D) Both (b) & (c) (E) Either (b) & (c)
9. Taka 1105 was divided between A, B & C. The amounts of money received by A & B were in the ratio 1: 2. Amounts of money received by B & C were in the ratio 3 : 4. How much money did A receive?
   (A) Tk 205 (B) Tk 195 (C) Tk 150 (D) Tk 100 (E) None of these
10. The ratio of incomes of Ali & Baby is 5 : 4 and the ratio of their expenditure is 4 : 3. If Ali saves Tk 500 per month, what is the income of Baby?
   (A) Tk 2,500 (B) Tk. 2,000 (C) Tk. 1,500 (D) Tk. 1,000 (E) None of these
11. In the parallelogram, E is the mid point of AC and EF is parallel to AB. If the area of ABCD is 36 sq. cm. and EX = 6 c.m. What is the area of triangle ABX in sq. c.m.?
   (A) 16 (B) 15 (C) 12
   (D) 9 (E) None of these



12. Two cars start towards each other from points 200 km apart. One car travels at 40 km/hr and the other travels at 35 km/hr. How far apart will the two cars be after four hours of continuous traveling?

    (A) 100 km (B) 75 km (C) 40 km (D) 20 km (E) 160 km

13. A man made a loss of 20% on his cost by selling a pen at taka 200. What should be his selling price in taka if he wants to make a profit of 10% on cost?

    (A) 250 (B) 275 (C) 300 (D) 225 (E) None of these

14. A boat sailing against the currents takes 8 hours to travel 32 km. If it had been sailing with the current the time taken would have been only 4 hours. What is the speed of current?

    (A) 3 km/hr (B) 2.5 km/hr (C) 2 km/hr (D) 1 km/hr (E) None of these

15. There are 200 question on a three hour examination. Among these questions are 50 mathematical problems. It is suggested that twice as much time be allowed for each mathematics problems as for each of the other questions. How many minutes should be spent on the mathematics problems?

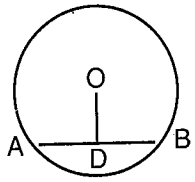
    (A) 100 (B) 72 (C) 60 (D) 36 (E) 120

16. Which of the following fractions is the smallest?

    (A) 2/9 (B) 5/12(C) 5/8 (D) ½ (E) 3/10

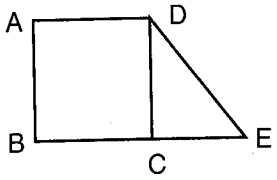
17. O is the center of the circle and OD is the perpendicular to AB. If OD = 3cm and the diameter of the circle is 10 cm, what is the length of AB in cm?

    (A) 8 (B) 6 (C) 5 (D) 4
    (E) None of these




18. In triangle DCE, <CDE = < DEC. If the triangle's area is 8, what is the area of the square ABCD?

    (A) 82 (B) 16 (C) 8
    (D) 4 (E) 22




19. Width of a rectangle is increased by 25% & length is decreased by 25%. New area is what percent of original area?

    (A) 90% (B) 100% (C) 93.75% (D) 1.25% (E) none of these

20. In a survey of the town of Brahmanbaria, it was found that 6.5% of the people surveyed watched the news on television, 40% read a newspaper, and 25% both read newspaper & watched news on television. What percent surveyed neither watched the news on television nor read a newspaper?

    (A) 80% (B) 20% (C) 10% (D) 15% (E) 5%

21. If a right angle isosceles triangle is inscribed in a semi circle, what is the ratio of the area of the circle to the area of the triangle?

    (A) ¼ (B) ½ (C) Π / 2 (D) 2 Π (E) Π

22. Nishi is two years older than Mishi, who is twice as old as Rishi. If the ages of the 3 total 27 years, how old is Mishi?

    (A) 12 years (B) 8 years (C) 10 years (D) 9 years (E) 5 years

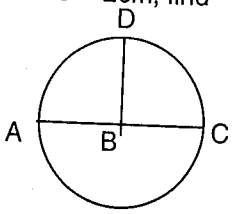
23. In a sugar solution the ratio of sugar to water was 4 : 1. IF the total weight of the solution was 2 kg, how much more sugar should be added so that the ratio becomes 5 : 2?

    (A) 0.3 kg (B) 0.2 kg (C) .24 Kg (D) .32 kg (E) none of these

24. A man travels from A to B at 20 km/hr. He makes the return journey at 30 km/hr. What was his avg speed?

    (A) 20 (B) 22 (C) 23 (D) 25 (E) none of these

25. In the circle AC is diameter. DB is perpendicular to AC. If AB : BC = 3 : 1 & BC = 2cm, find the length of BD in cm.
(A) 2.5 (B) 3 (C) $3\sqrt{2}$
(D) $2\sqrt{3}$ (E) None of these



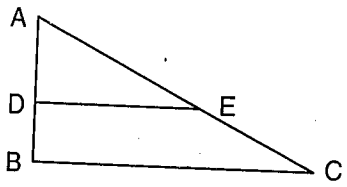

26. If the result of multiplying a number X by a number 1 less than itself is than multiplying X by itself, then X =?
(A) 2 (B) 3 (C) 4 (D) 5 (E) 6

27. If the price of an item is increased by 10% and then decreased by 10%, the net effect on the price of the item is
(A) Increase of 99% (B) decrease of 1% (C) No change
(D) Increase 1% (D) Decrease 11%

28. Price of a hammer is twice that of a screwdriver. If price of a hammer is raised by 5% & the price of a screwdriver is decreased by 4%, how much more or less will it cost to buy 3 screwdriver & 3 hammers?
(A) 2% more (B) 2% less (C) 4% more (D) 4% less (E) None of these

29. If $(x - y)^2 = 12$ and $xy = 1$, then $x^2 - y^2 = ?$
(A) 10 (B) 11 (C) 12 (D) 13 (E) 14

30. In the triangle ABC, $\angle ABC = 90^\circ$. DE is parallel to BC and D is the midpoint of AB. If AD = 3 cm, what is the area of BCED in square cm?
(A) 12 (B) 16 (C) 20
(D) 24 (E) none of these




## 20 Questions — Section II: Analytical Ability — 30 marks

**Questions 1 & 2 refer to the following table**

Scholarship Money paid to the students of Totaram College

| Course | No. of students getting scholarship | Total scholarship money paid |
|---|---|---|
| B. A. (pass) | 45 | Tk. 94,500 |
| B. A (Honors) | 55 | Tk. 138, 600 |
| M. A | 25 | Tk. 87, 500 |
| All Students | 125 | Tk. 320, 600 |

1. In percentage terms ho much more money did a B. A. (honors) student receive on average compared to that received by a B.A. (pass) students on average?
(A) 25 (B) 30 (C) 46.67 (D) 48 (E) none of these

2. The average scholarship money ( to the nearest taka) for all student is
(A) Tk 1,200 (B) Tk 2,707 (C) Tk, 2,565 (D) Tk 8,120 (E) Tk 106, 867

3. Yunus must be a business man, he is carrying a briefcase.
The conclusion above is valid only if it is true that
(A) All businessmen carry briefcase (B) Only businessmen carry briefcase
(C) Businessmen often carry briefcase (D) Businessmen are required to carry briefcase
(E) Businessmen never carry any kind of container other than briefcase.

**Questions 4-7 are based on the following**
Eight musicians who play the sitar (G, H, I, J, K, L, M, N, and O) have been invited to a special dinner. Three of these musicians (H, M, and O) also play flute. Two of the (K and N) are also Tabla players. In arranging the seats it was decided that musicians who play two instruments should not be seated next to another musician who plays two instruments.

4. Before all musicians are seated there are two vacant seats on either side of N. Which two musicians may occupy these seats?
(A) G & L (B) G & K (C) J & H (D) L & O (E) M & J

5. Which of the following cannot sit next to M?
(A) K (B) L (C) L (D) G (E) G & J

6. Which of the following combinations is possible in order to have the arrangement of seat assignment as planned?
(A) JLHK (B) HKJL (C) JKMN (D) HGKJ (E) LKNJ

7. To have the proper sitting arrangement, K should sit between
(A) G & H (B) J & M (C) L & N (D) J & L (E) J & N

8. Your friend throws a ball to you. After catching it, you throw it back to him and the game goes on. If each of you catches the ball five times, at least how many throws must take place between the two of you?
(A) 25 (B) 15 (C) 11 (D) 5 (E) none of these

9. Which of the following is less than -1 but greater than 0?
(A) 7/6 (B) $\sqrt{3}$ (C) $-\frac{3}{4}$ (D) -7/6 (E) none of these

**Questions 10 – 12 are based on the following:**
An office manager must assign six employees to six offices, consecutively numbered 1 to 6, which are arranged in a row and are separated only by a low height wall. Therefore, voices, sound, cigarette smoke readily pass from one office to those on either side.

- Beauty's work requires her to speak on the telephone throughout the day.
- Wasim & Borhan often talk to one another. And prefer to have offices next to one another.
- Gulzar the senior employee, is entitled to office 5, which has the largest window.
- Peter needs silences in the office(s) next to his own
- Ahmed, Wasim and Peter all smoke. Gulzar must have non-smoker in the office(s) next to her.

10. The best employee to occupy the office furthest from Borhan would be
(A) Peter (B) Beauty (C) Gulzar (D) Ahmed (E) Wasim

11. The three employees who smoke should be placed in offices
(A) 2, 3 & 6 (B) 1,2 & 4 (C) 1,2 & 6 (D) 2,3 & 4 (E) 1,2 & 3

12. The best location for Wasim's office is in office?
(A) 1 (B) 2 (C) 3 (D) 4 (E) 6

13. What is the next number in the series 2, 10, 26, 50, .....
(A) 63 (B) 80 (C) 86 (D) 122 (E) none of these

14. Gani: I wish you wouldn't eat so much beef. It's bad for your health.
Nima: How can you say that? I don't weigh a pound more than I did year ago.

Which of the following responses would most strengthen Gani's argument?
(A) Putting on weight is not only harmful effect of eating beef.
(B) Most people who eat a lot of beef do put on weight.
(C) If you keep eating so much beef, you will soon put on weight.
(D) You weight ten pounds more than you did six years ago.
(E) You can put on weight in other ways than by eating beef

15. In a sports club, 34 boys play football & 27 boys play cricket. Of these, 13 boys play both cricket & football. What is the ratio of the number of boys who play only cricket to those who play only football?
(A) 27 : 34 (B) 7 : 11 (C) 4 : 3 (D) 2 : 3 (E) none of these

16. Which of the following statement is always true? (a, b, & c are real numbers and not equal to zero)
I. 1/a is less than a. II. (a+b)/2a equal 2b/(b+a)when a equals b
III. (a+c)/(b+c) is more than a/b
(A) I and II (B) I and III (C) II and III (D) I, II and III (E) only II

17. Tipu: I will not take professor Haroon's course. I've heard he is very strict when it comes to giving out grades. Shoma: that is not true. Seema took his course last year, and he gave her an A grade.
From the conversation above, it can inferred that Shoma interpreted Tipu's statement to mean that Professor Haroon
(A) Never gives out A grades
(B) Make unfair demands on his students
(C) Only gives good grades to few favored students
(D) Has become increasingly strict in his grading over the past years.
(E) Gives out fewer good grades than most teachers in the department

18. Thirty students have enrolled either in finance or marketing or both. If 17 enrolled in Finance & 18 enrolled in marketing, how many enrolled in both?
(A) 10 (B) 8 (C) 7 (D) 5 (E) None of these

19. Which of the following contradicts the view that only smart become rich?
(A) Bashar was smart, yet he was poor in his whole life
(B) Both 'smart' and 'rich' are relative terms
(C) Shamim is stupid, yet he made a lot of money by the age of 30
(D) Different people are smart in different ways
(E) Some smart people do not desire to become rich

20. Tahia: I just heard that Yasmin failed her H.S.C. Exam
Narmin: That can't be true. She got star marks in her S. S. C. exam
From the conversation above it can be inferred that
(A) Narmin thinks tahia is lying
(B) Narmin thinks Yasmeen has not appeared at her H.S.C. exam yet
(C) Tahia thinks Yasmen has failed her H. S. C. exam
(D) Narmin thinks no one who got star marks in S.S.C. is like to fail in H.S.C.
(E) Tahia knows that Yasmeen failed her H.S.C. exam

## Section III — English — 30 Marks

**Directions**: *for question 1 to 5: In the following sentences each sentence has 4 underlined words/phrases. Identify the one underlined word phrase that must be changed in order for the sentence to be grammatically correct. If the sentence is correct as it stands, mark (E) on your answer sheet.*

1. Cotton fiber, like (A) other (B) vegetable fibers, is (C) composed mostly (D) of cellulose. No error. (E)

2. If (A) the British had not persecuted (B) the local political leaders several decades ago (C), will (D) India have remained part of the British Empire. No Error. (E)

3. In ancient times and throughout the middle Ages, many people (A) believed (B) that the earth (C) is (D) flat. No Error. (E)

4. With his father's Guidance, Kalim begun playing the sitar at the age of twelve and composing
A B C D
music at the age of fourteen. No error
E

5. Students in Bangladesh often support themselves by tutoring or they drive mishuks. No error.
A B C D E

***Directions for questions 6 to 10:*** *Beneath each incomplete sentence are 5 words or phrases. Choose the one word or phrase that best completes the sentence and blacken the corresponding box on your Answer Sheets*

6. As it was raining heavily, the manager suggested that his employee _____ a taxi to the meeting.
(a) will take (b) taking (c) takes (d) took (e) take

7. The greater the demand, _____ the price.
(a) the higher (b) high (c) higher (d) the high (e) so the higher

8. Several of the trucks are out of order and_____
(a) needs repairing (b) repairing is required of them (c) need to be repaired
(d) require that they be repaired (e) need to be repairing

9. Since Shamima Khatoon's father never approved of_____ Kuddus Mollah, the couple ran off to St Martin's Island where they started a dried-fish processing business.
(a) she to marry (b) her to marrying (c) she marrying
(d) her to many (e) her marrying

10. He_____ a fortune when his father died.
(a) come about (b) came upon (c) came into (d) came into sight (e) came to

***Directions for questions 11 to 15:*** *Each sentence has an underlined word or phrase below. Each sentence are 5 lettered words or phrases Choose the word/phrase that best keeps the meaning of the original sentence if it is substituted for the underlined word Or phrase. Blacken the corresponding box on you Answer Sheet.*

11. He accused the Member of Parliament of fabricating the statistics.
(a) concealing (b) exaggerating (c) constructing (d) hiding (e) lying about

12 Relaxation therapy teaches one not to fret over small problems.
(a) get into (b)get angry about (c) get involved in (d) worry about (e) Look for

13 Einstein's theory of relativity seemed incredible at the time that he first introduced it.
(a) astonishing (b) unbelievable (c) brilliant (d) famous (e) complicated

14 The Mona Lisa is the portrait of a woman with a very enticing smile.
(a) alluring (b) beautiful (c) oblivious (d) elusive (e) luminous

15. Because malaria is more prevalent in the tropical countries, European tourists visiting Southeast Asia are advised to take anti-malaria pills.
(a) feared (b) extreme (c) short-lived (d) severe (e) widespread

***Directions for question I6 to 20:*** *For each question choose the correct form of sentence*

16. (a) You can arrive at the correct answer by a process of elimination.
(b) You can be arrived at the correct answer by a, processing of elimination.
(c) You can arrive into the correct answer by a process of elimination.
(d) You can arrive to the correct answer by a process of elimination.
(e) You can, arrive at the correct answer over a process of elimination

17. (a) How is the most difficult thing you have ever done?
(b) Which is the difficult thing you have ever done?
(c) What is the most difficult thing you have ever done?
(d) What is the difficultest thing you have ever done?
(e) What is the most difficult thing ever you have done?

18. (a) You cannot compare apples over oranges
(b) You cannot compare apples for oranges.
(c) You cannot compare apples and oranges.
(d) You cannot compare apples against oranges.
(e) You cannot compare from apples to oranges.

19. (a) It is extremely important for an engineer to know to use a computer.
(b) it is extremely important for an engineer to know how to use a computer.
(c) It is extremely important for an engineer to know use of the computer.
(d) it is extremely important for an engineer to know use of a computer.
(e) It is extremely important for a engineer to know usage of a computer

20. (a) One thing that divides people is the language they speak
(b) One thing that divides people are the languages that they speak
(c) One thing that divide people is the language that they speak.
(d) One thing that dividing, people are the languages spoken by them.
(e) One thing that divides people the language he speak.

## Part B Reading Comprehension (10 questions, 10 marks)

**Passage 1**

The average population density of the world is 47 persons per square mile. Continental destiny's range from no permanent inhabitants in Antarctica to 211 per square mile Europe. In the western hemisphere, population densities range from about 4 per square mile in Canada to 675 per square mile in Puerto Rico. In Europe the range is from 4 per square mile in Iceland to 83 per square mile in the Netherlands. Within countries there are wide variations of population densities. For example, in Egypt, the average is 55 per square mile, but 1300 persons inhabit each square mile in settled portions where land is arable.

High population densities generally occur in regions of developed industrialization, such as the Netherlands, Belgium, and Great Britain, or where lands are intensively used for agriculture, as in Puerto- Rico and Java.

Low average population densities are characteristic of most underdeveloped countries. Low density of population is generally associated with a relatively low percentage of cultivated land. This generally results from poor quality lands. It may also be due to natural obstacles to cultivation, such as deserts, mountains, or malaria-infested jungles; to land uses other than cultivation, is pasture and forested land; to primitive methods that limit cultivation, to social obstacles, and to land-ownership systems which keep land out of production.

More economically advanced countries of low population density have, as a rule, large proportions of there populations living in urban areas. Their rural population densities are usually very low. Poorer developed countries of correspondingly low general population density, on the other hand, often have a concentration of rural population living on arable land, which is as the rural concentration found in the most densely populated industrial countries.

21. In highly industrialized communities, we may expect
(a) arable land (b) large rural areas. (c) epidemics
(d) urban development (e) no change in population density

22. The title that best expresses the ideas of this passage is
(a) Where People Live (b) How People Live (c) Population Densities
(d) Economics and Population (e) no change la population density -

23. The most densely populated continent is
(a) Europe (b) South America (c) Asia (d) Africa (e) North America

24. Puerto Rico is a land of
(a) large cities (b) intense agriculture (c) poverty
(d) heavy industrialization (e) Malaria-infested jungles

25. Along the banks of the Nile, we may expect to find
(a) many settlements (b) pyramids (c) few inhabitants
(d) 1300 persons (e) 55 persons per square mile

**Passage 2**

The mansion in which Rabindranath was born on 7 May 1861, No 6 Dwarkanath Tagore's Lane, Jorasanko, lay in the heart of the Bengali section of Calcutta. The lane was virtually a cul-de-sac at its head, hardly more than a stone's throw away, ran the Chitpur Road, and the original north-south artery of Calcutta, and less than a mile beyond there were the river and the bathing and burning ghats. Turning north out of the lane after traveling not much over a mile, one reached the ruin of the once-magnificent Black Pagoda, a Hindu temple built by a notorious Zamindar in the days of Dwarkanath's great-grandfather, regarded roughly as the city proper's northern limit. Turning south, after less than a mile one found oneself in the heart of the government: the Writers' Building (of the now-defunct East India Company), Government House (home of India's governor general), Esplanade Row, and beyond these the green Maidan, Calcutta's Hyde Park, stretching south towards Fort William and the Eden Gardens beside the river. On either side of the Chitpur Road stood mansions similar to the Tagore's, set in gardens, built after the European' fashion and inhabited by wealthy Bengalis and Europeans (the latter living towards its southern and tiled, shrines and the occasional ten and rows of shops forming a famous bazaar. What is nowadays a claustrophobic, airless, hellish melee of dwellings, shops, pavement stalls Hindus shrines and the occasional mosque, tram-cars, motor-cars and rickshaws, goods, people and animals- all stewing in north Calcutta's fumes garbage and racket- was in those days a rich and appealing scene much painted by British artists.

There were no electric lights then and of course no motor vehicles. Looking back from 1940 Tagore remembered that, 'when the day was over, whatever business remained undone wrapped itself in the black blanket of the night and went to sleep .... Outside the house the evening sky rose quiet and mysterious. It was so still that we could hear, even in our lane the shouts from the grooms of the carriages of fashionable people returning from taking the air in the Eden Gardens by the side of the Ganges' In other words, a mile and half away

26. The passage implies that compared to today, Calcutta in 1861
(a) was a cleaner city (b) was ruled by notorious zamindars
(c) had more government buildings (d) was inhabited by many Europeans
(e) had no place for ordinary Bengalis

27. Which of the following was regarded as Calcutta proper's northern limit?
(a) Writers Building (b) the Black Pagoda (c) any Hindu temple
(d) Chitpur Road (e) Dwarkanath's great-grandfather

28. We can definitely say that there were no motor vehicles in Calcutta -.
(a) before 1940 (b) in the Eden Gardens (c) in 1865
(d) between and 1940 (e) around the time Rabindranath was born

29. It can be inferred that British artists often painted
(a) the Black Pagoda (b) all of the above
(c) the Street scene of present Calcutta (d) Hindu shrines and mosques
(e) scenes of north Calcutta during the 1860s

30. Well-to-do Bengalis of Calcutta lived
(a) in and around the Eden Gardens (b) towards the southern end of Chitpur Road
(c) a life of excessive luxury (d) in thatched and tiled dwellings
(e) in mansion set in gardens

**Part C** **Test of Written English** **15 Marks**

**Directions**: *This part must be answered in this test booklet in the box below. Keep in mind that how well you write is much more important than how much you write you are to write neaty and clearly so that examiners can read your handwriting.*

**"Products such as mobile phones and computers have important effects on our lives. Write about another product that you think has had either positive or negative impact on our lives."**

**Part D**

**15 Marks** **Test of Written English**

**Directions**: *This part must be answered in this test booklet in the box below. Keep in mind that how well you write is much more important than how much you write.*

Write 2 paragraphs on **"Teenagers are seldom understood by their elders."** The 1st paragraph should outline special behavioral characteristics of the teenagers, while 2nd paragraph should highlight the difference leading to the generation gap.

## Answer Key

**Section I: Mathematics**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. B | 2. D | 3. D | 4. E | 5. C | 6. A | 7. B | 8, C | 9. B | 10. E |
| 11. D | 12. A | 13. B | 14. C | 15. B | 16. A | 17. A | 18. B | 19. C | 20. B |
| 21. E | 22. C | 23. C | 24. E | 25. D | 26. C | 27. B | 28. A | 29. E | 30. E |

**Section II: Analytical ability**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. E | 2. C | 3.B | 4. A | 5. A | 6. D | 7. D | 8, E | 9. E | 10. A |
| 11. E | 12. C | 13. E | 14. A | 15. E | 16. E | 17. A | 18. D | 19. C | 20. D |

**Section III: language and communication**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1.E | 2. D | 3. D | 4. B | 5. D | 6. E | 7. A | 8, C | 9. E | 10. B |
| 11. E | 12. D | 13. B | 14. A | 15. E | 16. A | 17. C | 18. C | 19. B | 20. A |
| 21. D | 22. C | 23. A | 24. B | 25. A | 26. A | 27. B | 28. E | 29. E | 30. E |

# BBA (IBA) Admission Test (1998-99) Solution

## Section I: Mathematics

1. (B) Area of ΔADC = ½ of Area of ΔABC, and area of ΔBEC = ½ Area of ΔABC
   ∴ Area of ΔADC = Area of ΔBEC
   ADFE + ΔEFC = ΔBFC + ΔEFC
   ADFE = ΔBFC

2. (D) মনে করি pen এর price = x; pencil এর price = y; ∴ $\frac{x}{4}+\frac{y}{3}=11$,

   আবার, $\frac{x}{8}=\frac{y}{5}$ ∴ $x=\frac{8y}{5}$

   $\therefore \frac{8y}{5\times4}+\frac{y}{3}=11 \quad \Rightarrow \frac{24y+20y}{60}=11 \quad \Rightarrow 44y=660 \Rightarrow y=\frac{660}{44}=15;$

   $\therefore x=\frac{8\times15}{5}=24$

3. (D) $\frac{1}{4}+\frac{1}{5}=\frac{4+5}{20}=\frac{9}{20}$ অংশ করে একত্রে ∴ $\frac{9}{20}$ অংশ করে 1 দিনে। ∴ অংশ করে $\frac{20}{9}$ দিনে

   ∴ Jalil $\frac{9}{20}$ দিনে করে $\frac{1}{4}\times\frac{20}{9}=\frac{5}{9}$ অংশ করে একত্রে; ∴ Jalil পাবে 450 x $\frac{9}{20}$ = 250 Tk.

4. (E) একটু চিন্তা করলেই বোঝা যায়, CE = DE; ∴ ∠ECD = ∠EDC;
   এখন, ΔECD এ ∠E + ∠ECD+∠EDC = $180^0 \Rightarrow 40^0 + \angle ECD = 180^0 \Rightarrow \angle ECD = 70^0$
   ∴ $\angle ACD = 180^0 - \angle ECD = 110^0$

5. (C) মনে করি, people এর সংখ্যা = x এবং money = m; ∴ $\frac{m}{x+4}=\frac{m}{x}$ - 16 ..... (i)

   $\therefore m(\frac{1}{x}-\frac{1}{x+4})=16 \quad \Rightarrow m\frac{4}{x^2+4x}=16m=4x^2+16x$ এবং $\frac{m}{x-4}=\frac{m}{x}+24$

   $\Rightarrow \frac{m}{x-4}=\frac{m}{x}=24 \quad \Rightarrow \frac{x-x+4}{x(x+4)}=24 \quad \Rightarrow m=\frac{24(x^2-4x)}{4}$

   $= 4x^2 + 16x = 6x^2 - 24x \Rightarrow 2x^2 - 40x = 0 \quad \Rightarrow x - 20 = 0 \quad \Rightarrow x = 20$

6. (A) Distance = speed × time = 3.5 = 15
7. (B) 10% of 20 = 2 mangoes were damaged; ∴বিক্রি করলো 20 – 2 =18 = 1 ½ dozen;
   বিক্রয় মল্য = 54 x 1 ½ = 81. ∴profit = 81 – 55 = 26

8. (C) সংখ্যা চারটি n, n+2, n+4, n+6;
   ∴average = $\frac{4n+12}{4}$ = n+3; n odd, ∴average টা সব সময় even

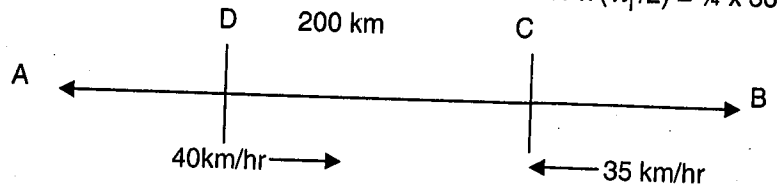
9. (B) A:B =1:2; B:C = 3:4; ∴ A:B = 3:6; B:C = 6:8 ∴ A:B:C = 3:6:8
   ∴ A received = $\frac{1105}{3+6+8}\times3=\frac{1105}{17}\times3$ = 65 x 3= 195

10. (E) মনে করি, Ali র income = x Tk. ∴ baby র income = $\frac{4x}{5}$; Ali এর expenditure = x – 500;

so, Baby র expenditure = $\frac{x-500}{54}\times 3$; এর পর আর করা solve যাবে না।

11. (D) Let, $h_1$ = height from A to CD; Area of ABX = ½ x AB x ($h_1$/2) = ¼ x 36 = 9

12. (A)




AC = 40 x 4 = 160 km; BD = 35 x 4 = 140 km
∴ BC = 200 – 160 =40; AD= 200 – 140 = 60
∴ CD = 200 – BC – AD = 200 – 40 – 60 = 100 km

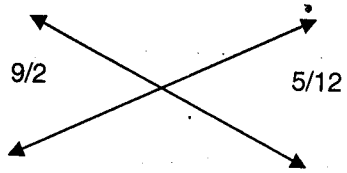
13. (B) At 10% loss, 80 টাকা বিক্রয় মল্য হলে cost = 100 Tk.
∴ 200 Tk. টাকা বিক্রয় মল্য হলে cost = (100 x 200) / 80 = 250 Tk

14. (C) speed of boat = b km/hr; speed of current = c km/hr; ∴ 8 x (b – c) = 32 and,
(b + c) x 4 = 32; therefore, b – c = 4 and b + c = 8; ∴ 2b = 12 ∴ b = 6 ∴ c = 2

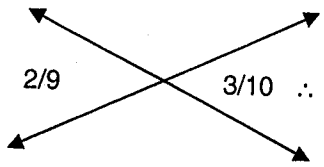
15. (B) মনে করি, প্রতি problem এ x minute লাগবে। ∴ 50x + 150 x $\frac{x}{2}$ = 180 ⇒ $\frac{180}{125} = \frac{36}{25}$;

∴ 50x = $\frac{36}{25}$ x 50 = 72 minutes

16. (A) B এবং C এর মধ্যে (B) হলো smaller; B এবং D এর মধ্যে B হলো smaller: B এর A এর তুলনায়




24 < 45; 2/9 হলো smaller;
(A) 2/9 এবং (E) 3/10 এর মধ্যে তুলনায়




∴ 20 < 27 ⇒ 2/ 9 হলো smallest

17. (A) OA = 10/2 = 5; OD = 3; ∴ AD =4 and Ab = 8

18. (B) ½ DC x CE = 8 ⇒$DC^2$ = 16 ⇒ DC =4; area of ABCD = 42 = 16

19. (C) মনে করি original width = x; original length = y; ∴ area = xy;
new width = 1.25x and new length = 75y; ∴ new area = (1.25 x .75) xy= .9375 xy
percentage = 93.75 %

20. (B) নীচের মতো করে এগোতে হবে; প্রথমে নীচের chart টা আকুন;

| | TV | No Tv | Total |
|---|---|---|---|
| Newspaper | | | |
| No Newspaper | | | |
| Total | | | 100% |

এখন, দেয়া আছে, 65% TV তে news দেখতো ও 40% Newspaper পড়তো ও 25% লোকাল Newspaper পড়তো ও TV দেখতোঃ

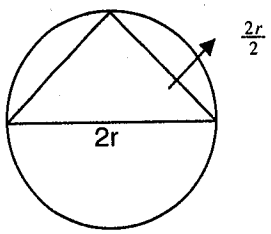
| | TV | No Tv | Total |
|---|---|---|---|
| Newspaper | 25% | | 40% |
| No Newspaper | | | |
| Total | 65% | | 100% |

এখন বাকী ঘরগুলো পর্ণ করতে হবেঃ

| | TV | No Tv | Total |
|---|---|---|---|
| Newspaper | 25% | | 40% |
| No Newspaper | 65% -25% = 40% | 60% - 40% = 20% | |
| Total | 65% | | 100% |

21. (E)

$$\frac{areaofcircle}{areaoftriangle} = \frac{\pi r^2}{\frac{1}{2}\times\frac{2r}{\sqrt{2}}\times\frac{2r}{\sqrt{2}}} = \Pi$$




22. (C) N = M + 2 : M = 2R : N + M + R = 27 ⟶ M + 2 + M + $\frac{M}{2}$ = 27 ⟶ 2M + $\frac{M}{2}$ = 25 ⟶ 5M = 50, So, M = 10

23. (C) Now amount of Sugar = (1/5) × 2 = 0.4 k: মনে করি; X পরিমান sugar add করতে হবে।

$$\therefore X + 0.4 = \frac{2}{7}\times(2+X) \Rightarrow 7X + 2.8 = 4 + 2X \Rightarrow 5X = 1.2 \Rightarrow X = \frac{1.2}{5} = 0.24$$

24. (E) Average = $\frac{TotalDistance}{TotalTime} = \frac{d+d}{\frac{d}{20}+\frac{d}{30}} = \frac{2}{\frac{1}{20}+\frac{1}{30}} = \frac{2\times60}{3+2} = 24km/hr$

25. (D) BC = 2, AB = 6 ∴AC = AB + BC = 8; ∴ $AC^2 = AD^2 + DC^2$; ∴$AC^2 = BD^2 + AB^2 + BD^2 + BC^2 \Rightarrow 8^2 = 2BD^2 + 6^2 + 2^2 \Rightarrow 64 - 36 - 4 = 2BD^2 = 24/2 = 12$ ∴$BD = 2\sqrt{3}$

26. (C) $x(x-1) = 2x = 4 \Rightarrow x^2 - x = 2x - 4$ ∴$x = 4$

27. (B) After 10% increase, price = 110; After 10% decrease price = 110 – 10% 0f 110 = 99

28. (A) মনে করি, screwdriver এর দাম = s ∴hammer এর দাম = 2s
After increase price of Hammer = 2s + 5% of 2s + 0.1s = 2.1s

After decrease price of screwdriver = s - 4% of s = s – 0.4s = 0.996s
Original price of 3 screwdriver and 3 hammers = 3s + 3 x 2s = 9s

New price = 3 x 0.96s + 3 x 2.1s = 9.8s' ∴Change = 0.18s

∴Percentage Change = $\frac{0.18s}{9s} \times 100\% = 2\%$

29. (E) $(x - y)^2 = 12; \Rightarrow x^2 + y^2 = 12 + 2xy = 12 + 2 \times 1 = 14$

30. (E) ΔADE এবং ΔABC সদৃশ ∴ $\frac{A}{D} = \frac{DE}{BC} \Rightarrow \frac{3}{6} = \frac{4}{BC}; \therefore BC = 8$

Area of trapezium BCED = $\frac{DE + BC}{2} \times BD = \frac{4+8}{2} \times 3 = 18$

## Section II: Analytical Ability

1. BA (Honours) student received = $\frac{136,600}{55} = 2520$; BA (Pass) student received = $\frac{94,500}{45} = 2100$

$\therefore \frac{2520 - 2100}{2100} \times 100 = \frac{420}{21} = 20\%$

2. (C) $\frac{320,600}{125} = 2564.8$

3. (B) Yunus must be a businessman হলো conclusion; আর এই conclusion এ আসার জন্য reason হিসেবে কাজ করছে এই যুক্তিটা he is carrying a briefcase. ∴ Hidden premise হলো যে, শুধু businessman রাই briefcase বহন করে।

Answers 4 – 7 দেখা যাচ্ছে, শুধুমাত্র G, J এবং L একটা instrument বাজায়। বাকীয়রা (H, K, M, N, O) দুটো করে Instrument বাজায়।

4. (A) N নিজেই একজন two instrument musician. ∴তার পাশে কোন two instrument musician বসতে পারে না। শুধু মাত্র G/L/K বসতে পারে।
5. (M) M নিজেই একজন two instrument musician তার পাশে K বসতে পারে না।
6. (D) বাকীগুলোতে two instrument musician পাশাপাশি আছে।
7. (D) K একজন two instrument musician ∴সে শুধু J এবং L এর মাঝে বসতে পারে।
8. (E) at least ten throws.
9. (E)
10. (A) Gulzar যাবে # 5 – এ। ∴ #4 বা #6 এ কোন smoker থাকতে পারবে না। ∴ Beauty কে #6 এ এবং Borhan কে #4 এ দেয়অ যা। #1 এর থাকতে পারে Peter, #2 এ ahmed এবং #3 এ wasim থাকতে পারে।
11. (E)

12. (C)

13. (E) 2, 10, 26, 50, --------- = $1^2 + 1, 3^2 + 1, 5^2 + 1, 7^2 + 1$ ∴ *** = $9^2 + 1 = 82$

14. (A) Nima র কথার অর্থ হলো, beef খাওয়া ক্ষতিকর নয় কারন তার ওজন আদৌ বাড়েনি। তার মানে Nima র মতে ওজন বাড়াটাই হলো একমাত্র ক্ষতিকর দিক। অতএব, Gani এই বলে উত্তর দিতে পারে যে ওজন বাড়া ছাড়াও আরো অন্যভাবেও ক্ষতি হতে পারে।

15. Only football = 34 – 13 = 21; Only cricket = 27 – 13 = 14; ∴ ration = 14/21 = 2/3

16. (E) I. a যদি fraction হয়, তবে $\frac{1}{a} < a$ হবে না; II. $\frac{a+b}{2a} = \frac{a+a}{2a} = 1; \frac{2b}{b+a} = \frac{2a}{2a} = 1$; ∴true

III. $\frac{a+c}{b+c} > \frac{a}{b}$; a, b, c, এর value জানা থাকলে এটা true না।

17. (A) টিপুর কথাকে খন্ডন করতে যেয়ে Shoma বললো, Professor Harron গত বৎসর Seema কে A grade দিয়েছিল। তার মানে, Shoma মনে করেছিলো যে, টিপুর কথার অর্থ হলো, Professor Haroon কখনই A grade দেন না।

18. (D) Both = (17 + 18) –30 – 5

19. (C) Only the smart becomes rich এই view (দৃষ্টিভঙ্গি)-কে contradict করতে হলে দেখাতে হবে যে, smart (চালাক-চতুর) না হয়েও কেউ rich হতে সক্ষম হয়েছে। (C) তে বলা হলো যে, Shamim stupid হওয়া সত্ত্বেও সে অত্যন্ত ধনী হয়ে গিয়েছে।

20. (D) Tahia র কথাকে refute করতে যেয়ে Narmin যুক্তি দেখালো যে, Tahia SSC তে star marks পেয়েছিলো ∴ বোঝা যাচ্ছে, Narmin এর assumption হলো SSC তে star marks পাওয়অ student HSC তে fail করে না।

## Section III : Language & Communication

1. (E) 2. (D) would হবে 3. (D) was হবে 4. (B) began হবে 5. (D) driving হবে
6. (E) subjunctive rule অনুসারে suggest থাকাতে শন্যস্থানে verb word take হবে।
7. (A) The greater থাকাতে parallel রাখার জন্য the higher হবে।
8. (C) Several হলো একটা plural subject; ∴ need হবে।
9. (E) marrying হলো gerund; ∴ এর আগে possessive case her হবে।
10. (B) come upon something অর্থ হঠাৎ কোন কিছু পাওয়া।
11. (E) Fabricating অর্থ মিথ্যা কথা বলা।
12. (D) fret over অর্থ দুশ্চিন্তা করা
13. (B) incredible অর্থ অবিশ্বাস্য।
14. (A) enticing অর্থ প্রলুব্ধ করা।
15. (E) prevalent অর্থ বিদ্যমান
16. (A) arrive এর সাথে at লাগে।
17. (C) difficult এর আগে most হবে।
18. (C)
19. (B) know how + infinitive
20. (A) "one thing" noun টি singular, সুতরাং সব verb singular হবে।।
21. (D) 22. (C) 23. (A) 24. (B) 25. (A) 26. (A)
27. (B) 28. (E) 29. (E) 30. (E)

**Part C: Test of Written English**

Now a day, our lives are being influenced by an irresistible phenomenon. The effects of this are prevailing all over our country, rather, all over the world. This is the expansion of satellite networks throughout the world.

We can't think of living without watching the programs of satellite channels. The impacts of the programs of satellite channels are both negative and positive.

The intimidating take-over of satellite channels is greatly hampering the development, of a country's own cultural heritage. The programs shown in these channels may contradict with the socio-cultural cultural background of a country. These programs mostly influence children and the future growth of a country may be overshadowed.

To say about the positive effects, we can mention the improvement of telecasting and studio techniques of a country's broadcasting channels by following the technologies used by the satellite channels. We can also learn the good things of other nation' cultures.

However the effects of satellite channels are numerous. Whether positively or negatively, now a days the satellite channels are influencing the lives of millions of people.

**Part D: Test of Written English**

Most teenagers are always influenced by their peers and friends. One feels oneself as backdated if he does not do what the others do if the others smoke, he also has to smoke; if others practice eve teasing, he also has to do the same; if the other girls have boy-friend, she also must have a boyfriend! In short, peer-groups, not parents, play the main role in molding the peculiar behavioral characteristics of teenagers.

Parents always want their respective children to follow them, not their friends; the poor teenager feels imprisoned by all the rules, regulations and restrictions imposed by the parent. The teenager looks down the well-meant intentions of the protective parent upon. So, the harder the parent tries to control the teenager; the more rebellious the teenager becomes! But, the funny thing about the whole situation is that, the parents forget that they themselves were teenagers once and they themselves had rebelled against their parents.

# BBA (IBA)

## Admission Test Question (1999-2000) with Solution

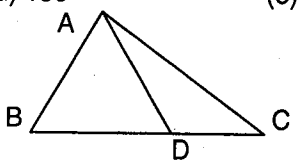
## Section I : Mathematics

**30 Questions** **[1 X 30 = 30 marks]**

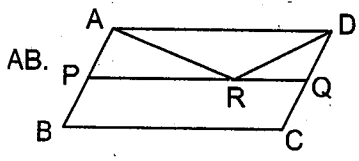
**Direction:** *Solve each of the following problems and mark the correct answer on your Answer Sheet.*

**DO NOT USE CALCULATOR.** *Figures are not drawn to scale.*

1. A seller of pen was asking for such price that would enable him to offer 10% discount and still make a profit of 20% on cost. If the cost of a pen was Tk. 30, what was his asking price?
   (a) Tk. 32 (b) Tk. 36 (c) Tk. 40 (d) Tk. 42 (e) none of these
2. If one-half of female students enjoy watching movies and one-third of male students do not like to watch movies, what fractional part of the student body enjoys watching movies?
   (a) 5/12 (b) 2/5 (c) 3/4 (d) 1/6 (e) can't be determined
3. In a picnic there were 240 persons. There were 20 more men than women and there were 20 more adults than children. How many men were there in the picnic?
   (a) 240 (b) 75 (c) 110 (d) 130 (e) 200
4. In ABC, AB = 4 cm, AC = 6 cm and BD = 3 cm. If $\angle BAD = \angle DAC$, what is the length?

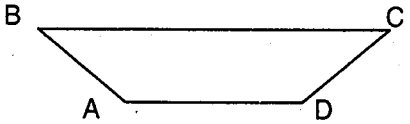



   (a) 7 (b) 7.5 (c) 9
   (d) 9.5 (e) none of these
5. The average weight of 3 men is 53 kg. None of them weighs less than 51 kg. What is the maximum possible weight (in kg) of a person in that group?
   (a) 53 (b) 55 (c) 57 (d) 59 (e) none of these
6. Mr. Karim traveled from A to B at a speed of 3 km/hr and returned from B to A at a speed of 5 km/hr. If the round trip required 8 hours what was the distance between A and B in km?
   (a) 9 (b) 12 (c) 15 (d) 18 (e) 20
7. During transportation, 5% merchandise was stolen and another 5% was damaged. A t what profit (in percentage) should the goods be sold so as to make an overall profit of 20%?
   (a) 22.25 (b) 27.5 (c) 30 (d) 33.3 (e) none of these
8. In the parallelogram, PQ || BC and P is the midpoint of AB. If PR = 16 cm and area of ABCD is 128 sq. cm, what is the area of the ARD in sq. cm?
   (a) 16 (b) 20 (c) 24
   (d) 28 (e) 32




9. In a store, the ratio of red socks to green socks is 3:2. The socks are made of either cotton or wool. If 60% of the red socks are made of cotton and 80% of the green socks are made of wool, what percentages of socks are made of cotton?
   (a) 44 (b) 48 (c) 50 (d) 52 (e) none of these
10. A trader purchased some pen for Tk. 120. If the price of each pen were Tk. 3 less, he would have got 2 more pens. How many pens did he buy?
    (a) 6 (b) 8 (c) 10 (d) 12 (e) none of these
11. If $x/4 - 8/x = 1$, $x = ?$
    (a) –2 (b) –4 (c) 8 (d) both a & b (e) both b & c
12. The total price for a watch and a chain is Tk. 500. If the price of the watch increases by 10% and that of the chain by 5%, the total price becomes Tk. 545. What is the price of the chain?
    (a) 75 (b) 80 (c) 100 (d) 120 (e) 125
13. 80 apples were stored in two baskets in such a way that 6 times the content of the larger basket is 16 more than 10 times the content of the smaller basket. How many apples were stored in the smaller basket?
    (a) 20 (b) 23 (c) 24 (d) 25 (e) 29

14. In the figure, AD || BC, AB = 5 cm and AD = 7 cm. If ∠BCD = ½ ∠BAD, what is the length of BC in cm?

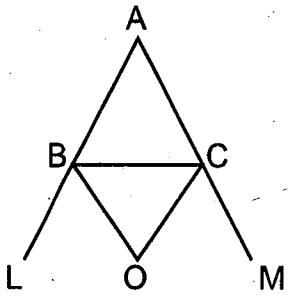



(a) 10 (b) 12 (c) 17
(d) 19 (e) can't be determined

15. Seven kg of mangoes cost as much as 10 kg of apples and 1 kg of oranges. 7 kg of oranges cost as much as 1 kg of mangoes and 2 kg of apples. How many kg of apples can be purchased by the amount of money required to purchase 12 kg of mangoes?
(a) 8 (b) 14 (c) 16 (d) 18 (e) 24

16. If 9 men or 15 women can do a work in 16 days, how long will it take 3 men and 7 women to complete the job?
(a) 12 (b) 15 (c) 18 (d) 20 (e) none of these

17. In Δ ABC, ∠A = 40°, ∠OBL = ∠OBC and ∠OCB = OCM. Calculate the value of ∠BOC.
(a) 60° (b) 70°
(c) 80° (d) 90°
(e) can't be calculated




18. You can now purchase 5 more bananas with tk. 75 due to a reduction in price by 20%. Calculate the current price of one dozen of Bananas.
(a) 24 (b) 30 (c) 32 (d) 36 (e) none of these

19. In an exam, 90% passed History and 85% passed English. If none of the students failed in both subjects and 225 passed in both subjects, calculate the number of students who have attended the exam.
(a) 250 (b) 275 (c) 300 (d) 325 (e) none of these

20. Two cars start towards the same destination at the same time. One car is 5 km behind the other. If the speed of the car at the front is 750 m/min and that of the other car is 1000 m/min, after how many minutes will the two cars meet?
(a) 20 (b) 24 (c) 25 (d) 30 (e) none of these

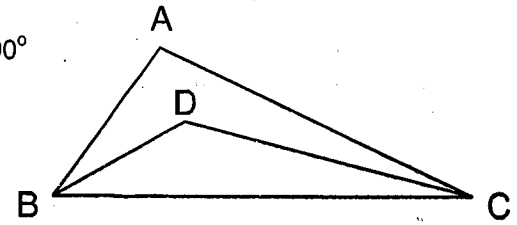
21. If $x/2 + 3 = x/3 + 4$, $x = ?$
(a) 6 (b) 8 (c) 12 (d) –4 (e) none of these

22. On an average, Dr. X attends 12 patients per day and Dr. Y attends 16 patients per day. If Dr. X's charge is 3/2 times as much as that of Dr. Y, who earns Tk. 72,000 per month (30 days), what is the monthly income of Dr. X?
(a) 64000 (b) 72000 (c) 76000 (d) 81000 (e) none of these

23. What is 10% of y/3, if 2y/3 is 10% of 600?
(a) 1 (b) 2 (c) 3 (d) 4 (e) none of these

24. In the figure below, angle ABD = angle DBC and angle ACD = angle DCB. If angle BAC = 70°, what is the value of angle BDC?

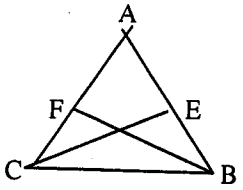
(a) 55° (b) 70° (c) 90°
(d) 125° (e) can't be determined




25. Karim can do a job in 15 minutes and his brother takes twice as long to do the same job. If they work together, how long will it take to complete the job?
(a) 5 (b) 7.5 (c) 10 (d) 12.5 (e) none of these

26. In triangle ABC, angle AFB = angle AEC = 90°. If BF =CE, which of the following must be true?

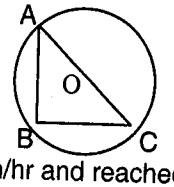
(a) AB = AC (b) AE = CE (c) BF = AF
(d) AB = BC (e) none of these




27. In 24 kg of salt water, 8% is salt; of another mixture, 4% is salt. How many kg of 2nd solution must be added to the first mixture to get a solution that is 5% salt?
(a) 24 (b) 36 (c) 48 (d) 72 (e) 96

28. If A : B = 1 : 2, B : C = 4 : 3 and A+B+C = 630, what is the value of A?
(a) 70 (b) 80 (c) 100 (d) 120 (e) 140

29. In the figure below, O is the centre of the circle. If OC =BC, what is the value of angle BAC?
(a) 22.5° (b) 30° (c) 45°
(d) 60° (e) none of these




30. A man started at 8 am from his home, walked at the rate of 3 km/hr and reached his office 45 minutes late. The next day, he started at the same time and walked at the rate of 5 km/hr and reached his office 15 minutes earlier than the scheduled time. What was the distance between his office and horne?
(a) 6 km (b) 7.5 km (c) 9 km (d) 12 km (e) none of these

## End of Section I

## Section II Analytical Ability [1 X 20 = 20 marks]

**Directions:** *Solve each of the following problems and mark the correct answer on your Answer Sheet.*

1. During the stock market crisis political leaders debated if financial assistance should be provided to the stock market. One economist opposed saying "*Are we supposed o help out the stock market every time it gets into crisis?*"
The economist's question can be criticized because it
(a) appeals to emotions rather than logic.
(b) assumes everyone else agrees to help the stock market.
(c) uses ambiguous terms. (d) completely ignores the issue at hand.
(e) relies upon second-hand reports than first-hand accounts.

2. "Only Dentozine Toothpaste gives your teeth alabaster whiteness and the unique Dentozine flavour."

If this advertisement claim is true, which of the following cannot be true?
*I. Peril Toothpaste gives your teeth alabaster whiteness.*
*II. Whitewash Toothpaste is a more popular toothpaste than Dentozine.*
*III. Dentozine breath-freshener uses the Dentozine toothpaste flavour.*
(a) I only (b) II only (c) III only (d) I and III (c) All of the propositions can be true

3. We must do something about the rising cost of our state prisons. It now costs an average of Tk. 500 per day to maintain a prisoner in a double-occupancy cell in a state prison. Yet in the many towns in the country, one can find good hotel room for less than Tk. 500 per day.

The argument above might be criticized in all of the following ways except
(a) it introduces an inappropriate comparison. (b) it misuses numerical data
(c) it draws a faulty conclusion. (d) it relies on an unwarranted appeal to the authority.
(e) it fails to take account of costs, which prisons have but hotels do not have.

4. Following is a conversation between two friends:
   Rabiul: *"You shouldn't eat so much oily food. It contains high cholesterol."*
   Nabi: *"You are wrong. I have been eating the same quantity of oily food for fifteen years. I never had any heart problem."*

   Which of the following logic best supports and explains Nabi's argument?
   (a) Heavy eating is not the only reason, high-cholesterol itself causes heart failure.
   (b) Oily food is not always bad for health.
   (c) If you keep on eating like this, you may find out in near future that you arc eating more and more.
   (d) Oily food is not the only type that contains high cholesterol.
   (e) Generally, people who eat as much food as Nabi have severe heart problems.

5. All effective administrators are concerned about the welfare of the employees, and all administrators
   who are concerned about such welfare are liberal in granting time off for personal need. Therefore, all administrators who do not grant time off to employees for personal needs are not effective.

   If the argument is valid then it must be true that,
   (a) all time off for personal needs are granted by effective administrators.
   (b) no ineffective administrators are liberal to grant time off for employees' personal needs.
   (c) some effective administrators are not liberal to grant time off for employees' personal needs.
   (d) all effective administrators are liberal to grant time off for employees' personal needs.
   (e) no ineffective administrators are concerned about the welfare of their employees.

6. If a>b and c<0, which one is true?
   (a) c/a<c/b (b) ac<bc (c) ac>bc (d) a/c>b/c (e) none of these
7. Following is a dialogue between two friends Sara and Elham:

   Sara: "Shamima is one of the most important executives at Coca Cola."
   Elham: "How come? I know for fact that she drinks RC Cola."

   Elham's statement implies that he believes
   (a) all Cola drinks taste pretty much alike.
   (b) Shamima is an unimportant employee of RC Cola.
   (c) RC Cola is a subsidiary of Coca Cola. (d) RC is a better tasting cola than Coke.
   (e)an executive purchases only that company's products.

8. Mita and Anjali are two friends. They were arguing as follows:

   Mita: *"All of the graduates from Notre Dame College go to Dhaka University."*
   Anjali: *"Well, some of the students at the university come from Dhaka College."*

   Anjali's response shows that she has interpreted Mita's remark to mean that
   (a) only students from Notre Dame College attend Dhaka University.
   (b) some Notre Dame College graduates attend Dhaka University.
   (c) most of the students at Dhaka College attend Dhaka University.
   (d) none of the students at Dhaka University are from Notre Dame College.
   (e) Notre College is a better institution than Dhaka College.

9. *"Is your company going to continue to discriminate against women in its hiring and promotion policies?"*
   The above question might be considered unfair for which of the following reasons?

   I. It is internally inconsistent.
   II. It contains a hidden presupposition, which the responder might wish to contest.
   III. Its construction seeks a "yes" or "no" answer where both might be inappropriate.
   (a) I only (b) II only (c) III only (d) I & III (e) I, II & III

10. All high powered racing engines have stochastic fuel injection. This system is not generally included in the engines of passenger sedans.

Which of the following conclusions can be drawn from these statements?
(a) Stochastic fuel injection is found only in high-powered racing cars.
(b) Passenger sedans do not usually have stochastic fuel injections.
(c) Car producers do not include the system in passenger cars because they fear accident.
(d) Some passenger sedans are high powered racing vehicles.
(c) Stochastic fuel injection system is too expensive for purchasers of passenger cars.

## Read the following text and then answer questions 11 to 13

P, Q, R, S, T, U, V and W are 8 friends. They went to a graduation party. P ate more than W and left later than V. T ate more than P but less than V and left later than P but earlier than S. U ate less than Q but more than V and left later than S. W ate more than R and left earlier than V.

11. Who ate the least?
(a) R (b) V (c) P (d) U (e) T

12. Who was the first person to leave the party?
(a) P (b) S (c) T (d) U (e) W

13. If S ate more than W, who ate more than S?
(a) P&R (b) P, Q, U & V (c) P, R & Q
(d) all but R & W (e) cannot be determined

## Read the following text and then answer questions 14 to 16

Two couples Mr. & Mrs. N and Mr. & Mrs. P has different tastes in music as follows: One like classical, one jazz, one rock and one country music. Of the four, only two have white hair and one of them likes jazz best. The wife with white hair likes country music and her husband likes classical music best. Mrs. P has brown hair.

14. What type of music does Mrs. P like?
(a) jazz (b) rock (c) classical (d) country (e) can't be determined

15. What is the color of Mr. P's hair and what type of music does he prefer?
(a) brown hair and jazz music (b) brown hair and country music
(c) white hair and jazz music (d) white hair and classical music
(e) white hair and rock music

16. Who prefers classical music?
(a) Mr. N (b) Mrs. N (c) Mr. P (d) Mrs. P (e) can't be determined

## Read the following text and then answer questions 17 to 20

Kaiser is planning his sales calls for tomorrow. He is judged and paid by his company both on the basis of the number of calls he makes and the amount of sales he generates.

Acme Co. will take only one hour and will probably result in an order for 5 boxes. Borak Co. will take three hours and will either result in an order for 2O boxes or nothing. Citibank Inc. will take one hour and make an order for 10 boxes. Duncan Bros. will take from one to three hours and probably result in an order for 10-30 boxes.

17. Under these conditions, what is the minimum number of boxes can he expect to sell in eight working hours?
(a) 10 (b) 15 (c) 20 (d) 25 (e) 35

18. Under these conditions, what is the greatest number of boxes Kaiser can sell in seven working hours?
(a) 35 (b) 60 (c) 65 (d) 45 (e) 25

19. If Kaiser has a 30-minute lunch appointment at 1:30 p.m., which companies should he choose (assuming the working hours are from 9 am to 5 pm.)?
    (a) Citibank & Borak, and Acme & Duncan
    (b) Duncan & Acme, then Citibank & Borak
    (c) Acme & Citibank, then Borak & Duncan
    (d) Borak & Acme, then Citibank and, if time permits, Duncan
    (e) Borak & Citibank, then Duncan and, if time permits, Acme

20. If he sells 20 boxes to Duncan bros. and then his car breaks down and cannot be fixed until 2 pm, what is the maximum no. of boxes he can sell by 5 p.m.?
    (a) 20 (b) 40 (c) 45 (d) 50 (e) 55

End of Section II

## Section III Language and Communication [50 marks]

*This section consists of three parts: Part A and Part B contain MCQs that must be answered on the Answer Sheet. Part C must be answer in this test booklet in the spaces provided.*

**Part A: Multiple-choice questions [I X 20 = 20 marks]**

**Directions for Questions 1 to 5:** *For each question choose the most correct form of sentence mark your choice on the Answer Sheet accordingly.*

1. (a) I would have rather shaven my head than gone out in that ridiculous outfit.
   (b) I would rather shave my head than go out in that ridiculous outfit.
   (c) I would of rather shaven my head than go out in that ridiculous outfit.
   (d) I rather would shave my head than go out in that ridiculous outfit.
   (e) I would rather have shaven my head than go out in that ridiculous outfit.

2. (a) I've never had any other ambition than to be a musician.
   (b) I never have any other ambition than to be a musician.
   (c) I've never had no ambition other than to be musician.
   (d) I've hardly ever had any ambition than to be a musician.
   (e) I've never had any other ambition than being a musician.

3. (a) Theirs have been a long and happy marriage.
   (b) Their has been a long and happy marriage.
   (c) A long and happy marriage have been theirs.
   (d) Theirs has been a long and happy marriage.
   (e) Theirs been a long and happy marriage.

4. (a) Ireland seconds Japan in the number of engineering graduates.
   (b) Ireland is only second to Japan in the proportion of engineering graduates.
   (c) Ireland only is second to Japan in the proportion of engineering graduates.
   (d) Ireland is second to Japan's first in the proportion of engineering graduates.
   (e) Ireland is second only to Japan in the proportion of engineering graduates.

5. (a) McGrath is considered widely as Australia's most lethal weapon.
   (b) Widely, McGrath is considered as Australia's most lethal weapon.
   (c) McGrath is widely considered as Australia's most lethal weapon.
   (d) McGrath is widely considered as Australia's lethal most weapon.
   (e) McGrath is considered in Australia the team widely as a most lethal weapon.

**Directions for Questions 6 - 15:** *Select the word/set of words that, when inserted in the sentence, best fits the meaning of the sentence as a whole and mark your choice on the Answer Sheet accordingly.*

6. A serious study of physics is impossible _____ some knowledge of mathematics.
(a) not with (b) without (c) in absence of (d) lacking (c) not having

7. _____ together in one place, they form a community.
(a) When people who live (b) People living (c) Whenever people living.
(d) When people living (c) Whenever people live

8. _____ Bangladesh, the general movement of air is from South to North.
(a) For (b) Regarding (c) Across (d) Over (e) Everywhere

9. Not until the seventeenth century _____ to measure the speed of light.
(a) did anyone even attempt (b) did even attempt anyone (c) anyone did even attempt
(d) none did attempt (e) did none attempt even

10. I _____ to hospital last Friday.
(a) would go(b) must go (c) have to go (d) had to go (e) have gone

11. Rajshahi Silk is still highly prized _____ similar artificial fabrics.
(a) although is available (b) despite there are available (c) in spite of the availability of
(d) even though an availability (e) there are available

12. The art of landscape architecture is _____ that of architecture itself.
(a) as almost old (b) old as almost (c)almost as old as
(d) almost as old than (e) nearly as old than

13. When he arrived I was about to _____.
(a) be leaving (b) leave (c) left (d) go (e) be gone

14. The type of clothing people wear tells others a lot about _____.
(a) what they are (b) what they were (c) whom they are
(d) who are they (e) who they are

15. Blind fish that spend their entire life in caves have _____ eyes nor ears.
(a) any (b) no (c) nor any (d) neither (e) nor

16. The opposite of the word *instigate* is
(a) inhibit (b) random choice (c) approve vigorously (d) waive (e) presume

17. The meaning of the word *abate* is
(a) to embarrass (b) tolerate (c) split into halves (d) decrease (e) assist

18. The meaning of the word *supportive* is
(a) antagonistic (b) helpful (c) dangerous (d) hostile (e) active

19. The meaning of the word *exit* is
(a) back step (b) entry (c) exile (d) outlet (e) backdoor

20. The opposite of the word *gratify* is
(a) displease (b) waste (c) stupefy (d) argue (e) acknowledge

**Part B: Reading comprehension** **[1 X 10 = 10 marks]**

**Direction:** *This part contains two passages. Each one is followed by several questions about it. Choose the best answer for each question and mark your choice on the Answer Sheet accordingly.*

## Passage 1

The term anesthesia was used by the ancient Greeks to mean 'absence of feeling' in the sense of 'boorishness'. Since then, however, much has happened in the sense of evolvement, to make the experience of undergoing anesthesia a pleasant one. At one stage of development of this science (around the early part of the 19th century) the principal aim of anesthesia was to relieve the pain of surgery rather than to produce oblivion to it. As one can easily imagine, the use of anesthesia to make the patient complaint while under the surgeon's knife was a vast improvement to the earlier practice of employing a squad of heavily muscled goons to hold the patient. Finer refinements, such as enabling the patient to actually enjoy the experience, came much later.

The word anesthesia was again coined in 1846 by the sage Oliver Wendell Holmes – anatomist, physician and poet - to describe the modern practice of this science, as a "loss of feeling" caused by drugs, especially ether, leading to a state of oblivion. Today, anesthesia is an entirely different proposition. A sense of feeling good is as important for the patient as the relief it provides from pain inflicted airing surgery.

Patients requiring anesthesia are often terrified of 'going under' for mainly two reasons: (a) will I feel pain during surgery? (b) will I ever come out of anesthesia? For a large number of patients, the second question is by far the more crucial one. Most people, naturally, are quite willing to endure any amount of pain if there is a guarantee that they will live to talk about it.

Today, we have come to the stage where anesthesia is primarily concerned with not only the relief of pain during surgery, but also the overall safety and well-being of the patient. An 'anesthesia trip' these days is accompanied by almost nil mortality and, more importantly, reversible morbidity. Safety of the patient is the prime objective. Keeping that as the basic premise, anesthesia is being continuously refined and fine tuned so that it can be far from unpleasant experience. More often than not, the only unpleasantness the patient has to go through is a single needle-prick for which, unfortunately, there is still no substitute. From there on, the patient's experience under a skillful anesthetist is one, which he or she generally recalls with a dreamy-eyed expression.

In this day and age of sophisticated monitoring devices and customized drugs, patients can be continuously supervised so that the possibility of any life-threatening accidents during anesthesia is reduced to the barest minimum. What is wonderful is that these monitors are now available in the hospitals and the better private clinics in Dhaka. The previously oft-repeated phrase 'the operation was successful but the patient died', does not hold water in contemporary anesthetic practice.

21. The passage clearly states that the person who coined the word "anesthesia" was all of the following EXCEPT
    (a) A poet (b) An anatomist (c) A doctor (d) A wise man (e) An Englishman
22. Anesthesia is being continuously refined with which of the following as a basic premise?
    (a) minimum pain reduction for the patient (b) greatest degree of patient comfort
    (c) safety of the patient (d) making it a pleasant experience
    (e) maintenance of a dreamy-eyed expression
23. Nowadays the risk of serious accidents during anesthesia has been significantly reduced as a result of
    (a) continuous supervision using modern equipment and special drugs
    (b) state-of-the-art hospital facilities
    (c) effective emergency treatment procedures
    (d) an increase of quality clinics in Dhaka city
    (e) an increase in surgeon's skill

24. According to the passage, before the development of anesthesia, people who underwent surgery
    (a) consumed large amounts of alcoholic prior to the operations
    (b) were basically non-complaint in their general attitude
    (c) had to bear the pain of the surgery
    (d) employed a squad of heavily muscled goons
    (e) had a high degree of pain tolerance
25. The author is of the opinion that most people would be willing to suffer any moment of pain if there is a guarantee that they
    (a) will suffer less pair in future (b) will not die (c) will get to talk about it
    (d) will be financially rewarded (e) will go to heaven.

## Passage 2

One day in 1974, in a poverty-wrecked village in Bangladesh, Muhammad Yunus stumbled upon a woman making bamboo stools – and upon a new concept of banking that would eventually lift millions of people in developing nations out of abject poverty.

Professor Yunus, who then headed the Economics Department of Chittagong University, recalls what impelled him to walk through the village that day; a famine so intense that people were dying in the street, and a frustration with theories of economics that seemed utterly irrelevant to such disaster.

Speaking the woman's dialect, he asked about the difficulties she was having. The problem, he quickly learned, was that she had no bamboo of her own. So she was forced to borrow money to buy it from a trader, who then required her to sell the finished product back to him at whatever price he offered.

"She only made two pennies for a whole day's work", Yunus recalls. "But she could improve her economic situation if someone would give her the five taka (about fifteen US cents) she needed to buy bamboo."

Yunus lent her the money, and he came back the next day with a student to help him find others like her. By the end of next week they had identified forty-two people who, if given very small loans, could begin to become financially independent. Total amount needed: the equivalent of twenty-six US dollars.

Feeling "shocked and ashamed" to be a part of a society that could not provide $26 to "forty-two able, willing eager, hard working, skilled workers" he recalls that impulse was to take the money from his own pocket. "But I realized that was an emotional response, not a solution."

Out of this realization, after nine years of battling the bureaucracies and paperwork of his country's banking system, came a concept known as micro-enterprise lending – though Yunus prefers the term "*micro-credit* lending." Out of it, too, came the birth of Grameen Bank, the first bank in the world to specialize in tiny loans to people with no collateral and no credit history.

26. An apt title for the passage would be
    (a) The Mechanics of Micro-credit Lending (b) The Famine of 1974
    (c) Financing of Cottage Industry (d) The Birth of Grameen Bank
    (e) The History of Micro-credit Lending
27. From the passage, the following conclusion can be inferred about Bangladesh's banking system.
    (a) The system was relatively free from paperwork.
    (b) Some banks lent money without collateral.
    (c) Banks were not particularly interested in a customer's credit history.
    (d) Banks were providing adequate service to the rural poor.
    (e) None of the above.
28. The passage implies that if the woman had access to credit
    (a) she could have gone into other profitable ventures.
    (b) she would be better able to avert famine.
    (c) she could have increased her daily production.
    (d) she would have made more than 2 pennies a day.
    (e) she could keep some of the bamboo stools for her own use.

29. The article was most likely written for an audience composed of
    (a) Americans who are interested in developing countries. (b) Grameen bank borrowers.
    (c) newly recruited officers of Grameen Bank. (d) Bangladeshi NGO workers.
    (e) first year economics students of Chittagong University.
30. Each of the following could be a likely factor that impelled Professor Yunus to walk through the village that day EXCEPT:
    (a) He was disturbed that people were dying of hunger.
    (b) He was frustrated with irrelevant economic theories.
    (c) He wanted a first-hand look at the effect of the famine.
    (d) He wanted to distribute food to the poor and hungry.
    (e) He wanted to learn about the poor people's struggle for survival.

**Part C: Written section** **[2 X 10 = 20 marks]**

**Direction:** *This part contains **two questions**. Answer these questions in this test booklet in the designated space. Keep in mind that how well you write is much more important than how much you write. Write as neatly and clearly as you can.*

i. Many people are expecting major changes in the job market in the near future. These changes can result from changes in the technology or in the economy. **Write a conversation** between two friends incorporating these two aspects of changes.
[10 marks]

ii. Write five arguments in favor of or against *rickshaws as a means of transport in big cities.* (10 marks)

## Answer Key

**Section I: Mathematics**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. C | 2. E | 3. D | 4. B | 5. C | 6. C | 7. E | 8, E | 9. A | 10. B |
| 11. E | 12. C | 13. E | 14. E | 15. D | 16. D | 17. B | 18. D | 19. C | 20. A |
| 21. D | 22. D | 23. C | 24. D | 25. C | 26. A | 27. D | 28. E | 29. B | 30. B |

**Section II: Analytical ability**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. A | 2. D | 3. D | 4. B | 5. D | 6. E | 7. E | 8, A | 9. C | 10. B |
| 11. A | 12. E | 13. E | 14. B | 15. C | 16. A | 17. A | 18. C | 19. E | 20. B |

**Section III: language and communication**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. B | 2. A | 3. D | 4. B | 5. C | 6. B | 7. E | 8, D | 9. A | 10. D |
| 11. C | 12. C | 13. B | 14. E | 15. D | 16. A | 17. D | 18. B | 19. D | 20. A |
| 21. E | 22. C | 23. A | 24. D | 25. B | 26. E | 27. E | 28. B | 29. A | 30. D |

# BBA (IBA) Admission Test (1999-2000) Solution

## Section 1: Mathematics

1. (C) Recall Arithmetic review chapter 2: Mark-up and discount
Cost (Tk. 30) এর 20% বা 1/ 5 বেশী selling price. অতএব, selling price 36 ( 120/100 x 30) জানতে হবে কোন amount থেকে তার 10% বা 1/10 কমলে 36 পাওয়া যাবে। 36 এর 1/9 বাড়লে mark up price 40(100/90 x 30). Recall adjustments to get original price.
2. (E) female students আর male students দের সংখ্যা কিংবা ratio বা অন্য কোন relation ছাড়া এটা solve করা যাবে না।
3. (D) Confusion create করার জন্য adult আর children এর information টি দেয়া হয়েছে 20 জন men কে separate করলে 220 জন (240 – 20) ছেলে মেয়ে সমান. ∴male হবে 110+20 = 130 জন।
4. (B) geometry review এর chapter 3 এর শেষের some important formulae র শেষ দুটি recall করেন। শীর্ষ কোণের অন্তর্দ্বিখন্ডক ভূমিকে কোন সংলগ্ন বাহুদ্বয়ের অনুপাতে বিভক্ত করে।

$\frac{DC}{BD} = \frac{AC}{AB}$ ∴ DC = 4.5 ∴ BC = 7.5

5. (C) একজনের weight এর maximum মান জানতে হলে বাকীগুলো minimum ধরতে হবে। তাহলে অন্য দুজনের weight 51 ধরতে হবে, 3 জনের total থেকে 2 জনের total বিয়োগ করে অথবা shortage = excess ধরে solve করা যাবে।

6. (C) Average speed = $\frac{2S_1S_2}{S_1+S_2} = \frac{2x3x5}{3+5} = \frac{30}{8}$

Total Distance = Av. Speed x Total Time $= \frac{30}{8} \times 8 = 30$ km.

Distance from A to B is 15. Back calculation করলে খুব সহজে solve করা যেত।

7. (E) 100 টি merchandise এর cost 100 tk. 20% profit এ sell করতে হবে 120 tk. তে। এখন 90 টি merchandise (90 tk) থেকে profit করতে হবে 30 tk.
∴ percentage of profit= 30 / 90 x 100 = 33.3
এখানে, approximation করতে বলেনি এবং none choice আছে।

8. (E) P mid point এবং PQ || BC ফলে APQD এর area ABCD এর ½ আবার AD base আর parallel AD এবং PQ এর মাঝে triangle এর APQD এর ½ area of Δ ARD = ¼ x 128 = 32
9. (A) ধরি, Red socks 30 টি, তাহলে Green socks 20 টি Cotton red socks = 60% of 30 = 18 টি
Cotton green socks = 20% of 20 = 4 টি (১০০ %-৮০%)
% of cotton socks = 22 / 50 x100 = 40%
10. (B) Pen এর পর্ব সংখ্যা x হলে

$\frac{120}{x} - 3 = \frac{120}{x+2}$ বা, $\frac{120-3x}{x} = \frac{120}{x+2}$ ⇒ (120 – 3x) (x+2) = 120

⇒ $120x - 3x^2 + 240 - 6x = 120x$ ⇒ $3x^2 + 6x - 240 = 4$ ⇒ $x^2 + 2x - 80 = 0$⇒
(x+10) (x-8) = 0 ∴ x = - 10 or 8. x = 8; Back calculation করলে easily solve করা যাবে।

11. (E) $\frac{30}{8} - \frac{30}{8} = 1$ ⇒ $\frac{30}{8} = 1$

or ⇒ $x^2 - 32 = 4x$ or $x^2 - 4x - 32 = 0$ ⇒ (x – 8) (x+ 4) = 0 or x = 8 or x= 4

12. (C) Back solve করলে c ধরে প্রথমেই মিলে যেতো price of chain x বলে

$\frac{5x}{100} + \frac{10}{100}(500 - x) = 45$ [loss + gain= net change]

or, 5000 – 5x = 4500 or, 5x = 500 or, x = 100

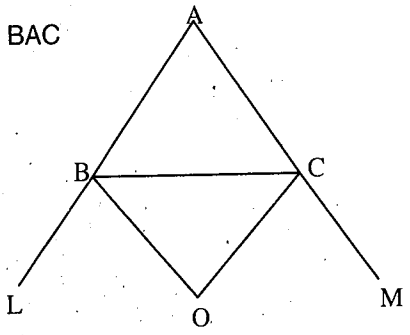
13. (E) S + L = 80 ..... (i) 6L = 16 + 105..... (ii)
or, 6 (80 – S) = 16 + 10S or, 450 – 6S = 16 + 10S
or, 464 = 16S or, $s = \frac{464}{16} = 24$

14. (E) AB = DC বলা থাকলে angle গুলোর মান বের করে solve করা যেত। অথবা height এবং BC এর মান দেয়া থাকলে formula use করা যেত।

15. (D) 7 Mn = 10 Ap =1Or .....(i) 7 Or = 1 Mn + 2 Ap..... (ii)
∴ 7 ( 7Mn – 10 Ap) = 1 Mn + 2 Ap
∴ 49 Mn – 70 Ap = 1Mn + 2 Ap
or, 48 Mn = 72 Ap ∴ 12 Mn = $\frac{72}{48}$ x 12 Ap = 18 Ap

16. (D) 9M = 15W ∴ 3M = 5W ∴ 3M + 7W = 12W
15 W can do it in 16 days ∴ 12W can do it in $\frac{16\times5}{12}$ = 20 days

17. (B) $\angle A = 40^0$
∴ $\angle CBL + \angle BCM = \angle ACB + \angle BAC + \angle ABC + \angle BAC$
$260^0 - 40^0 = 220^0$
∴ $\angle CBO + \angle BCO = 110^0$ ∴ $\angle BCO = 70^0$




18. (D) আগে x টি tk. 75 এখন x + 5 টির price tk. 75, x টির বর্তমান price calculate করতে পারলে present price বের করা যাবে।
Previous price 100 হলে current price = 80
Previous price 75 হলে current price = $\frac{80\times75}{100}$ = 60
5 টির current price = 75 – 60 = tk. 15
∴ 12 টির current price = $\frac{15\times12}{5}$ = tk. 36

19. (C) Total = A + B – Both + none ∴ 100 = 90 + 80 – Both + 0
∴ Both = 70 70% means 225
100% means $\frac{225\times100}{75}$ = 300

20. (A) 2nd car per minute cover করে 250 meters
5 km cover করে = $\frac{1\times5\times1000}{250}$ = 20 minutes এ

21. (A) x/2 + 3= x/3 + 4 ∴ x/2 – x/3 = 1 ∴ x/6 = 1 ∴x = 6

22. (D) per day patient earning of Mr. Y = $\frac{72000}{30\times16}$

per day patient earning of Mr. X = $\frac{72000}{30\times16}\times\frac{3}{2}$

∴ per day patient earning of Mr. X = $\frac{72000}{30\times16}\times\frac{3}{2}\times12$

per month patient earning of Mr. X = $\frac{72000}{30\times16}\times\frac{3}{2}\times12\times30$

= 81000

23. (C) 10% of y/3 means $\frac{10}{100}\times\frac{y}{3}=\frac{y}{30}$

$\frac{2y}{3}$ = 10% of 600

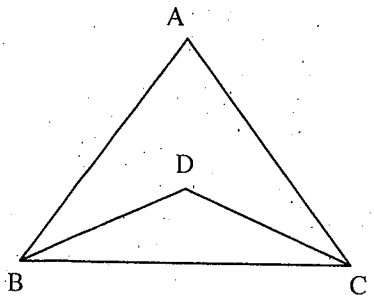
$\frac{2y}{3}=60$ or, $\frac{y}{3}=30$ or, $\frac{y}{30}=3$

24. (D) ∠B + ∠C = 180 - ∠A = 110

½ (∠B + ∠C) = 55

আবার, ∠D = 180 - ∠DBC - ∠DCB

= 180 – ½ (∠B + ∠C) = 125




25. (C) rate of Karim + rate of brother = $\frac{1}{15}+\frac{1}{30}=\frac{3}{30}=\frac{1}{10}$

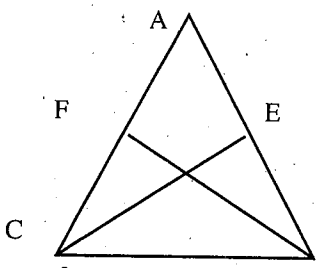
together they do, 1/10 of the work in 1 day

∴ together they can do the work in 1 x 10 = 10 days

26. (A) ΔABF এবং ΔACE এ

∠F = ∠E = $90^0$, ∠A = common ∴ triangle দুটি similar

∴ $\frac{AB}{AC}=\frac{BF}{CE}=1$ ∴ AB = Ac

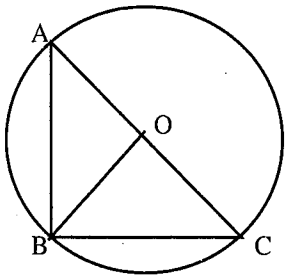



27. (D) $\frac{C_1Q_1+C_2Q_2}{Q_1+Q_2}=C$ or, $\frac{8\times24+4Q}{24+Q_2}=5$ or, $192+4Q^2=120+5Q^2$ or, $Q^2$ = 72

28. (E) A:B = 1:2 = 2:4 B:C = 4: 3

∴ A:B:C = 2: 4:3 ∴ A = 630 x 2/9 = 140

29. (B) OC = BC $\therefore$ AC = 2BC $\therefore \angle A = 30^0$ (recall 30: 60: 90 triangle)




30. (B) $\frac{d}{3}-\frac{3}{4}=\frac{d}{5}+\frac{1}{4}$ or, $\frac{d}{3}-\frac{d}{5}=+\frac{1}{4}+\frac{3}{4}$ or, $\frac{2d}{15}=1$

or, 2d = 15 or, d = 7.5

back calculation করে 3 km/hr দিয়ে 5 km/hr speed দিয়ে time দুটির পার্থক্য 1 hr হয় কিনা check করে solve করা যেতে পারে।

## Section 2: Analytical Ability

1. (A) যিনি বিরোধিতা করেছেন তিনি কোন যুক্তি না দেখিয়ে আবেগপর্ণ কথা বলেছেন।
2. (D) শুধুমাত্র Dentozine Toothpaste - এ albaster whiteness এবং dentozine flavor পাওয়া যায়। সুতরাং (I) ও (II) true হতে পারে না।
3. (D) এখানে authority এর প্রতি কোন আবেদন জানানো হয়নি।
4. (B) Navi এর statement করে support করে শুধুমাত্র এই sentence টি।
5. (D) যেহেতু সব effective administration ই employee দের welfare চায় এবং যেহেতু যারাই employee welfare চায় তারা সবাই ব্যক্তিগত প্রয়োজন time-off দেয়, সুতরাং সব effective admistration ই time-off দেয়।
6. (E) a > b, c< 0

   যদি a =2, b = 3, c = - 1 ধরি, তাহলে (a) ও (c) দুটিই true হয়। সুতরাং কোনটিই সব সময় true নয়।
7. (E) Elham ভাবছে যেহেতু Shamina Coca Cola এর executive সেহেতু সে Coca Cola ই পান করবে, RC cola নয়।
8. (A) Anjali বলল Dhaka College এর ছাত্ররাও University তে পড়ে। অর্থাৎ সে ধরে নিয়েছে শুধুমাত্র Notre Dame এর ছাত্ররা University তে পড়ে।
9. (C) এখানে হ্যা বা না দুটো উত্তরই অসম্পর্ণ হতে পারে। কারণ হ্যা বললে বোঝায় যে তারা এখনও কাজটা continue করছে। আর 'না' বললে বোঝায় আগে করত, এখন করছে না। এমনও হতে পারে আগেও করতনা। তখন এ প্রশ্নের উত্তর দেয়া সম্ভব নয়।
10. (B) বলাই আছে stochastic fuel injection সাধারণত passenger sedan এ থাকে না।

**11-13**

কে বেশি খেয়েছে সেটার একটা structure দাঁড় করানো যায়।

Q > U > I > P > W > R

কে আগে চলে গিয়েছে তাও বোঝায় যায়

$W \rightarrow V \rightarrow P \rightarrow I \rightarrow S \rightarrow U$

11. (A) উপরের structure ১ম টি দেখুন।

12. (E) উপরের structure ২য় টি দেখুন।

13. (E) S ate more than W; কিন্তু কে S এর থেকে বেশি খেয়েছে তা বের করা যায় না।

**14-16**

যেহেতু Mrs. P এর চুল brown সেহেতু Mrs. N এর চুল white বলা আছে wife with white hair অর্থাৎ Mrs. N Country music পছন্দ করেন Mr. N Classical music পছন্দ করেন White চুলের একজন Jazz পছন্দ করেন। তাহলে তিনি হচ্ছেন Mr. P; অর্থাৎ Mrs. P পছন্দ করে rock.

| Name | Color of hair | Type of music preferred |
|---|---|---|
| Mr. P | White | Jazz |
| Mrs. P | Brown | Rock |
| Mr. N | Brown | Classical |
| Mrs. N | White | Country |

14. (B) 15. (C) 16. (A)

**17-20**

17. (A) একমাত্র Citibank এর ১০টা order ই certain সুতরাং এটাই minimum number.

18. (C) 5+20+ 10+30 = 65 টি maximum number of boxes

19. (E) see the table

20. (B) 20 + 20 (Borak) = 40

## Section 3: Language and Communication

### Part A

1. (B) Would rather এর পর নতুন কোন subject না আসলে present real situation এ টুটো simple present verb এর মাঝে than বসে।
2. (A) Here, after past participle, *had* is used after *I've*. As *than* is a preposition, so gerund is used after *it* instead of infinitive.
3. (D) The short form of *their marriage* is *theirs* and the auxiliary used here is *has been* (singular).
4. (B) The meaning of *second to something* is obtaining second position after something. Here, c will not be the answer because verb can't be used after *only*.
5. (C) Both *considered* and *lethal* would precede the adverbs.
6. (B) To mean *exception*, ***without*** is used before noun phrase
7. (E) Only this clause has subject and appropriate verb.
8. (D) To understand *air movement over Bangladesh*, the preposition **over** is used.
9. (A) As the adverb phrase *has* come to the beginning of the sentence, the auxiliary **did** has been used before subject.
10. (D) *had to go* is used to mean the journey that took place in the past.
11. (C) Only after *in spite of*, an appropriate phrase has been used.
12. (C) Before as *old as*, almost is used.
13. (B) After *about to*, simple present verb is used.

14. (E) Here, *who* is used as a correct clause marker. As it is an embedded question, so auxiliary will follow the subject.
15. (D) *neither* will be used as **nor** has been used afterwards.
16. (A) The meaning of *instigate* is to provoke and *inhibit* is to forbid.
17. (D) The meaning of both *abate* and *decrease* is to make less.
18. (B) *Supportive* and *helpful* are synonymous.
19. (D) Both *exit* and *outlet* means outdoors and both are nouns.
20. (A) The meaning of *gratify* is to satisfy, its antonym is *to displease*

21. (E) 22. (C) 23. (A) 24. (D) 25. (B)

26. (E) 27. (E) 28. (B) 29. (A) 30. (D).

# BBA (IBA)

## Admission Test Question (2000-2001) with Solution

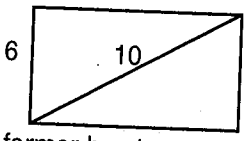
## Section I : Mathematics

30 Question (1 × 30 = 30 marks)

**Directions:** *Solve each of the following problems and mark the correct answer on your Answer Sheet.* **DO NOT USE CALCULATOR.** Figures are not drawn according to scale.

1. Which of the following is a solution to $x + x^2 - 1$ ?
   A. - 1 B. 0 C. ½ D. 1 E. None of these

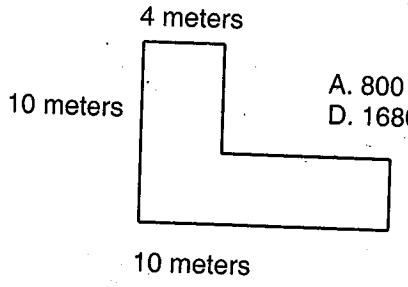
2. What is the perimeter of the rectangle shown below?




   A. 28 B. 24 C. 20
   D. 18 E. 16

3. A farmer has two rectangular fields. The larger field has twice the length and four times the width of the smaller field. If the smaller field has area K, then the area of the larger field is greater than the area of the smaller field by what amount?
   A. 2K B. 6K C. 7K D. 8K E. 12K

4. The following figure shows the floor dimensions of an L shaped room. All angles are righ angles. It carpeting costs Tk. 20 per square meter. What will be the cost in Tk. Of carpeting for the entire floor of the room.




   A. 800 B. 1280 C. 1600
   D. 1680 E. None of these

5. Which of the following could be the area of an isosceles triangle with perimeter 18 and one side of length 8?
   A. 6 B. 12 C. $6\sqrt{3}$ D. 16 E. 18

6. X lives 4 kilometers west of Y's house, Z lives 6 kilometers north of Y's house and 4 kilometers west of T's house. What is the straight line distance in kilometers from X's house to T's house?
   A. 4 B. 5 C. 8 D. 10 E. 12

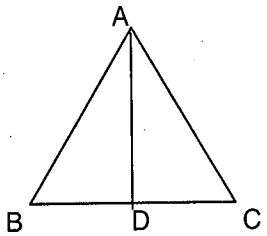
7. If 55 percent of the people who purchase a certain product is female, what is the ratio of the number of females who purchase the product to the number of males who purchase the product?
   A. 11/9 B. 10/9 C. 9/10 D. 9/11 E. 5/9

8. In a class of 120 students, 60 percent can speak French and the rest can speak only English. If 25 percent of those in the class who can speak French can also speak English, how many of the students in the class can speak English?
   A. 54 B. 60 C. 66 D. 84 E. 90

9. What is the greatest positive integer n such that $2^n$ is a factor of $12^{10}$?
   A. 10 B. 12 C. 16 D. 20 E. 60

10. If the length of every side of three square garden plots is increased by 50 percent, by what percent is the sum of the areas of the three plots increased?
    A. 675% B. 375% C. 225% D. 125% E. 50%

11. In the figure below AB = AC and D is the mid point of BC. Which of the following can be a possible value of ABD?




(i) 70° (ii) 90° (iii) 120°

A. Only (i) B. only (ii) C. only (iii)
D. both (ii) and (iii) E. all of these

12. Arif makes his first cup of coffee at 6:00 AM and then makes one cup of coffee every four hours after that. Asif makes his first cup of coffee at 8:00 AM. and then makes one cup every 3 hours after that. At what time will they both be making coffee?
A. 9:00 AM B. 11AM C. 12:00 noon D. 1:00 PM E. 2:00 PM

13. After X% of their games had been played. Abahani had won 40% of their games. They won 30% of the rest of the games. In terms of X which of the following expresses the percentage of games Abahani had won at the end of the season?

A. 70x B. $\frac{x}{10}+30$ C. $\frac{x}{10}+35$ D. 10x + 30 E. none of these

14. A machine costs m taka per day to maintain and n paisa for each unit it produces. If the machine is operated 7 days a week and produces r units in a week, which of the following is the total cost, in taka of operating the machine for a week?

A. 7m +10nr B. $\frac{700m+nr}{100}$ C. 7m + nr D. 7m + 7nr E. 700mnr

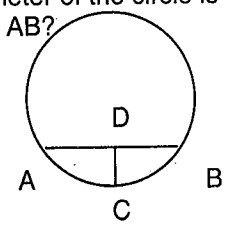
15. Of the animals in Dhaka Zoo, 1/3are Zebras, 1/6 are Giraffes, 1/5 are Tigers, and the rest is comprised of 36 Deer. How many Zebras are there in the Zoo?
A. 12 B. 20 C. 36 D. 40 E. 120

16. If $1/y = 3\frac{1}{2}$, then $\frac{1}{y+2}$?
A. 7/16 B. 2/7 C. 7/9 D. 7/8 E. 16/7

17. The sum of six consecutive odd number exceeds twice the largest by 38. Find the sum of the six numbers.
A. 43 B. 50 C. 64 D. 72 E. none of these

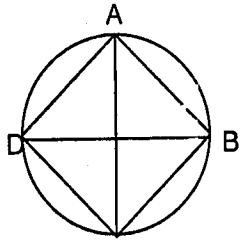
18. The average price of a new car increased by 20% from 1990 to 1995, and again increased by 20% from 1995 to 2000. If the average price of a new car was Tk. 450,000 in 1995, what is the difference in average price of a car between year 1990 and 2000?
A. Tk. 120,000 B. Tk. 145,000 C. Tk. 165,000 D. Tk. 175,000 E. none of these

19. The diameter of the circle is 10cm and DC = 2 cm. If <ADC = 90° and AD = DB, what is the length of AB?



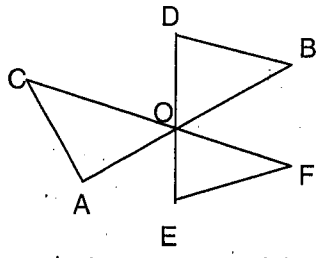

A. 6 B. 8 C. 9
D. 12 E. none of these

20. In the figure below <DAC = <CAB and BC = 5cm. What is the value of CD?




A. 3 B. 4 C. 5 D. $3\sqrt{3}$
E. cannot be determined

21. In the figure below OF = EF, OD = OB and OC = OA. If <ACO = 60° and <OEF = 30°, what is the value of <DBO?




A. 60° B. 55° C. 50°
D. 45° E. none of these

22. Nasreen lost a purse containing Tk. 120. Incidentally, she had only notes of Tk. 2 and Tk. 5 denominations in the purse. If the total number of notes was 30, how many Tk. 5 denomination notes did she have?
A. 15 B. 16 C. 18 D. 20 E. none of these

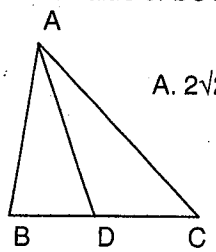
23. 16 ounces of fresh orange juice contains 216 calories and 16 ounces of fresh grapefruit juice contains 174 calories. If an 8 ounce mixture of these two juices contains 94 calories, what fraction of the mixture is orange juice?
A. 1/3 B. 12/27 C. ½ D. 2/3 E. 47/54

24. A father can do a job as fast as two sons working together. If one son does the job alone in 3 hours and the other son does it alone in 6 hours, how many hours does it take the father to do the job alone?
A. 1 B. 1.5 C. 2 D. 2.5 E. none of these

25. At a company, 70% of this year's new employees are graduates of business school and the remainders are graduates of liberal arts colleges. If 550 new employees were hired this year, what is the difference between the number of new business school employees and the number of new liberal arts employees?
A. 55 B. 220 C. 240 D. 385 E. none of these

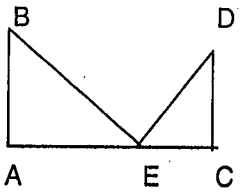
26. If a > b and a > c, which of the following must be greater than 0?
A. $\frac{b-c}{b+c}$ B. $\frac{c-b}{a+b}$ C. $\frac{b-c}{b-c}$ D. $\frac{b-a}{c-a}$ E. none of these

27. In the figure below. AB is perpendicular to BC and DB = DC. If AD = √10 and AC = 4 cm. what is the value of BC?




A. 2√2 B. 3 C. 3√2 D. 4 E. none of these

28. In the figure below AB and CD are perpendiculars on AC. If BED is 100 and EC = CD. What is the value of ABE?




A. 45° B. 50° C. 55°
D. 60° E. none of these

29. If x > 1 which of the following decreases as x decreases?

(i) $x + x^2$ (ii) $2x - x$ (iii) $\frac{1}{x-1}$

A. only (i) B. both (i) and (ii) C. only (ii)
D. only (iii) E. none of these

30. A trader purchases some pen at the rate of Tk. 10 per dozen. If he sells all the pen at a rate of Tk. 120 per hundred pen. What will be his profit in percent ?
A. 33.33 B. 44 C. 45 D. 48 E. none of these

## Section II: Analytical Ability (1 × 20 = 20 marks)

**Directions:** *Solve each of the following problems and mark the correct answer on your Answer Sheet.*

1. How many cups of sand will be required to fill a bucket?
   i. If one cup of sand were added to the bucket that is filled to three fourths of its capacity. It would be filled to seven-eighths of its capacity.
   ii. If two cups were removed from the bucket that is filled to three fourths of its capacity, it would be filled to one half of its capacity.
   A. Statement (i) alone is sufficient, but statement (ii) alone is not sufficient to answer the question:
   B. Statement (ii) alone is sufficient, but statement (i) alone is not sufficient to answer the question:
   C. Both statements together are sufficient to answer the question, but neither alone is sufficient:
   D. Each statement alone is sufficient to answer the question:
   E. Statements (i) and (ii) together are not sufficient to answer the question.

2. Rahim's grade point average puts him in the top third of the graduating class of the BBA program of IBA. Habib is in the top tenth of the same class. Farzana has the same grade point average as Habib. Perveen has a lower grade point average than Farzana.
If the above information above is true, which of the following must also be true?
   A. Rahim has a higher grade point average than Farzana.
   B. Rahim has a higher grade point average than Perveen.
   C. Habib has a higher grade point average than Perveen.
   D. Farzana and Perveen both have a higher grade point average than Rahim.
   E. Habib and Rahim both have higher grade point average than Perveen.

3. In the past year there has been a large drop in the number of new cars sold due to harsh economic conditions in the market place and high taxes. At the same time the average price paid for a new car has risen dramatically.
Which of the following if true, best explains the increase in the average price of a new car?
   A. The price of used cars has climbed steadily over the past ten years.
   B. There will be a tax reduction later in the year, which is expected to aid upper middle and middle income families.
   C. The market for expensive cars has been unaffected by the current economic conditions.
   D. Economic conditions are expected to get significantly worse before the end of the year.
   E. Low demand for trucks and vans has led to lower purchase by the car sellers.

4. A light bulb company produces 2,000 light bulbs per week. He claims that out of 2,000 light bulbs produced per week, 500 light bulbs are rejected. The manager plans to ensure that standards of quality remain constant from week to week.
Of the following the best criticism of the manager's plan is that the plan assumes that.
   A. light bulb manufacturers cannot accept all light bulbs that are produced.
   B. The overall quality of the light bulbs would not be improved if the total number of light bulbs produced were reduced.
   C. Each light bulb that is reviewed is worthy of being reviewed.
   D. The 1,500 light bulbs that are accepted will be of the same quality from week to week.
   E. It is difficult to judge the quality of a light bulb.

5. How many of the boys in a group of 100 children have brown eyes ?
   i. Of the children in the group 60 percent have brown eyes.
   ii. Of the children in the group 40 are boys.

   A. Statement (i) alone is sufficient, but statement (ii) alone is not sufficient to answer the question;
   B. Statement (ii) alone is sufficient, but statement (i) alone is not sufficient to answer the question;
   C. Both statements together are sufficient to answer the question, but neither alone is sufficient;
   D. Each statement alone is sufficient to answer the question;
   E. Statements (i) and (ii) together are not sufficient to answer the question;

6. The eggs in a bowl are dyed red, green, or blue. If one egg is to be removed at random, what is the probability that the egg will be green?
   i. There are 5 red eggs in the bowl.
   ii. The probability that the egg will be blue is 1/3
   A. Statement (i) alone is sufficient, but statement (ii) alone is not sufficient to answer the question;
   B. Statement (ii) alone is sufficient, but statement (i) alone is not sufficient to answer the question;
   C. Both statements together are sufficient to answer the question, but neither alone is sufficient;
   D. Each statement alone is sufficient to answer the question;
   E. Statements (i) and (ii) together are not sufficient to answer the question;

7. The average normal infant born in Bangladesh weighs between 4 to 6 kilograms at the age of three months. Therefore, if a three-month-old child weighs only 2 kilograms, its weight gain has been below the Bangladesh average.
   Which of the following indicates a flaw in the reasoning above?
   A. Weight is the only one measure of normal infant development.
   B. Some three-month-old children weigh as much as 8 kilograms.
   C. It is possible for a normal child to weigh 2 kilograms at birth.
   D. Average weight gain is not the same as average weight.
   E. The phrase "below average" does not necessarily mean insufficient.

8. From 1994 to 1997, the value of Indian goods consumed annually in Bangladesh increased by what percent?
   i. In 1994 the value of Indian goods consumed constituted 19.8 percent of the total value. The total value of goods consumed in Bangladesh that year was 2.5 billion dollars.
   ii. In 1997 the value of goods consumed was 23.2 billion dollars. Bangladeshi goods constituted 22.7 percent and foreign goods other than that of Indian origin constituted 55.3 percent of the total value of goods consumed in Bangladesh that year.
   A. Statement (i) alone is sufficient, but statement (ii) alone is not sufficient to answer the question;
   B. Statement (ii) alone is sufficient, but statement (i) alone is not sufficient to answer the question;
   C. Both statements together are sufficient to answer the question, but neither alone is sufficient;
   D. Each statement alone is sufficient to answer the question;
   E. Statements (i) and (ii) together are not sufficient to answer the question;

9. What will be the next number in the series : 14, 25, 46, _____?
   A. 64 B. 77 C. 84 D. 86 E. none of these

10. The cost of producing radios in Country Q is 10 percent less than the cost of producing radios in Country Y. Even after transportation costs and customs duty are added. It is still cheaper for a company to import radios from Country Q to Country Y than to produce radios in Country Y.
The statements above, if true, best support which one of the following assertions ?
A. labor costs in Country Q are ten percent below those in Country Y.
B. Importing radios from Country Q to Country Y will claimant ten percent of the manufacturing jobs in Country Y.
C. The customs duty on a radio imported from Country Q to Country Y is less than ten percent of the cost of manufacturing the radio in Country Q.
D. The cost of transporting a radio from Country Q to Country Y is more than ten percent of the cost of manufacturing the radio in Country Q.
E. It takes ten percent less time to manufacture a radio in Country Q than it does in Country Y.

11. Two cars, S and T, each traveled a distance of 50 kilometers. Did car S use more fuel than car T?
i. Cars S and T traveled the entire distance at the rates of 55 kilometers per hour and 50 kilometers per hour respectively.
ii. For the entire distance, car S traveled 20 kilometers per liter of fuel and car T traveled 25 kilometers per liter of fuel.
A. Statement (i) alone is sufficient, but statement (ii) alone is not sufficient to answer the question;
B. Statement (ii) alone is sufficient, but statement (i) alone is not sufficient to answer the question;
C. Both statements together are sufficient to answer the question, but neither alone is sufficient;
D. Each statement alone is sufficient to answer the question;
E. Statements (i) and (ii) together are not sufficient to answer the question;

**Instruction:** Answer question 12 – 13 based on the table below.

**Coca Cola and Virgin Cola Market Survey**

| Cola Drinks | Coca Cola | | Virgin Cola | |
|---|---|---|---|---|
| Year | 1998 | 1999 | 1998 | 1999 |
| Dhaka | 2700 | 2900 | 800 | 2400 |
| Chittagong | 1260 | 2400 | 250 | 850 |

12. For the year 2000 the market size of Virgin is expected to be
A. greater in Chittagong provided greater emphasis is given on advertising.
B. Greater compared to Coca Cola in Dhaka if everything remains constant.
C. Less in Dhaka compared to that in Chittagong.
D. Low since Coca Cola plans to increase production.
E. Cannot be estimate.

13. For Coca Cola the market share for Dhaka in the year 1999
A. is almost 60% of the total Cola Market.
B. is more than 80% compared to the virgin cola market.
C. is more than 30% of the Coca Cola market of Chittagong.
D. has increased.
E. Cannot be calculated.

14. Samina puts X number of apples in a basket. She puts another X number of apples the next day, and an additional one dozen apples the third day. After a week she finds that half of the total apples in the basket are spoiled and another X number have been eaten by her brother. How many good apples are left in the basket?
A. 6 B. 8 C. 10 D. 12 E. 14

15. A company's two divisions performed with remarkable consistency over the past three years; in each of those three years, the pharmaceutical division has accounted for roughly 20 percent of Taka sales and 40 percent of profits, and the chemical division for the rest. Which of the following sentence must be TRUE ?
   A. Total Taka sales for each of the company's division have remained roughly constant.
   B. The pharmaceutical division has faced stiffer competition in its markets than has the chemical division.
   C. The chemical division has realized lower profits per Taka of sales than the pharmaceutical division.
   D. The product mix offered by each of the company's division has remained unchanged.
   E. Highly profitable products accounted for a higher percentage of the chemical division's sales than of those of the pharmaceuticals division.

***Instruction: Read the following passage and answer question no 16 to 20;***

On your way to the university this morning you witnessed an accident that killed a woman. You were going on a rickshaw alone. At the approach of the university's eastern gate, your rickshaw-puller took a sudden right turn from the left lane. He wanted to avoid two fast-moving vehicles that were coming from the opposite direction. The road had two-way lanes. The cars on the other lane somehow skidded to stop. The scooter that was overtaking your rickshaw from the right skidded as well but the passengers on board were thrown over. The passenger thrown over on the left was run over by a heavy vehicle that was at the back of your rickshaw. She died on the spot. The other passengers were bruised. Everyone around rushed towards the spot. But you had to come away as you would be late for the exam otherwise. You left the rickshaw and came walking; shaky and with a bruised heart.

16. Which of the passengers was a woman ?
   A. one on the rickshaw  B. one on the scooter  C. the one run over
   D. one thrown over from the scooter  E. none of these
17. Which of the vehicles could be a truck ?
   A. one on the left lane  B. one behind the scooter  C. one on the right lane
   D. the one that killed  E. none of these
18. The scooter was going towards
   A. North  B. South  C. East  D. West  E. South-East
19. The passengers thrown over on the right were
   A. killed  B. hurt  C. female  D. safe  E. none of these
20. The accident in the morning has made you
   A. late  B. injured  C. feel bad  D. nervous  E. unconscious

## End of Section – II

## Section III: Language and Communication

This section consists of two parts: Part A contains MCQs that must be answered on the Answer Sheet. Part B must be answered in this test booklet within the space provided.

### Part A : Multiple choice questions (1 × 25 = 25 marks)

***Instruction:*** *For question 1 – 5 choose the word from the alternatives, where the prefix or suffix (that are given in all capital) has not been properly used; mark your* ***Answer Sheet*** *accordingly.*

1. DIS
   A. dispossess  B. disaffected  C. disorder  D. disarray  E. none of these
2. UN
   A. unassuming  B. unbelievable  C. unabated  D. undaunted  E. uncourteous
3. IM
   A. imfathomable  B. immaterial  C. immemorial  D. impalpable  E. impracticable
4. EN
   A. golden  B. wooden  C. blurreden  D. woolen  E. none of these

5. UN
   A. unsay B. untrue C. unkind D. unholy E. none of these

***Instruction:*** *For questions 6 – 10 chose the most appropriate word to fill in the blank in each case and mark your* ***Answer Sheet*** *accordingly.*

6. The --------- of freshly baked bread filled the room.
   A. scent B. flavor C. fragrant D. odor E. aromatic
7. We all admired the dignity and ---------- with which Emma handled her fall from power.
   A. pride B. aptitude C. caring D. arrogance E. privilege
8. She had little ------------ for decorating a room.
   A. flair B. etiquette C. vanity D. affiliation E. none of these
9. He felt no ------------- about borrowing money from friends.
   A. pain B. grief C. qualms D. quiver E. persistence
10. It is a ------------ to call this place a first-class hotel.
    A. faulty B. error C. misnomer D. wrong E. none of these

***Instruction:*** *For questions 11 – 13, find the closest same meaning of the word (in all capitals) from the list given below and mark your Answer Sheet accordingly:*

11. INGREDIENT
    A. component B. ingenious C. congenial D. perfect E. none of these
12. CONVICTION
    A. convenience B. cooperate C. belief D. caused E. none of these
13. GRACIOUS
    A. gorgeous B. haughty C. grand D. courteous E. none of these

***Instruction:*** *For questions 14 – 16 find the closest opposite meaning of the word (in all capitals) from the list given below each and mark your Answer Sheet accordingly;*

14. MONOPOLY
    A. moderate B. competition C. noisy D. control E. none of these
15. REDEEM
    A. reduce B. forfeit C. revenge D. injure E. none of these
16. YIELD
    A. zenith B. impede C. produce D. youthful E. none of these

***Instruction:*** *In questions 17 to 22; some part of the sentence is underlined. Find the correct answer from the alternatives given and mark you Answer Sheet accordingly; Choice A is the same as the original sentence; select it if you think the original is preferable to the alternative choices.*

17. Despite the election of a woman to the office of Prime Minister, the status of women in Bangladesh is little changed from how it was in the last century.
    A. is little changed from how it was B. is a little changed from how it was
    C. has changed little D. is little changed from the way it was
    F. has changed little from how it has been
18. Recently there has been increased debate over if a budget surplus should go toward lower taxes or increased spending on social programs.
    A. over if a budget surplus should go toward lower taxes or increased spending
    B. about a budget surplus going toward lower taxes or increasing spending
    C. about if lower taxes should come from a budget surplus or spending increases
    D. concerning a budget surplus and its going toward lower taxes or increased spending
    E. over whether a budget surplus should go toward lowering taxes or increasing spending
19. Two week notice being given to employers before leaving a job is the generally accepted protocol.
    A. Two week notice being given to employers before leaving
    B. Giving notice to employers of two weeks before having to leave
    C. Two weeks notice to give to employers before leaving
    D. Giving notice to employers two weeks before leaving
    E. To give two weeks worth of notice before having to leave

20. Of all the possible disasters that threaten Bangladesh agriculture, the possibility of an adverse change in climate is may be the more difficult for analysis.
A. is maybe the more difficult for analysis B. is probably the most difficult to analyze
C. is maybe the most difficult for analysis D. is probably the more difficult to analyze
E. is it may be, the analysis that is most difficult

21. Delighted by the reported earnings for the first quarter of the fiscal year, it was decided by the company manager to give her staff a raise.
A. it was decided by the company manager to give her staff a raise
B. the decision of the company manager was to give her staff a raise
C. the staff was given a raise by the company manager
D. a raise was given to the staff by the company manager
E. the company manager decided to give her staff a raise

22. Whatever he aspired to achieve, they were thwarted by his jealous older brothers, who controlled the stock in the family companies.
A. Whatever he aspired to achieve they B. Whatever he had any aspirations to they
C. Whatever aspirations he had D. Whatever be his aspirations they
F. Many of his aspirations and goals

23. Today he is in high spirits. This sentence means.
A. he is giving a high jump B. he is going to a high mountain
C. he is out of spirits D. he is cheerful E. none of these

24. There are black sheep in every community " Black Sheep" means –
A. sheep with black colors B. ship with black sails
C. bad characters D. black sheep and goats E. none of these

25. He was at his wit's end. This sentence means that he is ---
A. at the end of his journey B. at the end of his wits
C. quite pleased D. quite puzzled E. none of these

## Part B: Written section (25 marks)

**Sentence making**

There are four words in each of the following six sets. Construct one sentence with each of the set of words. Each sentence must contain all four words. Answer in the space provided below. (1 × 6 = 6 marks)

1. BBA, IBA, SEMESTER, YEAR :
2. BUSINESS, E-MAIL, FAST, ESSENTIAL:
3. FLOWER, SPRING, GARDEN, BEAUTIFUL :
4. DHAKA, BABY-TAXI, TRAFFIC, POLLUTION :
5. EFFECTS, CABLE-TV, HARMFUL, CHILDREN:
6. STUDENT, CRIME, POLITICS, EDUCATION :

**Reading comprehension** (3 × 3 = 9 marks)

Instruction: Read the following passage and answer the questions that follow in the space provided. Each answer must not be less than three (3) sentences.

The word orange evolved from Sanskrit. The Chinese word for orange, in ancient as well as modern Chinese, is jyu, but it did not migrate with the fruit. India was the first major stop in the westward travels of citrus, and the first mention of oranges in Sanskrit literature is found in a medical book called the Charaka-Samhita, which was compiled approximately two thousand years ago, the Hindus called an orange a naranga, the first syllable of which, according to Tolkowsky, was a prefix meaning fragrance. This became the Persian naranj, a word the Muslims carried through the Mediterrancan. In Byzantium, an orange was a nerani. This in Neo-Latin, became variouly styled as arangium, arantium, and aurantium eventually producing naranja in Spain, laranja in Portugal, arancia in Italy, and orange in France.

1. The passage is from a book devoted entirely to the subject of oranges. Does this history of the word orange contribute to your general understanding of and appreciation for the fruit itself? How?

2. Would the definition be helpful to someone who had never seen an orange? Why?
3. How would you describe an orange to one who has never seen one?

**Writing ability** **(10 marks)**

You have studied for at least twelve years in educational institutes. You have been taught by many teachers. Some of them may have left a lasting impression in your mind because they were so good. What, in your opinion, makes a good teacher different from others and why do you think so? Write in about 100 – 120 words in the space provided in the next page.

## Answer Key

**Section I: Mathematics**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. E | 2. A | 3. C | 4. B | 5. B | 6. D | 7. A | 8. E | 9. D | 10. D |
| 11. A | 12. E | 13. B | 14. B | 15. D | 16. A | 17. D | 18. C | 19. B | 20. C |
| 21. D | 22. D | 23. A | 24. C | 25. B | 26. D | 27. A | 28. C | 29. B | 30. B |

**Section II: Analytical ability**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. D | 2. C | 3. C | 4. D | 5. E | 6. E | 7. D | 8. C | 9. B | 10. C |
| 11. B | 12. B | 13. E | 14. A | 15. C | 16. C | 17. B | 18. B | 19. E | 20. C |

**Section III: Language and Communication**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. B | 2. E | 3. E | 4. C | 5. A | 6. A | 7. A | 8. A | 9. C | 10. C |
| 11. A | 12. C | 13. D | 14. B | 15. B | 16. B | 17. E | 18. E | 19. D | 20. B |
| 21. E | 22. C | 23. D | 24. C | 25. D | | | | | |

# BBA (IBA) Admission Test (2000-01) Solution

## Section – I: Mathematics

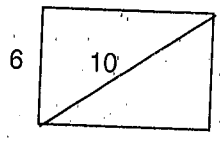
1. (E) $x + x2 - 1 = x2 + x - 1$; $a = 1, b = 1, c = -1$;

$$x = \frac{-1 \pm \sqrt{1 - 4.1.(-1)}}{2.1} = \frac{-1 \pm \sqrt{5}}{2}$$

Answer: None of these.

8

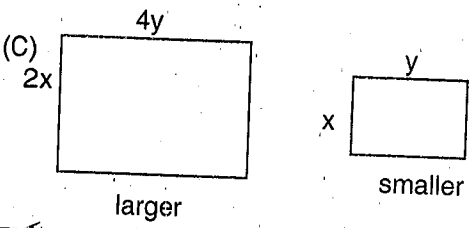
2. (A)




5 : 4 : 3 অনুপাতে rectangle এর অপর বাহুটির দৈর্ঘ্য = 8

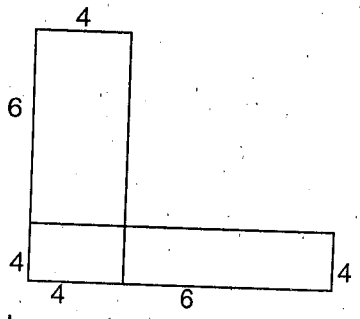
∴ Perimeter = 2(6 + 8) = 2 × 14 = 28 Answer: A

3. (C)




অর্থাৎ, xy = k = smaller field এর ক্ষেত্রফল larger field এর area = 2x × 4y = 8xy = 8k, area of larger field – area of smaller field = 8k – k = 7k Answer: C

4. (B)




Total area = (10×4) + (4 ×6) = 40 + 24 = 64

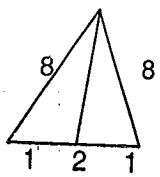
Total cost = 64 × 20 = 1280 Taka Answer: B

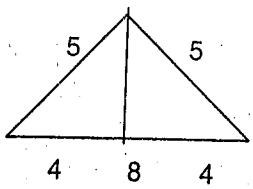
5. (B) Perimeter of the isosceles triangle = 18

One side of length = 8

এখন, তিনটি বাহু হতে পারে 8, 8, 2

অথবা 8, 5, 5

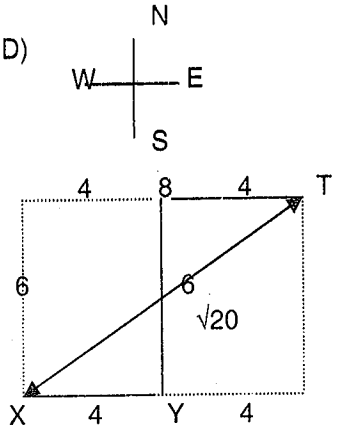



১ম ক্ষেত্রে, ক্ষেত্রফল = $\frac{1}{2} \times 2 \times \sqrt{63} = \sqrt{63}$ (Answer choice এ নেই)

২য় ক্ষেত্রে, ক্ষেত্রফল = $\frac{1}{2} \times 8 \times 3 = 12$ Answer: B

6. (D)




আয়তক্ষেত্রটির দৈর্ঘ্য ও প্রস্থ হয় যথাক্রমে 6 ও 8
6 অর্থ্যাৎ, কর্ণ হবে 10 (3: 4: 5)

Answer: D

7. (A) ধরি, মোট লোক = 100 জন
∴ মহিল = 55 জন অতএব, পুরুষ = (100 – 55) = 45 জন

Ratio of female to male = 55 : 45 = 19 : 9 = $\frac{11}{9}$ Answer: A

8. (E) Total students = 120

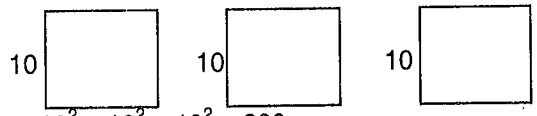
French – speaking = $120 \times \frac{60}{100} = 7$ Rest = 120 – 72 = 48 people can speak only English

আবার, $72 \times \frac{25}{100} \times 18$ জন আছে যারা French ও English দুটোই বলতে পারে।

মোট English – speaking = 48 + 18 = 66 Answer: C

9. (D) $12^{10} = 3^{10} \times 4^{10} = 3^{10} \times (2^2)^{10} = 3^{10} \times 2^{20}$ Answer: D

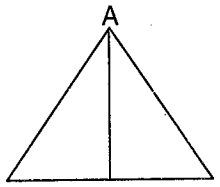
10. (D)




Total area = $10^2 + 10^2 + 10^2 = 300$
After 50% increase, area = $15^2 + 15^2 + 15^2 = 225 + 225 + 225 = 675$
300 এ increase করে = 375

∴100 এ increase করে = $\frac{375 \times 100}{300} = 125$ Answer: D

11. (A)




সমদ্বিবাহু ত্রিভুজের ভূমির সমদ্বিখন্ডক অবশ্যই ভূমির উপর লম্ব।
অর্থাৎ, <ADB = 90°
∴<ABD ≠ 90° and <ABD ≠ 120°
Answer: A

12. (E) 6 + 4 = 10 + 4 = 14; 8 + 3 = 11 + 3 = 14
অর্থাৎ, দুপুর দুটোর সময় তারা একসাথে কফি বানাবে। Answer: E

13. (B) Total games = 100; Played games = x ∴ won games = $x \times \frac{40}{100} = \frac{2x}{5}$

unplayed games = 100 – x ∴won games = $(100 - x) \times \frac{30}{100} = \frac{3(100 - x)}{10}$

Total won game = $\frac{2x}{5} + \frac{3(100 - x)}{10} = \frac{4x + 300 - 3x}{10} = \frac{300 + x}{10} = 30 + \frac{x}{10}$ Answer: B

14. (B) Total maintenance cost = 7m Taka

Total production cost = rn Paisa $= \frac{rn}{100}$ Taka

Total cost = $7m + \frac{rn}{100}$ Taka $= \frac{700m + rn}{100}$ Answer: B

15. (D) Total no of animals = x

Zebra = $\frac{x}{3}$, Giraffes = $\frac{x}{6}$, Tigers = $\frac{x}{5}$, Deer = 36 $\quad \therefore \frac{x}{3} + \frac{x}{6} + \frac{s}{5} + 36 = x$

$36 = x - \frac{x}{3} - \frac{x}{6} - \frac{s}{5} \quad 36 = x - \left(\frac{10x + 5x + 6x}{30}\right) \quad 36 = \frac{9x}{30}$

$x = \frac{36 \times 30}{9} = 120 \quad \therefore$ no of Zebras $= \frac{120}{3} = 40$ Answer: D

16. (A) $\frac{1}{y} = 3\frac{1}{2} = \frac{7}{2} \quad \therefore y = \frac{2}{7}$

Therefore, $\frac{1}{y+2} = \frac{1}{\frac{2}{7}+2} = \frac{1}{\frac{16}{7}} = \frac{7}{16}$ Answer: A

17. (D) x + (x + 2) + (x + 4) + (x + 6) + (x + 8) + (x + 10) = 2(x + 10) + 38
6x + 30 = 2x + 20 + 38 $\quad$ 4x = 28 $\quad$ x = 7
∴ Sum = (6 × 7) + 30 $\quad$ = 72 $\quad$ Answer: D

18. (C) 100 + 20% increase = 120

120 + 20% increase = $120 + \left(120 \times \frac{20}{100}\right) = 144$

Price is 1995 = Tk. 450,000
1995 -এ 120 হলে 1990 এ = 100

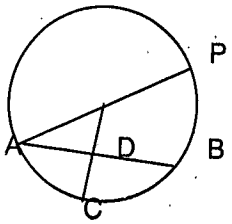
1995 এ 450,000 হলে 1990 এ = $\frac{100 \times 450000}{120} = 375{,}000$

আবার
1995 এ 120 হলে 2000 -এ = 144

1995 -এ 450,000 হলে 2000 এ $\frac{144 \times 450{,}000}{120} = 540{,}000$

Difference = 540,000 – 375,000 = 165,000
Answer: C

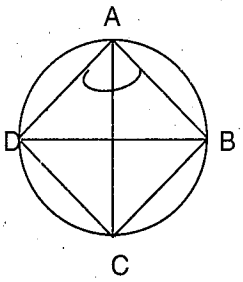
19. (B)




DC = 2 c.m.
<ADC = 90°
AD = DB

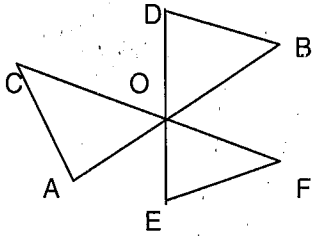
AP = 10 c.m. (Diameter)
DQ = QC – DC = 5(radius) – 2 c.m. = 3 c.m
∴ AD = 4 c.m (Δ AQD এ 3 : 4 : 5)
এবং BD = 4 c.m. [∴ AD = DB]
∴ AB = 4 + 4 = 8 c.m Answer: B

20. (C)




BC = 5 cm হলে CD = 5 cm.

21. (D)




যেহেতু OF = EF; <OEF = EOF = 30°
<EOF = <DOC = 30° [বিপ্রতীপ]
যেহেতু OC = OA; <DAC = <OCA = 60°
∴ <AOC = 60° [ত্রিভুজের ৩ কোণের সমষ্টি 180°]
∴<DOB = 90°

অতএব, <DBO = 45° (যেহেতু <DBO = <BDO) Answer: D

22. (D) Total amount of Taka = 120
Total no. of notes = 30
Suppose, no. of 5 Tk. Notes = x
∴ no. of 2 Tk. Notes = 30 – x
Therefore,

$5x + 2(30 - x) = 120$ $5x + 60 - 2x = 120$ $3x = 60$ $\therefore x = 20$

Answer: D

23. (A) Total mixture = 8 ounces
Suppose, Orange juice = x ounce Grapefruit juice = (8 – x) ounce
16 ounce of orange juice এ থাকে 216 cal.

X ounce of orange juice এ থাকে $\frac{216x}{16}$ cal.

আবার, 16 ounce of grapefruit juice এ থাকে 174 cal.

(8-x) ounce of grapefruit juice এ থাকে $\frac{174(8-x)}{16}$ cal.

অতএব, $\frac{216x}{16} + \frac{174(8-x)}{16} = 94$ or, $\frac{216x + 1392 - 174x}{16} = 94$

or, $42x = 1504 - 1392$ $x = \frac{112}{42} = \frac{56}{21}$

∴ Orange □□ fraction = $\frac{\frac{56}{21}}{8} = \frac{56}{21} \times \frac{1}{8} = \frac{1}{3}$ Answer: A

**N.B:** you can solve this problem by back solving, too.

24. (C) একজন ছেলে 3 hours এ করে সম্পূর্ণ কাজ ∴ সে 1 hour এ করে $\frac{1}{3}$ অংশ

অপর ছেলে 6 hours এ করে সম্পূর্ণ কাজ ∴ সে 1 hour এ করে $\frac{1}{6}$ অংশ

∴ দুজন একসাথে 1 hour এ করে $\left(\frac{1}{3} + \frac{1}{6}\right)$ অংশ = $\frac{3}{6} = \frac{1}{2}$ অংশ

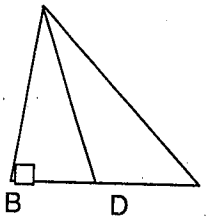
অর্থাৎ, বাবা $\frac{1}{2}$ অংশ করে 1 hour এ

∴ বাবা 1 অংশ করে 2 hour এ Answer: C

25. (B) $550 \times \frac{70}{100}$ = 385 জন business school employees (550 – 385)
= 165 জন liberal arts employees
∴ Difference = 385 – 165 = 220 Answer: B

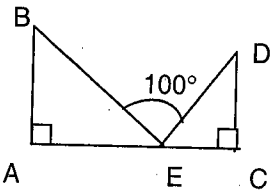
26. (D) b - a < 0 as a > b
c- a < 0 as a > c

27. (A)




$BD^2 + AB^2 = AD^2$
$BD^2 + AB^2 = 10$
আবার, $BC^2 + AB^2 = AC^2$
$BC^2 + AB^2 = 16$
$(BD + DC)^2 + AB^2 = 16$
C $BD^2 + DC^2 + 2BD.\ DC + AB^2 = 16$
$DC^2 + 2BD.\ DC = 6$ ($\therefore BD^2 + AB^2 = 10$)
$3DC^2 = 6$ ($\therefore BD = DC$)
$DC^2 = 2$
$DC = \sqrt{2}$
অতএব, $BC = 2\sqrt{2}$

28. (C)




দেওয়া আছে, EC = CD
∴ <CED = < EDC = 45°
∴ <AEB = 180° - (100° + 45°) = 35°
অর্থাৎ, <ABE = 180° - (90°+35°) = 55°
Answer: C

29. (B) ধরি, x = 2, decrease এর পরে x = 1
i) $x + x^2 = 2 + 4 = 6$, decrease এর পরে x + x2 = 1 + 1 = 2
ii) $2x^2 - x = 8 - 2 = 6$, decrease এর পরে $2x^2 - x = 2 - 1 = 1$
iii) $\frac{1}{x^2+1} = \frac{1}{4+1} = \frac{1}{5}$, decrease এর পরে $\frac{1}{x^2+1} = \frac{1}{2} = \frac{1}{2}$
∴ (i) ও (ii) decrease করে (iii) increase করে। Answer: B

30. (B) Buying price = Tk. 10/dozen = Tk. .83 per pen
Selling price = Tk. 120/hundred pen = Tk. 1.2 per pen
Profit = Tk. 1.2 – Tk. .83 = Tk. .37
.83_____ .37
100 ____ $\frac{.37 \times 100}{.83}$ = appu. 44 Answer: B

**Section – II**

1. (D) Statement (i) থেকে বলা যাবে how many cups will be required. কারণ এই statement থেকে determine করা যাচ্ছে যে, one up contains $\left(\frac{7}{8}-\frac{3}{4}\right)$ of the bucket's capacity.

   Statement (ii) থেকেও বলা যাবে how many cups will be needed. এখানে বলা হচ্ছে two cups contain $\left(\frac{3}{4}-\frac{1}{2}\right)$ of the bucket's capacity.

2. (C) Habib belongs to the first tenth. কিন্তু তাতে বোঝা যায়না যে সে Rahim এর চাইতে বেশি বা কম G.P.A. holder কি-না। Habib এবং Farzana 'র G.P.A. সমান। তাই Habib's G.P.A. is higher than Parveen's G.P.A.

3. (C) Low price car এর sales কমে গিয়েছে কিন্তু High price car এর sales কমেনি। That's why total number of cars sold কমেছে কিন্তু Average price paid per car বেড়ে গিয়েছে।

4. (D) Manager তার company 'র bulb এর quality বিচার করতে শুধু acceptance এবং rejection কেই হিসাব করেছেন। accepted bulb গুলোর মধ্যে quality 'র তারতম্য থাকতে পারে।

5. (E) (i) থেকে শুধু Brown-eyed children এর সংখ্যা জানা যাবে। (ii) থেকে শুধু boy এর সংখ্যা জানা যাচ্ছে। কিন্তু how many boys are brown – eyed সেটি জানা যাচ্ছেনা।

6. (E) Green egg এর সংখ্যা বা total number ok eggs এর অন্ততঃ একটি জানা না গেলে problem টি solve করা সম্ভব নয়।

7. (D) weight gain অর্থ হচ্ছে নির্দিষ্ট মেয়াদকালে বৃদ্ধি পাওয়া ওজন, weight হচ্ছে নির্দিষ্ট সময়ে ওজন। তাই এদুটো compare করা যাবেনা।

8. (C) (i) থেকে determine করা যাবে 1994 এ consumed Indian goods এর value. (ii) থেকে determine করা যাবে 1997 এ consumed Indian goods এর value.

9. (B) 14 থেকে 25 এ increase করেছে 11,
   25 থেকে 46 এ increase করেছে 21,
   ∴ 46 থেকেও increase করবে 31.

10. (C) Country Q তে produce করতে 10% খরচ কম হয়। এই 10% খরচের চেয়ে যদি import duties কম না হয় তাহলে Q থেকে Y তে radio import করা লাভজনক হতনা।

11. (B) (i) এ kilometer/hr. দেয়া আছে কিন্তু এটি থেকে fuel consumption হিসাব করা সম্ভব না। (ii) তে fuel consumption rate বলা হয়েছে। তাই এটি থেকে বলা যাবে যে S বেশি fuel use করেছে।

12. (B) Dhaka তে '98 – '99 এর coke এর growth মাত্র 7.4%. অর্থাৎ 2000 এ এটি সম্ভবতঃ 3115. হবে Virgin এর growth 200%. অর্থাৎ 2000 এ এটি হবে 7200.

13. (E) বাকি answer choice গুলোর একটিও সঠিক নয়। Coke এর Virgin এর Total sales বের করলে (d), (b), (c), (d) এর সত্যতা পাওয়া যায়না।

14. (A) Total apples ছিল 2x + 12. Half নষ্ট হবার পর থাকল x + 6. X Sumina র ভাই খেয়ে ফেললে বাকি থাকে 6.

15. (C) Pharmaceutical মোট sales এর মাত্র 20% করেও মোট profit এর 4% পেয়েছে। তারমানে তাদের profit / dollar on sales, chemical division এর চাইতে বেশি।

16. (C) Line 6 এবং 7 বলা হয়েছে one passenger was thrown over ----- She died on the spot.
17. (B) Line 6 এবং 7 এ বলা হয়েছে heavy vehicle that was at the bach on your rickshaw. Scooter টি rickshaw কে over take করছিল। অর্থাৎ truck টিও scooter এর পেছন থেকে এসেছে।
18. (B) Rickshaw টি East gate এর দিকে যেতে যেতে Right turn নিল। অর্থাৎ এর direction ছিল toward South. এবং Scooter টি Rickshaw কে overtake করছিল।
19. Line 7 এ বলা হয়েছে The other passengers were bruised .
20. (C) "Came walking, shaking and with a bruised heart." Line 9 এ এভাবেই বলা হয়েছে। The person there was not nervous, but ve*** definitely belt bud একটি diagram problems 16 – 20 কে easier to understand করবে।

## Section – III

1. The correct word is unaffected.
2. The opposite of courteous is uncouth, impolite or rude not "uncourteous".
3. The word should have been impractical not "impracticable".
4. Blurred means অস্পষ্ট but blurreden is incorrect.
5. "Unsay" is incorrect, it could have been untold.
6. Because fragrant (C) and aromatic (E) are adjectives, they are not the options. Odor is used in case of body, flavor is used describe taste of food. So (A) is the answer.
7. Only pride (সম্মান/গৌরব) is related with dignity (মর্যাদা)।
8. Having talent for something can be expressed by flair.
9. Qualms means বিবেকের দংশন।
10. Misnomer means ভুল নামকরণ/নামের ভুল প্রয়োগ।
11. Ingredient অর্থ উপাদান, Component অর্থ অংশ।
12. Convictions means strongly held belief.
13. Gracious means courteous, polite, etc.
14. Monopoly is the lack of competition.
15. Redeem অর্থ পাপমুক্ত হওয়া, দায়ভার থেকে মুক্তি লাভ অথবা প্রায়শ্চিত্ত করা।
16. Yield অর্থ নতি স্বীকার করা, impede অর্থ বাধা প্রদান।
17. Little changed is incorrect. It should be "changed little".
18. দুইয়ের মধ্যে তুলনা করলে whether হয়।
19. Accepted protocol বলে গন্য করা হবে কোন কাজকে। কাজেই subject হবে Gerund.
20. অনেকের মধ্যে তুলনা করলে most হয়, more হয়না। কেবলমাত্র দুইয়ের মধ্যে তুলনা করলেই more হওয়া সম্ভব।
21. যেহেতু company manager সম্বন্ধে delightful অর্থাৎ আনন্দিত ব্যবহার করা হয়েছে। কাজেই company manager subject হতে হবে।
22. যেহেতু "were" verb টি plural, subject টি কেও plural হতে হবে। এবেত্রে "whatever aspirations" is the best option.
23. He is in high spirits অর্থ খোশমেজাজে থাকা।
24. Black sheep অর্থ দুশ্চরিত্র ব্যক্তি।
25. Wit's end অর্থ কোন কিছু বুঝে উঠতে না পারা অথবা হতবুদ্ধি হওয়া।

## Written English

### Sentence making

1. There are two semesters each year in the BBA program of IBA.
2. Fast decision-making which is an essential part of business is facilitated by emails.
3. In spring, flowers in the garden look beautiful.
4. In Dhaka, Baby-taxi is one of the reasons for traffic congestion and air pollution.
5. Cable TV can have harmful effects on children.
6. Student politics hampers education and often involves a student in crimes.

### Reading

1. The history of the word orange contributes to my general understanding of the fruit in three specific ways.

   Firstly, I learnt that it is originally a native fruit of Asia. It originated in China, then migrated to various parts of the world.

   Secondly, it is a fruit popular in all parts of the world including Asia, Middle East and even Europe.

   Finally, it can be learnt that the fruit can be used for medical purposes as its healing potentials were discovered long ago.
2. The definition of orange that is given here would be of very little help to a person who had never seen it.

   This definition actually portrays the origin of the term "Orange" knowing the origin of a term and knowing a fruit are two different things. This definition does not mention the size, taste or color of the fruit. It did not also state where and how it is grown.
3. Orange is a fruit which is of the size of a tennis ball. Obviously, its color is orange which is a color in between golden and yellow. It has a skin which has to be peeled off before eating. The taste is mostly sweet and slightly sour. It is a juicy fruit. Inside it, is divided into slices. Each slice is eaten separately.

## Composition

A teacher teaches us not only academic subjects but also shows us the way to make full use of our potentials. A good teacher is the one who has been able to change our lives for the betterment, who has make us better persons than we were before in terns of knowledge and guidance. I consider two attributes very important to be a good teacher.

Every teacher has a wealth of knowledge, but a good teacher is expert in communicating that knowledge to the students. He has to have the ability to translate his thoughts, visions, and wisdom into words and make those words clearly understood by the students. It is a special skill to relate with the students and to come down to their level. It is this quality that brings interest in students about the subject being taught. Another important attribute of a good teacher is the burning desire to teach. A good teacher never loses patience, dares to take on the challenge, and sticks to his principal. He would go to any length to make a student understand something.

A good teacher is one of the most influential people to shape the future of students. Good teachers sow the seeds of a prosperous, progressive nation.

# BBA (IBA)

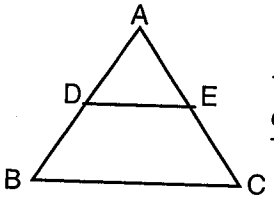
## Admission Test Question (2001-2002) with Solution

## Section I: Mathematics [30 marks]

**Directions**: *Solve each of the following problems and mark the correct answer on your Answer Sheet. DO NOT USE CALCULATOR. Figures are not drawn according to scale.*

1. The ratio of x to y is 0.75. If the ratio of 4y + 7 to x + 1 is 5, then what is the value of y?
   A. 2 B. 3 C. –2 D. 3 E. none of these

2. If $\frac{x}{b-c} = \frac{y}{c-a} = \frac{z}{a-b}$ then x + y + z = ?
   A. 0 B. a+b+c C. $\frac{a+b+c}{abc}$ D. 1 E. none of these

3. 

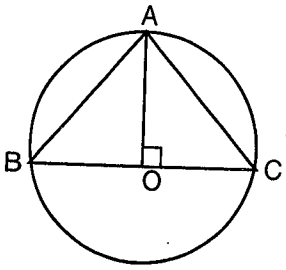
The area of the ABC triangle is 40 sq. cm. D is the mid point of AB and E is the mid point of AC. What is the area of the Triangle ADE?
   A. 20 B. 12 C. 10 D. 8 E. none of these

4. If n is an even integer, which of the following must be an odd integer?
   A. 7n – 2 B. 5(n-2) C. (16n+24)/8 D. (6n+12)/3 E. none of these

5. The length of a rectangle is increased by 60%. By what percent would the width have to be decreased to maintain the same area?
   A. 40% B. 50% C. 60% D. 62.5% E. none of these

6. If xy = 4, yz = 9 and zx = 25, and x>0, what is the value of y?
   A. 1 B. 6/5 C. 5/6 D. 4/3 E. none of these

7. The price of a pen is twice that of a pencil. If the price of the pen is increased by 5% and that of the pencil is decreased by 4%, how much more or less (in percentage) will it cost to buy 5 pen and 5 pencils?
   A. 2% less B. 2.5% less C. 2.5% more D. 2% more E. none of these

8. 

O is the centre of the circle. If BC = d, AC = x and AB = y, what is the length of AO?
   A. xy/d B. dx/y C. dy/x D. 0.5dx E. none of these

9. The ratio of green, red and yellow marbles in a box is 3:4:5. If 10 green marbles are removed and 5 red marbles are added, the total number of marbles becomes 103. How many yellow marbles were in the box?
   A. 32 B. 45 C. 48 D. 50 E. none of these

10. Which of the following is the largest?
    A. 12/15 B. 11/14 C. 5/7 D. 9/11 E. ½

11. Adults can do a job twice as fast as children. If x adults can complete a job in d days, how many children can do the same job in d + 2 days?
    A. $\frac{2dx}{d+2}$ B. $\frac{(d+2)x}{d}$ C. $\frac{dx}{2(d+2)}$ D. $\frac{2x+d}{d-x}$ E. none of these

12. Weight of Anwar is equal to 1/5 th of his own weight plus the weight of his sister, who is 10 kg less than Anwar. How much does Anwar weigh?
    A. 50 B. 45 C. 40 D. 35 E. none of these

13. The length of a rectangular plot is increased by a certain percentage while the width is decreased by the same percentage. The area of the new plot will
A. remain the same B. increase C. decrease
D. either increase or decrease E. cannot be determined

14. If $\frac{ab-b+a-b^2}{a-b} = 4$, then b =?
A. 2a B. 3 C. 2√a D. 1 E. none of these

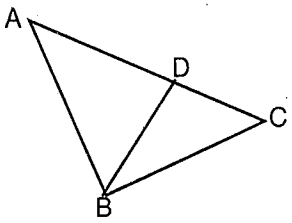
15. If $(x+\frac{1}{2})^2 = 3$, calculate the value of $x^3 + \frac{1}{x^3}$
A. 3 B. √3 C. 3√3 D. 0 E. none of these

16. A man had traveled 1/3 of the total distance of his trip when his car broke down. He finished the journey on foot, spending twenty times as long walking as he had spent driving. How many times faster was his driving speed than his walking speed?
A. 10 B. 12 C. 15 D. 20 E. none of these

17. A cake is divided into three pieces so that the first piece is four times as big as the second and the second piece is three times as big as the third. What fraction of the entire cake is the smallest piece?
A. 1/8 B. 1/12 C. 1/13 D. 1/16 E. none of these

18. If 25% of x equals 30% of y and 24% of y equals 20% of z, what is the ration of x to z?
A. 1.2 B. 1 C. 0.8 D. .75 E. none of these

19. Half of the graduates of the MBA program became members of the IBA Alumni association. One-third of the graduates became members of the MBA Club. If 1/5$^{th}$ of the graduates were members of both Alumni Association & MBA Club, what fraction of the graduates were members of only the MBA Club?
A. 1/8 B. 2/15 C. 1/12 D. 2/13 E. none of these

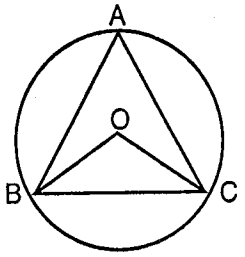
20. 

In the triangle, <ABC = 90° and AD = DC. If BD = 2 cm. calculate the length of AC.
A. 4√2 B. 8 C. 2 √2. D. 4 E. none of these

21. The ratio of water and salt in a 16 kg of salt-water solution 3:1. How much water in kg must be added to make the ration of water to salt 4:1?
A. 2 B. 3 C. 4 D. 6 E. none of these

22. A train leaves station X for station Y. At 8:20am, when the train has crossed one fifth of the way to station Y, it passes station A. At 8:30 am, when the train has crossed one third of the way to station Y, it passes station B. At what time does the train leave station X?
A. 7:45 am. B. 7:50 am. C. 8:00 am. D. 8:05 am. E. none of these

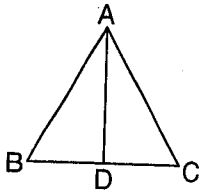
23. If $\frac{a}{x}+\frac{x}{a}=\frac{x}{b}+\frac{b}{x}$, then x = ?
A. $\pm\sqrt{(ab)}$ B. $\pm\sqrt{\left(\frac{a}{b}\right)}$ C. $\pm\sqrt{\left(\frac{ab}{2}\right)}$ D. $\pm\sqrt{\left(\frac{b}{a}\right)}$ E. none of these

24. 

O is the centre of the circle. If <BAC is 55°, what is the value of <OCB?
A. 55° B. 45° C. 35° D. 25° E. none of these

25. A square floor with side of 3 meters is to be covered with square tiles. If each tile has a perimeter of 1 meter, what is the minimum number of tiles needed to cover the floor?
A. 4 B. 9 C. 144 D. 256 E. none of these

26. X, Y and Z were each paid the same hourly rate to paint a building X worked for a full day, Y worked for half a day and Z worked half as long as Y worked. Together they earned Tk. 560. How much money did Y receive?
A. 100 B. 160 C. 240 D. 320 E. none of these

27. 

ABC is an equilateral triangle. D is the mid point of BC. AD=9 cm. Calculate the area of Δ ABC in sp. cm..
A. 24 B. $27\sqrt{3}$ C. $18\sqrt{3}$ D. $24\sqrt{3}$ E. none of these

28. If xy>0 and y<0, which of the following must be positive?
A. x-y B. x+y C. (x+10)/y D. (y-2)/x E. none of these

29. Seventy five percent of the students entering BBA program are from Dhaka city. Two-third of them majored in finance and of the finance majors, ¾ worked in multinational companies. What fraction of the entire class worked in multinational companies?
A. ½ B. ¼ C. 1/8 D. 1/12 E. none of these

30. Six years from now, Sumi's age will be the square of her age six years ago. What is Sumi's age?
A. 8 B. 10 C. 12 D. 15 E. none of these

**End of section I**

## Section II — Analytical Ability — [20 marks]

**Directions:** *Solve each of the following problems and mark the correct answer on your answer sheet.*

**Use the following table for questions 1-4**

| Income Range in TK. | | | Tax to be paid |
|---|---|---|---|
| From | | To | |
| 0 | - | 100,000 | 0% |
| 100,000 | - | 150,000 | 5% of total income |
| 150,000 | - | 250,000 | 7,500 + 10% of income over 150,000 |
| 250,000 | - | 500,000 | 17,500 + 15% of income over 250,000 |
| 500,000 | - | 1,000,000 | 55,000 + 18% of income over 500,000 |
| 1,000,000 | - | 5,000,000 | 145,000 + 20% of income over 1,000,000 |
| 5,000,000 or more | | | |

1. A person who has an income of Tk. 500,000, pays what percentage (to the nearest percent) of his total income in taxes?
A. 5% B. 10% C. 11% D. 12% E. 15%

2. How much tax is due on an income of Tk. 400, 000?
A. 20,000 B. 40,000 C. 35,000 D. 52,500 E. 60,000

3. You paid Tk. 10,000 in taxes. If X was your income, which of the following statements is true?
A. 0<x<100,000 B. 100,000<x<150,000 C. 150,000<x<250,000
D. 250,000<x<500,000 E. 500,000<x<1,000,000

4. Your income for a year is Tk. 1,500,000. You receive a raise so that next year your income will be Tk. 2,000,000. How much more will you pay in taxes next year if the tax rate remains the same?
A. 150,000 B. 90,000 C. 120,000 D. 100,000 E. 75,000

**Questions 5 to 8 are based on the following passage.**

In order to process application forms at IBA, it is necessary to have a minimum of three staff each day. The staff consists of five persons, who work on a part-time basis. Ali can work on Mondays, Wednesdays, and Fridays. Bashir cannot work on Wednesdays. Chisti can work on Tuesdays and Wednesdays only. Dilruba cannot work on Fridays. Ejaz is available anytime except on the first Monday and Thursday of the month.

5. Which three are available on any Monday?
A. Ali, Ejaz, and Chisti B. Bashir, Ejaz, and Chisti C. Bashir, Chisti, and Dilruba
D. Ejaz, Chisti, and Dilruba E. Dilruba, Bashir, and Ali

6. Which three could be available for work on Fridays?
A. Chisti, Bashir, and Ali B. Ali, Chisti, and Dilruba C. Ali, Bashir, and Dilruba
D. Ali, Bashir, and Ejaz E. Bashir, Chisti, and Ejaz

7. During which day of the week might it be impossible to have at least three staff?
A. Friday B. Tuesday C. Thursday D. Wednesday E. Monday

8. During which day of the week would it be necessary to call on Ejaz so that at least three staff are present?
A. Wednesday B. Friday C. Tuesday D. Thursday E. Monday

**Questions 9 to 12 are based on the following information.**

Three university students – an American, a Bangladeshi and a Chinese – win the top three prizes in an international computer programming contest. Their universities are Georgetown, Harvard, and IBA, not necessarily in that order. The students' names are John, Karim and Mark, not necessarily in that order.
The Georgetown student wins neither the first nor the second prize.
The Chinese wins the first prize.
Mark wins the second prize.
The American is Karim.
Mark studies in Harvard.

9. Karim
A. doesn't study at IBA B. is the Bangladeshi C. is not the American
D. studies at Georgetown E. wins the second prize

10. The Harvard student
A. is not Mark B. wins the second prize C. is Karim
D. is the Chinese E. is the Bangladeshi

11. The first prize is won by
A. Karim B. Mark C. The Harvard student D. The IBA student E. The Bangladeshi

12. Which statement correctly lists the students in the order of prizes won (i.e. $1^{st}$, $2^{nd}$, $3^{rd}$)?
i. The Harvard student; the Chinese; John
ii. John; the Bangladeshi; the Georgetown student
iii. The IBA student; Mark; the American
A. I and II B. II and III C. I only D. II only E. III only

**Questions 13 to 15 are based on the following passage.**

Since the completion of his HSC exams, Mushfique has been passing sleepless nights trying to take a decision about his career path. Having done his HSC in science, all options are open to him except medicine as he had taken geography instead of biology.
He wants to be an architect but his parents cannot afford the high course fees. He wouldn't mind being a doctor but he hates memorizing. In any case, he had dropped biology so that no one could force him to study medicine. His elder brother wants him to join the Marine Academy of the army. Sailing could be a choice because he would like to see the world, but, being accustomed to an easy life-style, he knew the army was not for him. He would rather do a university degree in a public university. Session jams could be a problem, but he cannot afford to study in a private university.

He'd be happy to do an honors in any theoretical subject to match his thirst for knowledge. However, he was aware of the importance of choosing a subject that will provide not only knowledge but also skills that are useful for a professional career.

Although Computer Science is 'the subject' of the day, he is not sure he can do very well there. Engineers are in oversupply and an honest engineer can hardly earn his bread. So he is seriously thinking about studying BBA at IBA. This can give him knowledge in a variety of subjects and in the end ensure him a job with a handsome salary.

13. Which of the following statements is true?
A. He wants to be an architect B. There are session jams in public universities.
C. He studied geography in HSC because he didn't want to study medicine.
D. He doesn't want to join the army because it's not an easy life.
E. All of the above

14. Which of the following is Mushfique definitely not considering as one of his career options?
A. An architect B. A BBA graduate C. A computer scientist
D. A sailor E. None of these

15. Which of the following is not a criterion for his choice of a career path?
A. Pursuit of knowledge B. Course fees C. Elder brother's suggestion
D. Opportunity to see the world E. Honest and decent living

## Section III Language & Communication [50 marks]

**This section consists of two parts: Part A contains MCQs and must be answered on the Answer Sheet. Part B must be answered in this Test Booklet in the spaces provided.**

**Part A: MCQ**

**Directions**: *Each of the following sentences contains a blank space. Select the best answer which completes the sentence and mark your Answer Sheet accordingly.*

1. I can't _____ thinking that we made a mistake in our calculations; the total is too high.
A. be B. tolerate C. accept D. help E. stand

2. If you don't exercise you _____ the risk of getting ill.
A. run B. suffer C. face D. stand E. take

3. I dread _____ what would have happened if there'd been an accident.
A. thinking B. believing C. the thought D. to thinking E. to think

4. If you are _____ with this test, perhaps you should attempt an easier one.
A. drowning B. straining C. stressed D. struggling E. stressed

**Directions**: *Each question below consists of a related pair o words, followed by five lettered pairs of words. Select the lettered pair that best expresses a relationship similar to that expressed in the original pair.*

5. COBBLER : SHOES
A. spy : plans B. mechanic : automobile C. painter : easel
D. carpenter : saw E. interrogator : questions

6. FROWN : DISPLEASURE
   A. smirk : regret B. smile : commiseration C. snore : relief
   D. blush : pallor E. sneer : contempt
7. AMUSING : UPROARIOUS
   A. petty : narrow-minded B. quiet : noisy C. exhausted : weary
   D. intractable : stubborn E. puzzling : dumbfounding
8. DAMPEN : DRENCH
   A. glide : drift B. gambol : play C. simmer : boil
   D. stagnate : flow E. ignite : quench
9. WINCE : PAIN
   A. blush : embarrassment B. march : patriotism C. sing : gaiety
   D. pardon : tolerance E. cry : anger

**Directions**: *Each of the two reading passages below is followed by a set of questions. Read each passage and answer the accompanying questions, basing your answer on what is stated or implied in the passage.*

**Passage 1**

We often act as if past civilizations had no insights into the great scientific questions of our day. I was amazed when I discovered this passage written by a 13th century Chinese philosopher.

> Heaven and earth are large, yet in the whole of space they are but a small grain of rice. It is as if the whole of empty space were a tree, and heaven and earth were one of its fruits. Empty space is like a kingdom and heaven and earth no more than a single individual person in that kingdom. Upon one tree there are many fruits, and in one kingdom many people. How unreasonable it would be to suppose that besides the heaven and earth which we can see there are no other heavens and no other earths.

10. It can be inferred that the philosopher would agree with which of the following statements?
    A. Empty space is just that, empty B. We can easily measure the volume of space
    C. Heaven and earth are like a kingdom.
    D. It is unreasonable to think that there are other heavens and earths.
    E. Space most likely contains many earths.
11. Which of the following does the author use to describe the expansiveness of space?
    I. A tree with fruit II. A kingdom with people III. A grain of rice
    A. I and III only B. I, II, and III C. I only D. II only E. III only
12. Which of the following best paraphrases the first sentence of the philosopher's discourse?
    A. As a grain of rice grows, so does the universe.
    B. Heaven and earth make the universe seem like a grain o rice.
    C. From our perspective, heaven and earth are overwhelming, but in reality they are minuscule.
    D. The author understood the significance of the Big Bang Theory.
    E. The whole of space is a predecessor to a black hole.

***Passage 2***

As of December, 1983, there were 391 species listed as endangered. Today, over 650 have been listed including 282 mammals, 214 birds, 59 reptiles, 49 fishes, 26 mollusks, 16 amphibians, and 8 insects. We hope to provide protection to another 600 species by the end of 1988. Although only 4 species of plants have been designated as endangered, with the establishment of five botanist positions in 1985, it is expected that 200 will be listed by the end of 1987.

Success should not be measured by the number of species listed; the goal is to return the species to the point where they are no longer endangered. This Department would be just as negligent in the performance of its duties under the Act for not de-listing a species that has recovered as it would be for not listing a critical species. We have not had the human resources or funding to review all of the species listed at the time of the 1983 Act.

13. Which of the following is not stated in the passage?
    A. The Department lacked human resources to review all listed species.
    B. Eight insects have been listed as endangered
    C. Four species of plants have been listed as endangered
    D. The Department considers listing species more important than de-listing them
    E. By the end of 1987, many plants will be added to the list.
14. "Success should not be measured by the number.....". What is a reasonable inference concerning the purpose of this statement?
    A. To counteract criticism that the Department was not listing enough species.
    B. To avoid mentioning that the computer that kept count malfunctioned.
    C. Because measurement is always statistically difficult.
    D. To indicate that the Department should not be successful.
    E. Because the concept of success has been abused in recent years.
15. It can be inferred that very few plants had been listed by 1983 because
    A. no botanists were on the staff at the time.
    B. very few are close to extinction
    C. the Department doesn't classify plants
    D. the Department had a surplus of funds
    E. some endangered mammals eat plants.

**Directions** : *Each of the following sentences contains a blank space. Select the best answer which completes the sentence and mark your Answer Sheet accordingly.*

16. Her parents are very _____ their daughter's education.
    A. concerning for B. concerned of C. concerned in D. concerned about E. concerned
17. During the storm last night there was lots of _____
    A. thunders and lightnings B. thunders or lightnings C. thunders and lightning
    D. thunder and lightnings E. thunder and lightning
18. If you take the train to Sylhet, you will see _____
    A. beautiful scene B. beautiful scenery C. some beautiful sceneries
    D. beautiful scenario E. a beautiful scenery
19. When it is ripe, _____ a yellow skin.
    A. a banana has B. bananas have C. banana has D. a banana have E. banana reveal
20. Every member of my family _____ here tonight.
    A. are B. is C. in D. were E. be

**Directions** : *Choose the correct answer to replace the underlined preposition or pairs of preposition in each of the following sentences. If the sentence is correct, choose (E).*

21. When I came through the customs at the airport, I had to pay tax **About** an electric knife I had **in** my luggage.
    A. for .. in B. with – with C. to – on D. on – in E. No error
22. This ticket entitles you **to** a free meal **in** our new restaurant.
    A. with – in B. for – at C. for – in D. to – on E. No error
23. **On** our school the teachers' basic hourly rate was increased **by** 5%.
    A. For – up to B. On – to C. In – by D. At – to E. No error
24. **In** the beginning **of** his career he had very little success.
    A. Till – of B. With – of C. At – of D. At – to E. No error
25. She's a very selfish person who doesn't show any consideration **for** others.
    A. to B. of C. about D. in E. No error

**Directions** : *Each of the following statements or questions is followed by five responses. Select the most appropriate response to the question or statement.*

26. Did she leave a message?
    A. No, he didn't give his name. B. No, she left the room
    C. No, she said she'd call later D. Yes, she left her handbag behind.
    E. Yes, she'll leave one.
27. Do you still feel homesick ?
    A. Well, I'm getting over it a little B. Not any more, the headache is gone
    C. Yes, I have problems back home D. Well, I feel dizzy
    E. Wouldn't you if you had to stay home all day long?
28. Can I see your ticket, please?
    A. Yes, my brother bought it. B. I'm afraid I can't find it.
    C. No, it's mine. D. Where did you keep it?
    E. It's very expensive.
29. We'd like some vanilla ice-cream, please.
    A. Sorry, we ran out of vanilla B. Hot or cold?
    C. Sweet or sour? D. Would you like a straw with it?
    E. What flavour would you like

30. Their plane should be here in **ON** time.
    A. Let's come back tomorrow B. let's see if they're at the gate.
    C. Let's find out why the flight was cancelled D. Let's wait for them at the arrival gate
    E. They are probably waiting for us at the main gate

***Part B : Test of written English*** ***[20 marks]***

**Directions**: *This part contains three questions. Answer these questions in this test booklet in the designated spaces.*

1. Write a short essay on "The best way to prepare for a test" in the box below. (10 marks)

2. Combine each group of sentences into one sentence that is grammatically correct and retains the original meaning of the group of sentences.
   [1 × 5 = 5 marks]

Example: "the dog barked. The dog was frightened. It barked loudly."
Answer: The frightened dog barked loudly.

(a) The two cows vanished. Another one appeared. It was a magnificent bull.
(b) The speaker told us the facts. The speaker told us calmly. The facts were terrifying.
(c) The doors open. The doors are made of brass. They open inward.
(d) The cassava root is a food for some people. They scrape the roots. Then they slice them. Then they boil them in salt water.
(e) The oceans contain fish. The oceans are deep. The fish are peculiar.

3. Use each of the following groups of words or phrases to write a sentence.
   [1 × 5 = 5 marks]

Example : player, disciplined, mind
Answer : A good tennis player must have a disciplined mind
(a) canteen, meals, Thursday
(b) go home, get a good night's rest, take my medicine
(c) education, society, important
(d) hiring, unskilled, jobs
(e) parents, struggle, fees

## End of Section IIII

## Answer Key

**Section I: math**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. E | 2. A | 3. C | 4. C | 5. E | 6. B | 7. D | 8, A | 9. B | 10. D |
| 11. A | 12. A | 13. C | 14. B | 15. D | 16. A | 17. D | 18. B | 19. B | 20. D |
| 21. C | 22. D | 23. A | 24. C | 25. C | 26. B | 27. B | 28. D | 29. E | 30. B |

**Section II: Analytical Ability**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. C | 2. B | 3. C | 4. D | 5. E | 6. D | 7. C | 8, B |
| 9. A,D | 10. B,E | 11. D | 12. B | 13. E | 14. E | 15. E | |

**Section III: language and communication**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. D | 2. E | 3. A | 4. D | 5. B | 6. E | 7. B | 8, C | 9. A | 10. E |
| 11. B | 12. C | 13. D | 14. E | 15. A | 16. D | 17. E | 18. C | 19. A | 20. B |
| 21. A | 22. E | 23. C | 24. C | 25. E | 26. C | 27. A | 28. B | 29. A | 30. D |

## BBA (IBA) Admission Test (2001-02) Solution

**Section – I: Mathematics**

1. equation (I) থেকে x = . 75y equation (II) তে স্থাপন করি,

$\frac{4y+7}{.75y+1} = 5$ or, 4y + 7 = 3.75y + 5 or, . 25y = - 2

or, y = - 8 Answer (E)

2. এটি cyclic order related problem.

let, $\frac{x}{b-c} = \frac{y}{c-a} = \frac{z}{a-b} = K$

∴ x = k(b – c) y = k(c – a) z = k(a – b)

যোগ করে পাই, x + y + z = k(b – c +c – a + a – b) = 0 ∴ Answer (A)

3. D, AB এর এবং E, AC এর midpoint

∴ DE = $\frac{1}{2}$BC এবং DE ||BC DE || BC বলে Δ ADE is similar to Δ ABC

∴ $\frac{Area\ of\ \Delta ADE}{Area\ of\ ABC} = \left(\frac{DE}{BC}\right)^2$ or, $\frac{Area\ of\ \Delta ADE}{40} = \frac{1}{4}$

or, Area of Δ ADE = 10 ∴ Answer (C)

4. A. 7n even, even – even is even
   B. n – 2 is even, odd × even is even
   C. (16n + 24)/8 = 2n + 3, 2n is even, even + odd is odd.
   D. (6n + 12)/3 = 2n + 4, even + even = even ∴ Answer (C)

5. এই ধরণের problem এ original length এবং width 100 ধরে নিলে সমাধান সহজ হবে।

$160 \times w' = 100 \times 100$ or, $w' = \frac{100 \times 100}{160}$ = 62.5

∴ width কমাতে হবে (100 – 62.5) বা 37.5% Answer (E)

6. xy = 4 ... (I), yz = 9 ... (II) এবং zx = 25 ... (III)

(II) ÷ (III) করে পাই, $\frac{y}{x} = \frac{9}{25}$ ... (iv)

(I) থেকে পাই, $x = \frac{4}{y}$

x এর মান (iv) এ স্থাপন করি,

$\frac{\frac{y}{4}}{y} = \frac{9}{25}$ or, $\frac{y^2}{4} = \frac{9}{25}$ or, $y^2 = \frac{36}{25}$ or, $y = \pm \frac{6}{5}$

কিন্তু x>0 = ∴ y > 0 ∴ $y = \frac{6}{5}$ Answer (B)

7. ধরি, price of pencil = 100 ∴ price of pen = 200
∴ Original price of 5 pen and 5 pencil = 1500
new price of pencil = 96 new price of pen = 210
∴ new price of 5 pen and 5 pencil = 1530 ∴ increase in price = $\frac{30\times100}{1500}$ = 2%
∴ Answer (D)

8. অর্ধবৃত্তস্থ কোণ সমকোণ

∴ Δ ABC এবং Δ ABO similar ∴ $\frac{AO}{AC} = \frac{AB}{BC}$

or, $\frac{AO}{y} = \frac{x}{d}$ ∴ $AO = \frac{xy}{d}$ Answer (A)

9. Total no. of marbles – 10 + 5 = 103 ∴ total no. of marbles = 108
∴ no. of yellow marbles = $108 \times \frac{5}{12} = 45$ Answer (B)

10. A. $\frac{12}{15} = .8$ B. $\frac{11}{14} = .78$ C. $\frac{5}{7} = .7$ D. $\frac{9}{M} = .81$ E. $\frac{1}{2} = .5$
Answer (D)

11. x adults = 2x children
to complete in d days 2x children is required.
∴ to complete in d + 2 days $\frac{2x\times d}{d+2}$ children is required ∴ Answer (A)

12. Let, weight of Anwar = x
∴ According to the problem
$x = \frac{x}{5} + (x - 10)$ or, $\frac{x}{5} = 10$ or, x = 50 Answer (A)

13. ধরি, rectangle টি 10/10, length 10% increase এবং width 10% decrease করলে area হবে 99 অর্থাৎ 1% কমে যাচ্ছে।
Answer (C)

14. $\frac{ab-b+a-b^2}{a-b} = 4$ or, $\frac{ab+a+-b^2-b}{a-b} = 4$
or, $\frac{a(b+1)-b(b+1)}{a-b} = 4$ or $\frac{(a-b)(b+1)}{a-b} = 4$ ∴ b + 1 = 4
or, b = 3 [এখানে a-b cross out না করলে a = b হবে যার ফলে denominator 0 হয়ে যাবে যা গ্রহণযোগ্য নয় ]
∴ Answer (B)

15. $\left(x+\frac{1}{x}\right)^2 = 3$ or $x + \frac{1}{x} = \sqrt{3}$

$\therefore x^3 + \frac{1}{x^3} = \left(x+\frac{1}{x}\right)^3 - 3x\frac{1}{x}\left(x+\frac{1}{x}\right)$

$= \left(\sqrt{3}\right)^3 - 3\left(\sqrt{3}\right)$ $= 3\sqrt{3} - 3\sqrt{3} = 0$ Answer (D)

16. let, distance = d and driving time = t

$\therefore$ driving speed = $\frac{d/3}{t} = \frac{d}{3t}$ $\therefore$ walking speed = $\frac{2d/3}{20t} = \frac{d}{30t}$

$\therefore \frac{driving\ speed}{walking\ speed} = \frac{d}{3t} \div \frac{d}{30t}$ = 10

[ যতটুক driving distance এর 2 গুন হেটে অতিক্রম করতে সময় লেগেছে 20 গুণ, সমান দরত্ব অতিক্রম করতে সময় লাগবে 10 times] Answer (A)

17. let, smallest piece = x

$\therefore$ second piece = 3x $\therefore$ first piece = 12x

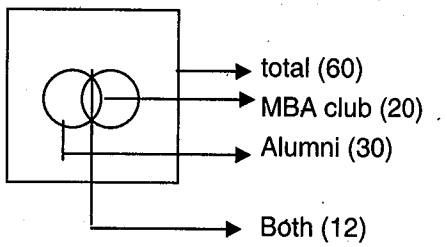
$\therefore$ smallest piece = $\frac{x}{16x} of\ the\ lake = \frac{1}{16}$ Answer (D)

18. $\frac{25}{100}x = \frac{30}{100}y$ $\therefore$ x = $\frac{30}{25}y$

আবার, $\frac{20}{100}z = \frac{24}{100}y$ $\therefore$ z = $\frac{24}{20}y$

$\therefore \frac{x}{z} = \frac{30y}{25} \div \frac{24y}{20}$ = $\frac{30y}{25} \times \frac{20}{24y}$ = 1 Answer (B)

19. 60 এমন একটি number যাকে $\frac{1}{2}, \frac{1}{3}$ এবং $\frac{1}{5}$ th করা যায়, let, no. of graduates = 60,




$\therefore$ only MBA club = 8 $\therefore \frac{8}{60} = \frac{2}{15}$ $\therefore$ Answer (B)

20. D, অতিভূজ AC এর মধ্য বিন্দু $\therefore$ AD = DC = BD [ D কে কেন্দ্র করে ABC বৃত্ত অঙ্কন করা যায়]

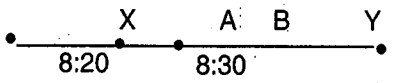
$\therefore$ AC = 2BD = 4 Answer (D)

21. salt = $16 \times \frac{1}{4}$ = 4 Kg water = 16 – 4 = 12 Kg

এখন, $\frac{water}{salt}$ = 4 $\therefore$ water = 4 × 4 = 16 Kg

$\therefore$ (16 – 12) = 4 Kg water add করতে হবে।

Answer (C)

22. 


$\frac{1}{3}-\frac{1}{5}=\frac{2}{15}$; $\frac{2}{15}$ অতিক্রম করে 10 minute এ

$\therefore \frac{1}{5}$ অতিক্রম করে $\frac{10\times15}{2\times5}$ = 15 minute – এ $\therefore$ station x leave করেছে 8:05 এ

Answer (D)

23. $\frac{a}{x}+\frac{x}{a}=\frac{x}{b}+\frac{b}{x}$ or, $\frac{a}{x}-\frac{b}{x}=\frac{x}{b}-\frac{x}{a}$ or, $\frac{a-b}{x}=\frac{x(a-b)}{ab}$

or, ab (a – b) = $x^2$ (a-b) or, $x^2$ = ab or, $x = \pm\sqrt{ab}$ Answer (A)

24. central < O = 2 inscribed < BAC = 110°

Δ OBC - এ OB = OC [radius] $\therefore$ < OBC = < OCB

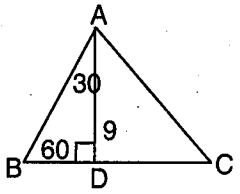
$\therefore$ <OCB = $\frac{1}{2}(180-110) = 35°$ Answer (C)

25. no. of tiles = $\frac{area\ of\ floor}{area\ of\ tiles}$

$= \frac{3^2}{\left(\frac{1}{4}\right)^2}$ [ perimetes/4 = side of a square] $= \frac{9}{\frac{1}{16}}$ = 9 × 16= 144 Answer (C)

26. $\frac{x}{2}=y$ $\therefore$ x = 2y এবং $\frac{y}{2}=z$

$\therefore$ 2y + y + $\frac{y}{2}$ = 560 or, 4y + 2y + y = 560 × 2 or, y = $\frac{560\times2}{7}$ = 160 Answer (B)

27. 


remember 30:60:90 triangle BD = $\frac{9}{\sqrt{3}} = 3\sqrt{3}$

Area = 3 $\sqrt{3}$ × 9 [ BD = $\frac{1}{2}$ BC] = $27\sqrt{3}$ Answer (B)

28. xy > 0, y < 0 $\therefore$ x < 0

A. could be positive if x > y, y > x হলে negative

B. always negative

C. negative if x + 10 is positive

D. y – 2 negative, neg ÷ neg = positive Answer (D)

29. 75% are from Dhaka city, remaining 25% এর কোন information নেই, ∴ entire class এর fraction বের করা যাবে না। appropriate answer হতো can not be determined. এখানে (E) গ্রহণ যোগ্য answer.

30. let, Sumi's age = x ∴ $x + 6 = (x - 6)^2$
or, $x + 6 = x^2 - 12x + 36$ or, $x^2 - 13x + 30 = 0$ or, $x^2 - 10x - 3x + 30 = 0$
or, $(x - 10)(x - 3)$ 20 ∴ $x = 3$ o 10
এখানে 3 acceptable নয় ∴ Answer (B)

## Section II: Analytical Ability

1. 500,000 এর মধ্যে 55,000 অর্থাৎ, $\frac{55,000 \times 100}{500000} = 11\%$ Answer: C

2. 250,000 এর জন্য 17,500 + (400,00 – 250,00) = 150,000 এর জন্য $150,000 \times \frac{15}{100} = 22,500$, মোট 40,000. Answer: B

3. 150,000 এর tax আসে 7,500. 250,000 এর tax আসে 13,500
অর্থাৎ, income 150,000 এবং 250,000 এর মধ্যে হবে। Answer: C

4. 1500,000 এর জন্য tax = $145,000 + 500,000 \times \frac{20}{100} = 245,000$

2000,000 এর জন্য tax = $145,000 + 1000,000 \times \frac{20}{100} = 345,000$

অর্থাৎ, 100,000 টাকা বেশি tax দিতে হবে। Answer: D

5. Ali, Bashir, এবং Dilruba প্রত্যেকে Monday তে কাজ করতে পারবে। Answer : E

6. Ali, Bashir এবং Ejaz Friday তে available. Answer: D

7. যদি মাসের প্রথম Thursday হয়, তাহলে Ejaz available না। Chishti এবং Ali ও Thursday তে available না। Answer: C

8. Friday তে Chishti এবং Dilruba available না। অতএব, Ejaz কে call করতে হবে। Answer: B

**9 – 12.** Three students → American, Bangladeshi, Chinese
Three universities → Georgetown, Harvard, IBA
Three name → John, Karim, Mark

| Price | Country | Name | University |
|---|---|---|---|
| 1st | Chinese | John * | IBA * |
| 2nd | Bangladeshi * | Mark | Harvard |
| 3rd | American* | Karim* | Georgetown |

উপরের table এ * দেওয়া অংশগুলো analyze করে বের করা হয়েছে। table টা তৈরী করে * ছাড়া অংশগুলো আগে fill up কর। তারপর প্রদত্ত information দেখে বাকীটা fill up কর।

9. ভুলবশতঃ দুটি Answer দেয়া আছে। A/D দুটোই answer হতে পারে।

10. ভুলবশতঃ দুটি Answer দেয়া আছে। B/E দুটোই answer হতে পারে।

11. D

12. B

13. সবগুলোই true প্রদত্ত passage অনুসারে। Answer: E

14. প্রত্যেকটি option ই সে consider করেছে। Answer: E
15. Honest এবং decent living এর কথা কোথাও উলেখ করা হয়নি। Answer: E

**Section III : Language and communication**

1. (D) এখানে বোঝানো হয়েছে "আমি চিন্া না করে পারছিনা যে আমাদের হিসেবে ভুল হয়েছে।" এই expression টির জন্য লিখতে হবে "subject + can't help + gerund" I tolerate (সহ্য করা) কিংবা stand (সহ্য করা) এখানে অযৌক্তিক হবে।
2. (E) exercise করা না হলে কি হবে তার জন্য হবে "you take the risk." অর্থাৎ, "তুমি ঝুঁকি নিচ্ছ।" (A), (B), (C), বা (D) তে যে শব্দগুলো দেয়া আছে সেগুলো risk নেয়া অর্থে ব্যবহৃত হয়না।
3. (A) এখানে "I dread" "আমি ভয় পাই।" এরপর বসবে 'ভাবতে যে ....।' এখানে 'বিশ্বাস করা'র কোন প্রশ্ন নেই। "dread" এর পর thinking বসবে।
4. (D) একটি পরীক্ষা না পারলে সহজ অন্যটি চেষ্টা করার অর্থ হচ্ছে প্রথমটিতে সহজে সমাধান না করতে পারা। এ কারণে হবে struggling, drowning (ডুবে যাওয়া), straining (ব্যথা পাওয়া); বা stressed (বিপর্যস্ত) এখানে অবান্তর।
5. (B) carpenter shoe মেরামত করে
   spy plan তৈরী করে
   mechanic automobile মেরামত করে
   painter easel এর ওপর ছবি আঁকে
   carpenter saw ব্যবহার করে
   interrogator question করে।
6. (E) Frown (ভ্রুকুটি করা) হচ্ছে Displeasure (অসন্তুষ্টি) এর প্রকাশ। sneer (খারাপ ধারণা করা) হচ্ছে contempt (অপছন্দ) এর প্রকাশ। বাকি শব্দগুলো হচ্ছে smirk (বোকা হাসি), regret (অনুতাপ), smile (হাসি), commiseration (সমবেদনা), snore (নাকডাকা), relief (মুক্তি), blush (লজ্জায় লঅল হওয়া), এবং pallor (ফ্যাকাশে অবস্থা)।
7. (B) Amusing (মধুর, চমৎকার) এবং বিপরীত শব্দ হচ্ছে uproarious (বিক্ষোপ বা গোলযোগপর্ণ)। quiet (শান্ত) এবং বিপরীত শব্দ হচ্ছে Noisy (গোলযোগপর্ণ)। বাকি শব্দগুলো হচ্ছে "Pety এবং Narrow minded" (নিচুমনা), "Exhausted এবং Weary" (ক্লান্ত), "Intractable এবং stubborn" (অবাধ্য), এবং "Puzzling এবং Dumbfounding" (বিভ্রান্তিকর)।
8. (C) Dampen (স্যাঁতস্যাঁতে করা) এবং extreme রূপ হচ্ছে Drench (ভিজিয়ে দেয়া)। simmer (তপ্ত করা) এবং extreme রূপ হচ্ছে boil (সেদ্ধ করা)। বাকি শব্দগুলো হচ্ছে glide (ভেসে যাওয়া), drift (গলে বের হওয়া), gambol (নাচানাচি করা), play (খেলা), stagnate (অচল করা), flow (প্রবাহিত হওয়া), ignite (প্রজ্জ্বলিত করা), এবং quench (তৃষ্ণা মেটানো)।
9. (A) wince (বেদনায় কুকড়ে যাওয়া) হচ্ছে pain (বেদনা) এর ফলাফল, blush (লজ্জায় লাল হওয়া) হচ্ছে embarrassment (বিব্রতকর অবস্থা) এর ফলাফল।
   বাকি শব্দগুলো হচ্ছে march (কুচকাওয়াজ), patriotism (পেশপ্রেম), sing (গান গাওয়া), gaiety (উচ্ছ্বাস), pardon (ক্ষমা), tolerance (সহিষ্ণুতা), cry (চিৎকার), এবং anger (ক্রোধ)।
10. (E) Passage এর last এ বলা হয়েছে "অন্য কোথাও আর কোন earth নেই এটি ভাবা unreasonable হবে।"
11. (B) আমাদের earth কে একটি small grain of rice এর সাথে তুলনা করা হয়েছে (line 2), universe এবং earth কে big tree এবং fruit বলা হয়েছে (line 2-3), এবং universe কে a kingdom with many people হিসেবে তুলনা করা হয়েছে (line – 5-6).
12. (C) passage এর শুরুতে বলা হয়েছে heaven & earth large হতে পারে। কিন্তু পুরো space এর তুলনায় grain of rice এর মতোই ক্ষুদ্র।
13. (D) Endangered (বিপন্ন) প্রজাতি listing এবং delisting দুটোকেই author গুরুত্ব দিয়েছিল। কোনটি বেশি আর কোনটি কম গুরুত্বপর্ণ তা বলেন নি।
14. (E) author মনে করলে success কে number দিয়ে measure করলে আসল goal এর পরিবর্তে অন্য goal মখ্য হয়ে যায়।

15. (A) line 5 এ বলা হয়েছে পাঁচজন botanist কে project এ নেয়া হবে। এদেরকে নেয়ার আগে পর্যন্ত plant enlistment হচ্ছিল না।
16. (D) চিন্তিত থাকা = concerned about
17. (E) Thunder এবং lighting দুটোই non-count noun, এদের plural হবেনা।
18. (C) Train করে যাওয়া হলে more than one scenary pass করবে Journey র সময়ে।
19. (A) অনির্দিষ্টভাবে যে কোন banana 'র জন্যই বাক্যটি সত্যি। তাই indefinite article use করতে হবে।
20. (B) Every থাকাতে subject singular হবে। "ok my family" এখানে prepositional phrase হিসেবে বসেছে।
21. (A) pay for something অর্থ হচ্ছে কোন কিছুর জন্য মল্য পরিশোধ করা। knife টি luggage এর ভিতবে ছিল বিধায় 'in' used হবে।
22. (E) entitled এরপর to হবে। restaurant এর ভিতরে, এর জন্যে 'in' হবে।
23. (C) আমাদের স্কুলে = in our school শতকরা হারে বৃদ্ধি পেলে বলতে হয় "by xyz%.
24. (C) Beginning এবং End এর আগে 'at' বসে। career এর আগে বসে of career.
25. (E) অন্যদের জন্য বিবেচনা/চিন্তা = consideration for others.
26. (C) প্রশ্নটির উত্তরে বলতে হবে সে টেলিফোনেই কি বলেছে। বাকি answer choice গুলো অন্য প্রেক্ষিত বলে। (A) তে she এর পরিবর্তে he use করাটাও ভুল।
27. (A) প্রশ্নটির উত্তরে বলতে হবে এখনও সে homesick করে নয়কি করেনা। (A) তে এই answer টিই দেয়া হয়েছে। বাকি answer choice গুলোর জন্য কেউ homesick হবেনা।
28. (B) টিকেট দেখানো বা বলা যে টিকেট নেই, এই দুটি কাজের যেকোন একটি করতে হবে। এখানে বলা হচ্ছে যে "টিকেট খুঁজে পাচ্ছি না।
29. (A) vanilla শেষ হয়ে গিয়েছে একটি logical response. আইসক্রিম not না cold, sweet না sour এগুলো অযৌক্তিক প্রশ্ন। vanilla বলার পর flavour জিজ্ঞেস করা বোকামি। আইসক্রিম কেউ straw দিয়েও খায় না।
30. (D) plane আসার সময় যখন হয়, তখন যে plane এ আসছে তার জন্য অপেক্ষা করাটাই logical.

Part B : Test of written English

**Answer to the question no. 1**

The best way to prepare for a test

The word 'test' has different implications in our life. We have to face an awful lot of tests every day. But 'test' in this writing is actually meant in a different context. This test refers to the exams we have to sit for very frequently either to get chance in any institutions/universities or to pass a certain level of our educational hierarchy. Nonetheless, the importance remains the same and the need to have a good preparation prevails in the same manner.

Comprehensive information about the test materials is the first and foremost priority for the best preparation. Knowing the test is actually very critical to the success in any test. Consequently, a person must find out his/her problem areas. If he/she can do that properly, the job is half done. The moment a person can understand where he stands, he/she can look for sources and materials to cope with those problems. Here coping means getting prepared for the test-related materials and the probable question types. Sometimes, making notes for different subjects helps a lot. Taking help from teachers and senior students pave the way towards a better preparation. Another very important thing is to get the things done at least one week before the test. The last week should be left for a revision.

Although taking help from different people and knowing the syllabus of the test are both very important, none can deny the supplementary benefit of organizing test materials in an efficient manner. The final thing that can be said is that everything depends on the person's ability to present the thing what he/she had learned before is the cardinal factor as far as success in the test is concerned.

**Answer to the question no. 2**

A. A magnificent bull appeared after the two cows had vanished.
B. The speaker told us the terrifying facts calmly.
C. The doors made of brass open inward.
D. Some people scrape cassava roots, slice them, boil them in salt water and take it as a food.
E. The deep Oceans contain peculiar fish.

**Answer to the question no. 3**

A. Our canteen offers special meals on Thursday.
B. You better go home now, take my medicine and get a good night's rest.
C. Education in probably the most important factor that characterizes a society.
D. He finds hiring unskilled people for the vacant jobs risky.
E. Parent in our country often struggle while comes to paying fees for their children's education.

# BBA (IBA)

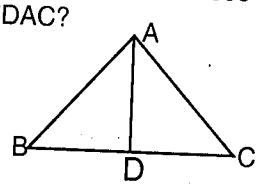
## Admission Test Question (2002-2003) with Solution

## Section I : Math

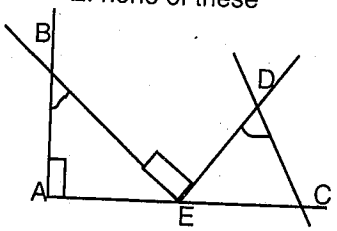
**[30 × 1 = 30 Marks]**

**Directions:** *Solve each of the following problems and mark the correct answer on your Answer Sheet.* ***DO NOT USE CALCULATOR.*** *Figures are not drawn according to scale.*

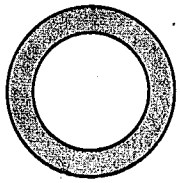
1. The cost of two litres of Oil and its container is Tk. 100. If the cost of the container is Tk. 23 less than the cost of one litre of Oil, what is the cost of one litre of Oil?
   A. 39 B. 41 C. 43 D. 47 E. none of these
2. Arif can do a particular work in 1 hour while Asif can do the same work in 1.5 hours. On a particular day, they worked together for half an hour, after which Arif left and Asif had to finish the rest of the work alone. How much time in minutes will Asif require to finish the rest of the work?
   A. 15 B. 16 C. 17 D. 18 E. none of these
3. If $X + 1/X = 2$ what is the value of $X/(X^2 + X - 1)$?
   A. 1/4 B. 1/5 C. 3/4 D. 1 E. none of these
4. A jar contains marbles of 4 different colours. The number of blue marbles is three times as many as the yellow ones. The number of red marbles is half that of the yellow ones. The number of orange marbles is equal to the number of red ones. What percent of the marbles are orange coloured?
   A. 10 B. 15 C. 20 D. 21.5 E. none of these
5. A worker is paid Tk. 40 per hour for the first 8 hours and then Tk. 52 for each additional hour. If on a certain day, his average pay was Tk. 44 per hour, how many hours did he work on that day?
   A. 12 B. 10 C. 8 D. 4 E. none of these
6. $\angle BCA = 30°$ $\angle BCA = 110°$ and AD = BD. What is the value of $\angle DAC$?
   A. 75° B. 85° C. 70°
   D. 80° E. none of these




7. If $y/(x + 1) = 4$ and $(4x + 3)/(y + 2) = 1.5$, what is the value of x?
   A. 5 B. 2 C. –1 D. – 3 E. none of these
8. If x is a positive integer and $y > -2$, which of the following must be positive?
   A. $3x + 4y$ B. $(x + y)/y$ C. $(2x + y)/(x-y)$ D. xy E. none of these
9. A trader normally makes a profit of 40% on items he sells. If he reduces the price by 10%, his sales increase by 40%. Let x be the total profit when he does not reduce the price, and y the total profit when he reduces the price. What is the ratio of y to x?
   A. 1.28 B. .78 C. 1.11 D. .91 E. none of these
10. A trader incurs a loss of 10% from selling an item. If the selling price was Tk. 200 more, he would have made a profit of 15%. What was the cost of the item?
    A. 800 B. 720 C. 1200 D. 900 E. none of these
11. $\angle ABE = 25°$ and $\angle EDC = 100°$. What is the value of $\angle DCE$?
    A. 25° B. 30° C. 45°
    D. 65° E. none of these




12. If the average of 5 consecutive odd integers is 55, what is the average of the last two integers?
    A. 56 B. 57 C. 58 D. 60 E. none of these
13. If the diameter of the outer circle is 8 cm more than that of the inner circle and the area of the shaded portion is $40\pi$ what is the area of the inner circle?
    A. $6\pi$ B. $9\pi$ C. $12\pi/\sqrt{2}$
    D. $16\pi$ E. none of these



14. If x books can be purchased for Tk. y, how many books can be purchased for Tk. m?
A. xm/y B. xym C. y/xm D. (x+m)/y E. none of these

15. The cost of 1 dozen apples and 1 dozen mangoes is Tk. 100 and Tk. 120 respectively. If you spend equal amounts of money to buy apples and mangoes and sell them both at Tk. 110 per dozen, what will be your approximate profit or loss?
A. 2% profit B. 2% loss C. 0 D. 1% profit E. 1% loss

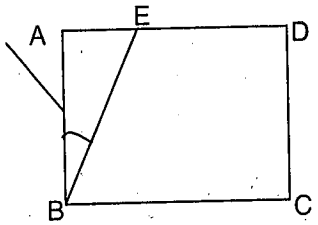
16. If $a > 0$, $b < 0$, $C > 1$ and $D < 1$, which of the following must be true?
A. $ab > cd$ B. $ab < cd$ C. $ac > bd$ D. $ac < db$ E. none of these

17. Which of the following fractions is the smallest?
A. 23/45 B. 24/46 C. 28/57 D. 2/3 E. 29/58

18. A man traveled one-fourth of the total distance of his trip by car. He traveled the remaining distance on foot. The ratio of his walking time to driving time was 15:1. Calculate the ratio of his driving speed to his walking speed.
A. 5:2 B. 5: 1 C. 1: 5 D. 2: 5 E. 25: 1

19. The cost of 4 pens is equal to the cost of 6 pencils. The cost of a CD is equal to the cost of 4 pencils and the cost of a book is equal to the cost of 6 pens. What is the ratio of the cost of a book to the cost of a CD?
A. 9/4 B. 4/9 C. 2/3 D. 3/2 E. none of these

20. ABCD is a rectangle. $\angle ABE = 30°$, BC 6 cm and ED = 2 AE What is the area of the triangle AEB in $cm^2$?
A. 4 B. $2\sqrt{3}$ C. $3\sqrt{2}$
D. $8/\sqrt{3}$ E. none of these




21. If $yx/z^2 = 27$ and $y^2/zx = 1/(3\sqrt{3})$, what is the ratio of z to y?
A. $\sqrt{3}$ B. $\sqrt{3}/3$ C. 1/3 D. $3\sqrt{3}$ E. none of these

22. If $a>0$, $b<0$ and $c>a$, which of the following must be positive?
A. $(a/b - b/c)/(c-b)$ B. $(b/a - c/b)/(a-b)$ C. $(c/b-a)/(a-c)$ D. $abc/(c+b)$ E. none of these

23. If $x/a+a/b = 4$, what is the value of x?
A. $-a^2/b+4a$ B. $a^2/b-2b$ C. $a^2b-4$ D. $a+b$ E. none of these

24. The weight of Kalim is an integer. If he gains 6 kg, he will weigh less than 70 kg. If he gains 8 kg, he will weigh more than 70 kg. What is his weight?
A. 61 B. 62 C. 63 D. 65 E. none of these

25. In a factory X out of every Y items produced were found to be defective. If 5% of the items produced during a day were found to be defective, what was the total number of items produced that day?
A. x/.05 B. 95x C. 20x/y D. 20y E. none of these

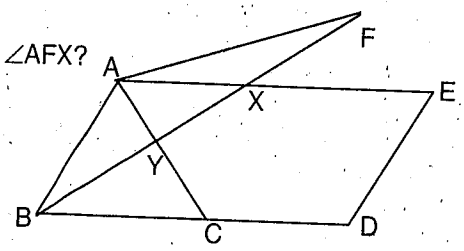
26. If all chocolates from a box were equally distributed among some children, each child would get 3 chocolates. If three more children are added to the group and you want to give each child 2 chocolates, you will run short by one chocolate. How many chocolates do you have for distribution?
A. 12 B. 15 C. 16 D. 18 E. none of these

27. A trader bought 48 tube lights and found that 8 of the tube lights were broken during transportation. As a result his per unit cost was increased by Tk. 24. What was the cost of each tube light?
A. 100 B. 104 C. 112 D. 120 E. none of these

28. A train left Dhaka for Chittagong at 62 km per hour and at the same time another train left Chittagong for Dhaka at 48 km per hour on the same route. How far apart were the two trains one hour before they met?
A 80 B. 92 C. 100 D. 110 E. none of these

29. One third, one fourth, one fifth and one-seventh of the human population of Island X, which has fewer than 5000 human inhabitants, are all whole numbers and their sum is exactly the population of Island Y. What is the population of Island Y?
A. 4200 B. 4279 C. 4581 D. 4800 E. none of these

30. ABDE is a parallelogram. AB = AC, AX = FX and ∠ABC = 50°. ∠AYX = 90°. What is the value of ∠AFX?
A. 15 B. 20 C. 25
D. 30 E. none of these




## Section II : Analytical Ability [15 × 4/3 = 20 marks]

**Directions:** *Solve each of the following problems and mark the correct answer on your Answer Sheet.*

**Questions 1 to 5 are based on the following situation:**

AM, JRZ, NAH, KJS, IA and GMC are six teachers of IBA who sit in adjacent rooms, numbered 1 to 6. The rooms have been allocated as per the following conditions:
NAH's room number must be lower than that of KJs's room.
AM must have room adjacent to that of JRZ.
IA must have room number 5.

1. Which of the following is a possible room allocation, serially from 1 to 6?
A. IA, GMC, JRZ, AM, NAH, KJS B. JRZ, IA, NAH, AM, KJS, GMC
C. JRZ, AM, NAH, GMC, IA, KJS D. KJS, GMC, AM, JRZ, IA, NAH
E. AM, NAH, JRZ, GMC, IA, KJS
2. If JRZ has room number 4, AM must have room number
A. 1 B. 2 C. 3 D. 5 E. 6
3. Which of the following could have room number 6?
A. GMC B. JRZ C. NAH D. AM E. IA
4. Which of the following must be true?
A. IA's room number is lower than that of GMC's
B. KJS's room number is lower than that of IA's
C. NAH's room number is lower than that of IA's
D. NAH's room number is lower than that of AM's
E. AM's room number is lower than that of GMC's
5. If KJS has room number 2, which of the following pairs could have adjacent rooms?
A. IA, JRZ B. IA, NAH C. KJS, GMC D. NAH, AM E. AM, GMC

**Questions 6 to 8 are based on the following sentence:**

A teacher is trying to assign seats to six students – Nourin, Papeeya, Quamrul, Ruhul, Sultana and Tahsan. A classroom has eight seats, arranged in 4 rows of 2 seats each. Seat assignments must be made according to the following conditions:
Nourin must sit alone in a row
Papeeya must sit in the same row as Sultana
Quamrul cannot sit in the same row as Sultana
The rows with only one student must be row 1 and row 3

6. Which of the following students can be assigned to sit in the same row as Quamrul?
A. Nourin B. Papeeya C. Ruhul D. Sultana E. Tahsan
7. If Papeeya and Ruhul are in row 2, which of the following must be true?
A. Nourin is in row 1 B. Quamrul is in row 1 C. Quamrul is in row 4
D. Sultana is in row 3 E. Tahsan is in row 4
8. The number of students eligible to sit in the same row as Tahsan is
A. 1 B. 2 C. 3 D. 4 E. 5

**Questions 9 to 12 are based on the following situation:**

A student has to select three subjects from six courses – K501, O203, S104, T503, V602 and W403 – as per the following rules:
A student must choose at least one of the courses K501 and S104
A student must select either O203 or V602
S104 cannot be selected with O203

9. Which of the following is an acceptable selection of subjects?
   A. K501, O203, and S104 B. K501, S104, and T503 C. K501, S104 and V602
   D. O203, S104, and V602 E. O203, T503, and V602
10. Which of the following pairs of subjects CANNOT be selected?
   A. K501 and O203 B. K501 and T503 C. O203 and W403
   D. T503 and W403 E. V602 and W403
11. If S104 is selected, which of the following must also be selected?
   A. K501 B. O203 C. T503 D. V602 E. W403
12. If 602 is NOT selected, which of the following pair of subjects must be selected?
   A K501 and O203 B. K501 and T503 C. K501 and W403 D. O203 and T503
   E. O203 and W403

**Questions 13 and 14 are based on the following situation:**

A worker has to do five jobs in five consecutive days beginning on Monday. The jobs are: J, K, L, M, and N. The jobs must be done as per the following rules:

Each job takes exactly one day to complete
K must be done before M and N
L cannot be done on a Tuesday
M must be the done one day after J is done

13. If M is done on Friday, which of the following must be true?
   A. J is done on Wednesday B. K is done on Tuesday C. I is done on Monday
   D. L is done on Thursday E. N is done on Thursday
14. On which of the following days can any of the five jobs be done?
   A. Monday B. Tuesday C. Wednesday D. Thursday E. Friday

**Question 15 is based on the following situation**

People from Island A always speak the truth. People from Island B always lie. People from Island C sometime speak the truth, sometime lie.

X said he is not from Island C; Y said he is not from Island B; Z said he is not from Island A

15. Which of the following is true?
   A. X is from Island A Y is from Island C. Z is from Island B
   B. X is from Island C. Y is from Island A. Z is from Island B
   C. X is from Island B. Y is from Island A. Z is from Island C
   D. X is from Island A. Y is from Island B. Z is from Island C
   E. none of these

## Section III : Language & Communication [50 marks]

This section consists of two parts: Part A contains MCQs and must be answered on the Answer Sheet. Part B must be answered in this text booklet in the space provided.

**Part A : MCQ**

**Directions :** Each of the sentences below contains a blank space and is followed by five words or phrases. Select the one word or phrase that best completes the sentence, and mark your Answer Sheet accordingly.

1. Gauhar Jamil, _____ of the pioneers of modern dance, didn't begin dancing until he was 21.
   A. who, as one B. he was C. one D. was one E. whose one
2. _____ often raise funds from the sale of stock.
   A. For corporations to operate B. The operations of corporations
   C. Corporations operate by D. To operate, corporations E. Corporations to operate
3. Diamonds are often found in rock formations called pipes, _____ the throats of extinct volcanoes.
   A. in which they resemble B. which resemble C. there is a resemblance to
   D. they resemble E. to which resemble
4. The size and shape of a nail depends primarily on the function _____ intended,
   A. for which it is B. which it is C. which it is for
   D. for which is E. it is to be

5. _____ relations with friends and acquaintances, play a major role in the social development of adolescents.
   A. What are called peer groups relations are
   B. Peer group relations are
   C. Relations which are peer group
   D. By peer group relations, we mean
   E. Peer group relations, the
6. _____ toward shore, its shape is changed by its collision with the shallow sea bottom.
   A. During a wave rolls
   B. as a wave rolls
   C. A wave rolls
   D. A wave's rolling
   E. When waves roll
7. So complicated _____ that consumers who use a product are seldom aware of where all its components come from.
   A. today trade is international trade today
   B. today international trade is
   C. is international
   D. international trade is today
   E. international trade these days is
8. Unlike most birds, _____.
   A. the heads and necks of vultures lack feathers
   B. feathers are not found on the heads and necks of vultures
   C. vultures do not have feathers on their heads and necks
   D. there are no feathers on vultures' heads and necks
   E. there is lack of feathers on vultures' heads and necks
9. Smaller and flatter than an orange, _____.
   A. a tangerine is easy to peel and its sections separate readily
   B. the peel of a tangerine is easily removed and its sections are readily separated
   C. it's easy to peel a tangerine and to separate its sections
   D. to peel a tangerine is easy, and its sections can be readily separated
   E. it is to peel a tangerine easily and separate its sections readily

**Direction:** *Each of the following sentences contains four underlined words or phrases. Select the word or phrase that is incorrect and mark you Answer Sheet accordingly. If the sentence is correct as its stands, then mark (E) on your Answer Sheet.*

10. Today (A) oysters are grown and harvested much (B) like (C) any another (D) crop. No error (E)
11. When (A) vigorous exercise, muscles require a much greater (B) amount (C) of oxygen than when they (D) are at rest. No error (E)
12. One (A) should never (B) throw water on a live (C) electrical (D) fire. No error (E)
13. In science (A), the results of an experiment are (B) not generally accepted until they had (C) been duplicated (D) in other laboratories. No error (E)
14. Each of the (A) four types of human tooth (B) are suited (C) for a specific (D) purpose. No error (E)

**Directions :** *Each of the statements below is followed by five sentences. Select the sentence that can be logically deduced from the given statement, and mark your Answer Sheet.*

15. When apple growers talk about new varieties of apples, they don't mean something developed last month, last year, or even in the last decade.
   A. Apple growers haven't developed any new varieties in recent decades.
   B. Some varieties of apples can be developed in a short time, but others take a long time.
   C. New varieties of apples were developed the decade before last.
   D. Apples don't grow easily.
   E. New varieties of apples take many years to develop.
16. Blood cholesterol used to be thought of as a problem only for adults.
   A. Blood cholesterol is no longer a problem for adults.
   B. Only children have a problem with blood cholesterol.
   C. Everybody has blood cholesterol.

D. Blood cholesterol affects both adults and children.
E. There is now a cure for blood cholesterol.

17. Even spiders that don not (do not) build webs from silk use it for a variety of purposes, such as constructing egg sacs and nursery items.
A. Spiders that build webs don't build egg sacs or nursery items.
B. Silk is used by all spiders.
C. Silk is used for many purposes
D. All spiders lay eggs
E. All spiders build webs

18. In all cultures, gestures are used as a form of communication, but the same gestures may have very different meanings in different cultures.
A. No two cultures use the same gestures.
B. One gesture will never have the same meaning in two cultures.
C. There are many kinds of gestures.
D. A person from one culture may misunderstand the gestures used by a person from another culture.
E. Gestures are used not only for communication purposes.

**Directions:** The passage below is followed by questions about the vocabulary in the passage. For each question, select the words or phrases that are closest in meaning to the words or phrases that are asked about, and mark your Answer Sheet accordingly.

All birds have feathers, and all animals with feathers are birds. No other major group of animals is so easy to categorize. All birds have wings, too, but wings are not peculiar to birds.

Many adaptations are found in both feathers and wings. Feathers form the soft down of geese and ducks, the long decorative plumes of ostriches, and the strong fight feathers of eagles and hawks. Wings vary from the short, broad ones of the chickens, which seldom fly, to the long, slim ones of albatrosses, which spend almost all their lives soaring on air currents. In penguins, wings have been modified into flippers and feathers into waterproof covering. In kiwis, the wings are almost impossible to detect.

Yet diversity among birds is not so striking as it is among animals. The difference between a hummingbird and a penguin is immense, but hardly as startling as that between a bat and a whale. It is variations in details rather than in fundamental patterns that has been important in the adaptation of birds to many kinds of ecosystems.

19. The word "categorize" in line 2 is closest in meaning to
A. appreciate B. comprehend C. separate D. classify E. visualize

20. Which of the following is closest in meaning to the phrase "Peculiar to" in line 2?
A. unusual for B. common to C. necessary for D. strange for E. unique to

21. The word "slim" in line 7 is closest in meaning to
A. slender B. powerful C. graceful D. soft E. weak

22. The word "detect" in line 9 is closest in meaning to
A. utilize B. extend C. observe D. describe E. investigate

23. Which of the following is closest in meaning to the word "diversity" in line 10?
A. function B. heredity C. specialty D. variety E. change

24. The word "hardly" in line 11 is closest in meaning to
A. definitely B. not nearly C. sometimes D. possibly E. Not always

25. The word "startling" in line 11 is closest in meaning to
A. initial B. exciting C. tremendous D. surprising E. unbelievable

**Direction :** *The passage below is followed by a number of questions. Read the passage and for each question, choose the best answer, and mark your Answer Sheet accordingly. All of your answers should be based on what is stated or implied in the passage.*

When drawing human figures, children often make the head too large for the rest of the body. A recent study offers some insights into this common disproportion in children's illustrations. As part of the study, researchers asked children between 4 and 7 years old to make several drawings of men. When they drew front views of male figures, the size of the heads was markedly enlarged. However, when the children drew rear views of men, the size of the heads was not so exaggerated. The researchers suggest that

children draw bigger heads when they know they must leave room for facial details. Therefore, the odd head size in children's illustrations is a form of planning ahead and not an indication of a poor sense of scale.

26. The main subject of the passage is
    A. what the results of an experiment revealed
    B. how children learn to draw
    C. how researchers can gather data from works of art
    D. what can be done to correct poor sense of scale
    E. why children cannot draw as well as adults
27. It can be inferred that, during the research project, children drew
    A. pictures of men from different angles
    B. figures without facial expressions
    C. sketches of both men and women
    D. only the front view of men
    E. in the presence of the researchers
28. The word "they" in line 4 refers to
    A. researchers B. men C. illustrations D. children E. artists
29. The findings of the experiment described in the passage would probably be of least interest to which of the following groups?
    A. teachers of art to children
    B. commercial artists
    C. experts in child development
    D. parents of young children
    E. school principals
30. The passage provides information to support which of the following conclusions?
    A. Children under the age of 7 do not generally have a good sense of scale.
    B. With training, young children can be taught t6o (to) avoid disproportion in their art.
    C. Children enlarge the size of the head because they sense that it is the most important part of the body.
    D. Children must gradually move from drawing simple objects to drawing human figures.
    E. Children plan ahead when they are drawing pictures.

**Part B: Test of Written English** **[20 marks]**

Directions: This part contains **three questions**. Answer these questions in this test booklet in the designated spaces.

1. In the box below, write an essay on <u>one of the qualities you like most about yourself.</u> Your essay must not be more than 18 lines long. [10 marks]
2. Use each of the following group of words to make a meaningful sentence [1 × 5 = 5]
   Example : enjoy, grass, garden
   Answer: I enjoy watering the grass and working in the garden.
   (a) take, polluted, fish
   (b) shopping, drive, evening
   (c) brush, toothpaste, squeeze
   (d)student, room, nervous
   (e) gift, excited, box

3. Combine the following sets of short sentences into **<u>one</u>** sentence that is grammatically correct and retains the original meaning of the group of sentences. Omit repeated words where necessary. [1 × 5 = 5 marks]

- Bina moved in the desk chair.
- Her moving was uneasy.
- The chair was hard.
- She worked at her assignment.
- The assignment was for her English class.

- Two children sit on the ground.
- They play in the mud.
- The mud is wet and sticky.

- Arif and Anushka decided to move out of their apartment.
- The apartment was cramped.
- The apartment was a one-bedroom.

- I looked at my watch.
- I did this after taking a couple of wrong turns.
- I realized I was going to be late for my first class.

- Kamal began to speak.
- His voice was cracking.
- His palms were sweating.
- His heart was thumping.

## Answer Key

**Section I: Math**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. B | 2. A | 3. D | 4. A | 5. A | 6. C | 7. D | 8. E | 9. D | 10. A |
| 11. E | 12. C | 13. B | 14. A | 15. D | 16. E | 17. C | 18. B | 19. A | 20. B |
| 21. B | 22. C | 23. A | 24. C | 25. E | 26. B | 27. D | 28. D | 29. E | 30. B |

**Section II: Analytical Ability**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. C | 2. C | 3. A | 4. C | 5. A | 6. E | 7. E | 8. B |
| 9. C | 10. D | 11. D | 12. A | 13. A | 14. A, C | 15. D | |

**Section III: Language and Communication**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. C | 2. D | 3. B | 4. A | 5. E | 6. B | 7. C | 8, C | 9. A | 10. D |
| 11. A | 12. E | 13. C | 14. C | 15. A | 16. D | 17. B | 18. D | 19. D | 20. E |
| 21. A | 22. C | 23. D | 24. B | 25. C (D) | 26. A | 27. A | 28. D | 29. B | 30. E |

## BBA (IBA) Admission Test (2002-03) Solution

### *Section 1: Mathematics*

1. (B) ধরি 1 লিটার তেলের দাম = x টাকা ∴ 2 লিটার তেলের দাম = 2x টাকা
এবং Container এর দাম = x - 23 টাকা প্রশ্নমতে, $2x + x - 23 = 100 \rightarrow 3x = 123$
∴ $x = 41$ Answer: B

2. (A) আরিফ 1 ঘন্টায় করে সম্পর্ণ কাজ অর্থাৎ 1 অংশ

আসিফ 1.5 ঘন্টায় করে সম্পূর্ণ কাজ অর্থাৎ 1 ঘন্টায় করে $\frac{1}{1.5}$ অংশ

∴ দুজন একসাথে 1 ঘন্টায় করে $1 + \frac{1}{1.5}$ অংশ $= 1 + \frac{1}{\frac{3}{2}}$ অংশ $= \frac{5}{3}$ অংশ

∴ দুজন একসাথে $\frac{1}{2}$ ঘন্টায় করে $\frac{\frac{5}{3}}{2}$ অংশ $= \frac{5}{6}$ অংশ; বাকী থাকে $= 1 - \frac{5}{6}$ অংশ $= \frac{1}{6}$ অংশ (এ অংশটুকু আসিফকে একা করতে হবে)

আসিফ $\frac{2}{3}$ অংশ করে 1 ঘন্টায় ∴ আসিফ $\frac{1}{6}$ অংশ করে $\frac{3 \times 1}{2 \times 6}$ ঘন্টায় $= \frac{1}{4}$ ঘন্টায় $= \frac{1}{4} \times 60$ মিনিটে 15 মিনিটে.

Answer: A

3. (D) দেয়া আছে, $x + \frac{1}{x} = ২ \rightarrow \frac{x^2+1}{x} = 2 \rightarrow x^2 + 1 = 2x$

$\rightarrow x^2 - 2x + 1 = 0 \rightarrow (x-1)^2 = 0 \rightarrow x - 1 = 0$

$\therefore x = 1$

অতএব, $\frac{x}{(x^2+x-1)} = \frac{1}{(1+1-1)} = \frac{1}{1} = 1$ Answer: D

4. (A) ধরি yellow মার্বেল = x

$\therefore$ blue মার্বেল = 3x $\therefore$ red মার্বেল = $\frac{x}{2}$

এবং orange মার্বেল = $\frac{x}{2}$ Total মার্বেল = $x + 3x + \frac{x}{2} + \frac{x}{2} = 5x$

5x এর মধ্যে orange = $\frac{x}{2}$ টি $\therefore$ 100 এর মধ্যে orange = $\frac{x \times 100}{2 \times 5x} = 10$ টি

Answer: A

5. (A) ধরি, সে x ঘন্টা কাজ করেছিল (x > 8) প্রথম 8 ঘন্টায় পেল = (40 × 8) = 320 টাকা

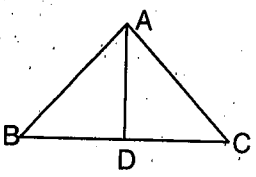
বাকী (x – 8) ঘন্টায় পেল = 52(x-8) = (52x – 416) টাকা

$\therefore$ মোট পেল = (320 + 52x – 416) টাকা = (52x – 96) টাকা

অর্থাৎ, গড়ে প্রতি ঘন্টায় পেল $\frac{52x-96}{x}$ টাকা প্রশ্নমতে, $\frac{52x-96}{x} = 49 \rightarrow 52x - 96 = 44x \rightarrow 8x = 96$

$\therefore x = 12$ Answer: A

6. (C)




<BCA = 30° ও <BAC = 110° হলে

Δ ABC এ < ABC = 40°

Δ ABD এ AD = BD হলে,

< BAD = < ABD = 40°

< BAC = 110° এবং <BAD = 40° হলে,

< DAC = 110° - 40° = 70°

Answer: C

7. (D) $\frac{y}{x+1} = 4 \rightarrow y = 4x + 4$

আবার, $\frac{4x+3}{y+2} = 1.5 \rightarrow \frac{4x+4-1}{y+2} = 1.5$

$\rightarrow \frac{y-1}{y+2} = 1.5 \rightarrow y - 1 = 1.5y + 3 \rightarrow .5y = -4 \rightarrow y = -8$

$\therefore -8 = 4x + 4 \rightarrow 4x = -12 \rightarrow x = -3$ Answer: D

8. (E) x একটি ধনাত্মক পর্ণসংখ্যা এবং y > - 2

অর্থাৎ, y ঋণাত্মক বা ধনাত্মক দুটোই হতে পারে এবং y পর্ণসংখ্যা কিনা তা বলা নেই।

অতএব, প্রদত্ত answer choice গুলোর কোনটিই সবসময় positive নয়। Answer: E

9. (D) ধরি, মোট বিক্রিত পণ্য = 100 টি এবং প্রতিটির ক্রয়মল্য = 1 টাকা

$\therefore$ মোট ক্রয়মল্য = 100 টাকা

মল্য স্বাভাবিক রাখলে, profit = 40 টাকা = x মল্য কমালে বিক্রয় বাড়ে 40%

∴ মোট বিক্রিত পন্য = 140 টি  অর্থাৎ, মোট ক্রয়মল্য = 140 টাকা

এবং profit = $140 \times \frac{26}{100}$ [ বিক্রয়মল্য 140 থেকে 10% কমালে হয় {140-(140×$\frac{10}{100}$)}

= 140 – 14 = 126 টাকা; অর্থাৎ, profit থাকে 26% ]= 36.40 টাকা = y

∴ $\frac{y}{x} = \frac{36.40}{40} = .90$  Answer: D

10. (A) ধরি, cost = x টাকা

∴ selling price = .9x টাকা (10% loss এ )

যদি selling price (.9x + 200) টাকা হতো, profit হতো .15x

অর্থাৎ, .9x + 200 = x + .15x → .9x + 200 = 1.15x → .25x = 200 ∴ x = 800

Answer: A

11. (E) <ABE = 25° এবং <EDC = 100 °

<BAE = 90°;

অতএব <AEB = 180° - (90°+25°) = 65°

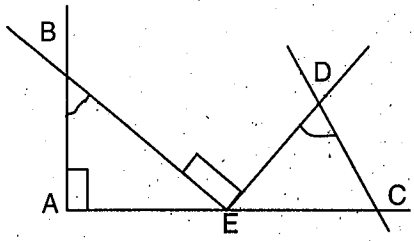
আবার, <BED = 90°;

অতএব, <DEC = 180° - (90°+65°)= 25°

Δ DEC -এ <DEC = 25°; <EDC = 100°

∴ <DCE = 180° - (100° + 25°) = 55°

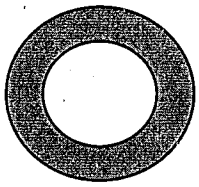
Answer: E




12. (C) ৫টি ক্রমিক বিজোড় সংখ্যার গড় 55, অর্থাৎ, 3rd সংখ্যাটি 55; শেষের দুটি সংখ্যা হচেছ 57 ও 59

GB msL¨vØ‡qi Mo = 58  Answer: C

13. (B)



ধরি, ভেতরের বৃত্তের ব্যাস = x C.M

∴ বাইরের বৃত্তের ব্যাস = (x + 8) C.M

বাইরের বৃত্তের ব্যাসার্ধ = $\frac{x+8}{2}$ C.M

এবং area = $\pi\left(\frac{x+8}{2}\right)^2$

অর্থাৎ, $\pi\left(\frac{x+8}{2}\right)^2 - \pi\left(\frac{x}{2}\right)^2 = 40\pi$

→ $\frac{(x+8)^2}{4} - \frac{x^2}{4} \rightarrow x^2 + 16x + 64 - x^2 = 160 = 40$  or, 16x = 96 ∴ x = 6

অতএব, ভেতরের বৃত্তের ক্ষেত্রফল = $\left(\frac{x}{2}\right)^2 \pi = \frac{6^2}{4}\pi = 9\pi$  Answer: B

14. (A) y টাকায় পাওয়া যায় x টি বই

∴ 1 টাকায় পাওয়া যায় $\frac{x}{y}$ টি বই ∴ m টাকায় পাওয়া যায় $\frac{mx}{y}$ টি উন  Answer: A

15. (D) 1 ডজন আপেলের দাম = 100 টাকা  1 ডজন আমের দাম = 120 টাকা

যদি আপেল ও আমের জন্য একই পরিমান টাকা খরচ করতে হয়, তবে খরচকৃত টাকার পরিমান 100 ও 120 দ্বারা বিভাজ্য হবে।

ধরি, টাকার পরিমান = 600  ∴ মোট খরচ = 600 + 600 = 1200 টাকা

আপেল পাওয়া যাবে $\frac{600}{100}$ = 6 ডজন  আম পাওয়া যাবে $\frac{600}{100}$ = 5 ডজন

আপেল থেকে পাওয়া যাবে = 6 × 110 = 660 টাকা ;  আম থেকে পাওয়া যাবে = 5 × 110 = 550 টাকা

মোট বিক্রয়মল্য = 660 + 550 = 1210 টাকা  1200 টাকায় লাভ হল = 10 টাকা

100 টাকায় লাভ হল = $\frac{10\times100}{1200}$ টাকা = $\frac{10}{12}=\frac{5}{6}$ টাকা  অর্থাৎ, প্রায় 1 টাকা বা 1% profit

Answer: D

16. (E) a > 0, b < 0, c > 1, d < 1

a একটি ধণাত্মক সংখ্যা b ঋণাত্মক c ধণাত্মক; কিন্তু d ঋণাত্মক কি ধণাত্মক তা স্পষ্ট নয়।

অতএব, কোনটিই প্রমাণ করা যায় না।  Answer: E

17. (C) A. $\frac{23}{45}\rangle\frac{23}{46}=\frac{1}{2}$;  B. $\frac{24}{46}\rangle\frac{24}{48}=\frac{1}{2}$  D. $\frac{2}{3}\rangle=\frac{1}{2}$;  E. $\frac{29}{58}=\frac{1}{2}$

কিন্তু C. $\frac{28}{57}\langle\frac{28}{56}=\frac{1}{2}$  Answer: C

18. (B) ধরি, total distance = x

গাড়িতে গেল = $\frac{x}{4}$ এবং হেঁটে গেল = $\frac{3x}{4}$  হাঁটার সময় = 15 হলে গাড়িতে যাওয়ার সময় = 1

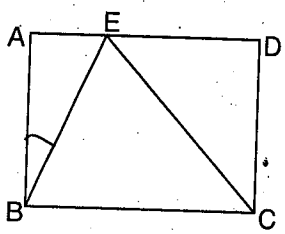
∴ হাঁটার গতি = $\frac{\frac{3x}{4}}{15}$ আর গাড়ির গতি $\frac{\frac{x}{4}}{1}$

অনুপাত = $\frac{x}{4}:\frac{3x}{60}=\frac{x/4}{3x/60}=\frac{x}{4}\times\frac{60}{3x}=\frac{5}{1}=5:1$  Answer: B

19. (A) 6টি pencil = 4টি pen  ∴ 4টি pencil = $\frac{4\times4}{6}$ টি pen = $\frac{8}{3}$ টি pen = 1টি C.D

আবার, 1টি book = 6টি pen  ∴ 1টি book : 1টি C.D = 6 : $\frac{8}{3}=\frac{9}{4}$  Answer: A

20. (B)




ABCD একটি আয়তক্ষেত্র।

<ABE = 30°; BC = 6 cm; ED =2AE

Δ ABE এ <ABE = 30° এবং <BAE = 90°

∴ <AEB = 60°

BC = 6 cm; ∴AD = 6 cm

আবার, AD = AE + ED = AE + 2AE = 3AE

∴AE = 2 cm

30° এর বিপরীত বাহু 2 cm হলে 60° এর বিপরীত বাহু $2\sqrt{3}$ cm. ∴area of Δ AEB = $\frac{1}{2}\times2\times2\sqrt{3}=2\sqrt{3}$

Answer: B

21. (B) $\frac{yx}{z^2}=27;\ \frac{y^2}{zx}=\frac{1}{3\sqrt{3}}\rightarrow\frac{yx}{z^2}=3^3;\ \frac{y^2}{zx}=\left(\frac{1}{\sqrt{3}}\right)^3$

এখন, $\frac{yx}{z^2}\times\frac{y^2}{zx}=3^3\times\left(\frac{1}{\sqrt{3}}\right)^3\rightarrow\frac{y^3}{z^3}=3^3\times\left(\frac{1}{\sqrt{3}}\right)^3=\left(3\times\frac{1}{\sqrt{3}}\right)^3$

$\rightarrow\left(\frac{y}{z}\right)^3=\left(3\times\frac{1}{\sqrt{3}}\right)^3\rightarrow\frac{y}{z}=\frac{3}{\sqrt{3}}\ \therefore\ \frac{z}{y}=\frac{\sqrt{3}}{3}$  Answer: B

22. (C) $a > 0, b < 0, c > a$
a ধণাত্মক, b ঋণাত্মক এবং c ধণাত্মক। কিন্তু কোনটির মান দেয়া নেই। Answer: C

23. (A) $\frac{x}{a} + \frac{a}{b} = 4 \rightarrow \frac{bx + a^2}{ab} = 4 \rightarrow a^2 + bx - 4ab = 0$

$\rightarrow bx = 4ab - a^2 \rightarrow x = \frac{4ab - a^2}{b} = 4a - \frac{a^2}{b}$ Answer: A

24. (C) ধরি, Kalim এর weight = x kg. (x পর্ণসংখ্যা)
$x + 6 < 70$ এবং $x + 8 > 70$
$\therefore x + 7 = 70$ (যেহেতু x পর্ণসংখ্যা) $x = 63$ Answer: C

25. (E) প্রতি y এ defective = x
$\therefore$ 100 এ defective = $\frac{100x}{y}$

প্রশ্নমতে, 5% = $\frac{100x}{y}$ $\therefore 100\% = \frac{100x \times 100}{5y} = \frac{2000x}{y}$ Answer: E

26. (B) সব চকলেট সমানভাবে ভাগ করলে প্রত্যেকে 3 টি করে পেত।
অর্থাৎ, মোট চকলেটের সংখ্যা 3 দিয়ে বিভাজ্য।

ধরি, চকলেটের সংখ্যা = x বাচ্চার সংখ্যা = $x/3$

প্রশ্নমতে, $\left(\frac{x}{3} + 3\right)2 = x + 1$

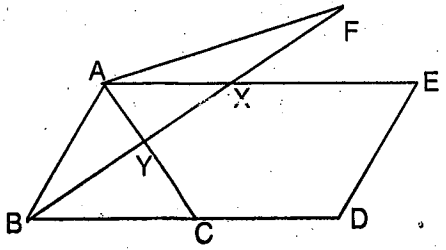
$\rightarrow \frac{2x}{3} - x = 1 - 6$ $\rightarrow \frac{-x}{3} - = -5$ $\rightarrow x = 15$ Answer: B

27. (D) ধরি, per unit cost = x টাকা
$\therefore$ মোট cost = 48x টাকা
8 টি ভেঙ্গে যাওয়ায় মোট light = 40 টি এখন, per unit cost = (x + 24) টাকা
প্রশ্নমতে, $48x = 40(x + 24) \rightarrow 48x - 40x = 960 \rightarrow x = 120$
Answer: D

28. D) ঢাকা হতে চট্টগ্রামগামী ট্রেনটি 1 ঘন্টায় 62 km. যায়।
চট্টগ্রাম হতে ঢাকাগামী ট্রেনটি 1 ঘন্টায় 48 যায়
$\therefore$ 1 ঘন্টায় দুটি বিপরীতমুখী ট্রেন মোট (62 + 48) = 110 km. দরত্ব অতিক্রম করে।
অর্থাৎ মুখোমুখি হবার 1 ঘন্টা আগে তাদের দরত্ব = 110 km. Answer: D

29. (E) 3, 4, 5, ও 7 এর ল. সা. গু বের করতে হবে। ল. সা. গু = 420
বলা হয়েছে island x এর জনসংখ্যা 5000 এর কম। এখন x এর জনসংখ্যা 4620, 4200, 420, 840 (আরও অনেক) যেকোন কিছু হতে পারে। 4620 ধরে নিলে island y এর জনসংখ্যা 4279 হয় (Answer choice B) কিন্তু আসলে answer দেয়া নেই। কারণ answer হওয়া উচিত cannot be determined (উলেখ্য, none of these ও cannot be determined এক অর্থ বহন করেনা)।

30. (B) AB = AC, AX = FX; <ABC = 50°
<AYX = 90°




আমরা জানি, parallelogram বা সামান্তরিকের বিপরীত কোনগুলো পরস্পর সমান। অর্থাৎ <ABC = <AED = 50° অর্থাৎ
<ABC + <AED = 100°
অতএব, <BAE + < EDB = 360° - 100° = 260° $\therefore$ <BAE = 130

আবার, ΔABC এ <ABC = <ACB [কারণ AB = AC] ∴ <BAC = 80° [180° - (50° + 50°)]
অর্থাৎ <CAE = 50° [130° - 80°]
Δ AYX - এ <YAX = 50° ও <AYX = 90°;
অতএব, <AXY = 40° ∴ <AXF = 140°
∴ <FAX + AFX = 180° - 140 ° = 40°
যেহেতু AX = FX; সুতরাং কোণদ্বয় সমান ∴ <AFX = 20° Answer: B

## Section 2: Analytical Ability

***Questions 1- 5***

IBA এর AM, JRZ, NAH, KJS, IA এবং GMC; এরা পাশাপাশি রুমে বসেন (রুম নং 1 থেকে 6); শর্তগুলো হচ্ছে-
NAH এর রুম নং KJS এর রুম নং এর চেয়ে ছোট হবে।
AM এর রুম নং JRZ এর ঠিক পাশে হবে।
IA এর রুম নং হবে 5.

1. (C) Answer choices (A) ও (B) বাদ কারণ IA 5 নং রুমে নেই।
(D) তে NAH এর রুম নং KJS এর রুম নং এর চেয়ে ছোট নয়।
(E) তে AM ও JRZ এর রুম পাশাপাশি নয়। শুধু (C) তে সব শর্ত মানা হয়েছে। Answer: C
2. (C) AM এর রুম যেহেতু JRZ এর ঠিক পাশে হবে, তাই AM এর রুম নং হবে 3 অথবা 5; কিন্তু 5 নং রুমে IA বসবে।
অতএব, AM এর রুম নং 3. Answer: C
3. (A) IA রুম 5 এ বসবে, (6) বাদ, AM এবং JRZ পাশাপাশি রুমে বসবে। 6 নং রুম এর পাশের রুমে আছে IA, (B) এবং (D) choice বাদ। NAH 6 নং রুমে যাবেনা, কারণ তার রুম নং সেক্ষেত্রে KJS এর চেয়ে কম হওয়া সম্ভব নয়।
Answer: A
4. (C) NAH এর রুম নং KJS এর চেয়ে ছোট হবে। তাই সে 6 নং রুমে বসবে না। 5 নং রুম IA এর। তাই NAH 1 থেকে 4 এর কোন রুমে বসবে। Answer: C
5. (A) KJS-2 নং রুমে গেলে NAH যাবে 1 নং এ। যেহেতু AM এবং JRZ পাশাপাশি রুমে যাবে, তাদের জন্য available রুম থাকে 3 এবং 4. সুতরাং AM বা JRZ এর একজন অবশ্যই 4 নং রুমে, অর্থাৎ JRZ এর পাশের রুমে বসবে।
Answer: A

***Question 6 - 8***

একজন শিক্ষক তার ছয়জন ছাত্র/ছাত্রী-নওরীন, পাপিয়া, কামরুল, রুহুল, সুলতানা এবং তাহসান এর জন্য সিট নির্ধারণ করছেন। ক্লাসে আটটি সিট আছে। চারটি Row তে, প্রতিটিতে দুটি করে। condition গুলো হচ্ছেঃ
নওরীন এক Row তে একা বসবে।
পাপিয়া এবং রুহুল একই Row তে বসবে।
কামরুল এবং সুলতানা এক Row তে বসতে পারবে না।
যেই Row তে শুধু একজন student আছে, সেটি অবশ্যই Row -1 এবং Row -3 হবে।

6. (E) নওরীন একা বসবে। পাপিয়া আর রুহুল একসাথে বসবে। সুলতানা, কামরুল এর সাথে বসতে বসতে পারবে না।
7. (E) নওরীন এK Row তে একা বসবে। পাপিয়া, রুহুল Row 2 তে বসলে বাকি থাকে দুটি Row. আর একটি একজন এবং অন্যটিতে দুজ b (Row 4) বসবে। তাহসান, কামরুল আর সুলতানার মধ্যে, তাহসান যদি একা বসে তবে কামরুল এবং সুলতানাকে একতে বসতে হয়। যেটি সম্ভব না। তাই তাহসান অবশ্যই একা বসবেনা। সে Row 4 এ বসবে। Answer: (E)
8. (B) নওরীন একা বসবে। পাপিয়া, রুহুল একসাথে বসবে। কামরুল আর সুলতানা একত্রে বসতে বসতে পারবেনা। এদের কাউকে অবশ্যই তাহসান এর সাথে বসতে হবে। Ans (B)

**Question 9 - 12**

একজন Student ৩টি বিষয় নিয়ে ছয়টি course থেকে। course গুলো K501, O203, S104, T503, V602, and W403. condition হচ্ছেঃ
(i) K501 এবং S104 এর ১টি অবশ্যই নিতে হবে।
(ii) O203 এবং V602 এর যে কোন ১টি নিতে হবে। কিন্তু একসাথে দুটি নেয়া যাবেনা।
(iii) S104 এবং O203 এক সাথে নেয়া যানেনা।

9. (A) এবং (D) তে ৩নং condition ঠিক হয়না, (B) তে ২নং condition break হয়। (C) ঠিক আছে। (E) তে ১নং condition break হয়। Answer: (C)

10. (D) T503 এবং W403 নিলে আর subject নেয়া যায় ১টি। এক্ষেত্রে ১ এব ৩নং condition এর যেকোন ১টি break হয়। Answer (D)
11. (D) S104 নিলে O203 নেয়া যাবেন। তাই ২নং condition অনুযায়ী অবশ্যই V602 নিতে হবে। Answer: (D)
12. (A) V602 না নিলে O203 নিতেই হবে। সেক্ষেত্রে S104 নেয়া যাবেনা। আবার, K501 এবং S104 এর ১টি নিতেই হবে। এক্ষেত্রে K501 নিতে হবে। Answer: (A)

***Question 13 - 14***

একজন শ্রমিক সোমবার থেকে শুরু করে ৫টি কাজ করবেন। কাজঃ J, K, L, M, N কাজগুলো নিম্নোক্ত Condition এ করতে হবেঃ

(i) একটি কাজ করতে একদিন লাগবে।
(ii) K কাজটি M এবং N এর আগে করতে হবে।
(iii) L কাজটি মঙ্গলবার করা যাবেনা।
(iv) J করবার একদিন পর M করতে হবে।

13. (A) M যদি শুক্রবার হয়, তবে তার একদিন আগে, অর্থাৎ বুধবারে J হবে। Answer: (A)
14. (A-C-) একাধিক উত্তর আসে। প্রশ্নে ভুল আছে। (A) এবং (C) উভয়ই উত্তর হয়।

**Question 15**

A দ্বীপের লোক সর্বদা সত্যবাদী। B দ্বীপের লোক সর্বদা মিথ্যাবাদী। C দ্বীপের লোক কখনও সত্যবাদী কখনও মিথ্যাবাদী।
X বলল সে C দ্বীপের নয় Y বলল সে B দ্বীপের নয় Z বলল সে A দ্বীপের নয়।

15. (D) এখানে Answer থেকে একটি একটি করে try করতে হবে। Ans. (A) অথবা (B) হলে Z is from island B হয়। এক্ষেত্রে দেখা যায় Z সত্যি কথা বলছে। Ans(C) তেও X Island B থেকে আসছে। সুতরাং এক্ষেত্রে সে সত্যি কথা বলছে। Island B এর মানুষ মিথ্যাবাদী। সুতরাং Ans(D) হলে সবগুলো statement মিলে যায়। Answer: D.

## Section 3 English

1. (C) এটি একটি simple sentence. সুতরাং option (C) এর 'One' দ্বারা শন্যস্থান পরণ করা হলে তা একটি adjective phrase হবে বা subject "Gauhar Jamil" কে modify করবে।
2. (D) এখানে verb raise এর জন appropriate subject প্রয়োজন। 'Corporation' এখানে subject এর কাজ করছে। সাথের 'To operate' – infinitive টি Adverb হিসেবে modifier এর কাজ করছে।
3. (B) এখানে 'Diamonds' এর জন্য Relative pronoun ব্যবহার করা হবে যা immediately main clause এর পরে বসবে। এইজন্য 'which resemble' ব্যবহার করা যুক্তিযুক্ত।
4. (A) এখানে 'nail' এর size & shape এর purpose এর কথা বলা হয়েছে। তাই for ব্যবহার করতে হবে। এছাড়া 'it' – pronoun টি nail কে refer করছে।
5. (E) এই sentence এর subject per group relations. Subject এর সাথে adjective phrase ব্যবহার করা হয়। এই adjective phrase এর marker হিসেবে একই Noun, 'the relation' ব্যবহার করা হয়েছে।
৬. (B) এখানে Pronoun 'its' ব্যবহার করা হয়েছে। সুতরাং subject টি singular. (E) বাদ, During এর সাথে clause ব্যবহার করা হয় না। (A) বাদ, (C) এবং (D) option এ Subordinate clause marker নেই। তাই (B) উত্তর।
7. (C) Sentence টি শরু হয়েছে একটি Adverbial দিয়ে। সুতরাং; এর পরপরই একটি auxilary verb আসবে। 'is' একটি Aux. verb.
8. (C) Sentence এর শরুতে রয়েছে একটি Adj. phrase. তাই এর পরপরই; phrase টি যাকে modify করে সেই subject টি বসবে। এক্ষেত্রে 'vultures' subject.
9. (A) প্রশ্ন নং (8) এর অনুরূপ। এক্ষেত্রে Adjective clause টির subject হল a tangerine.
10. (D) Sentence এ any আছে। তাই another এর বদলে other হবে।
১১. (A) When একটি clause marker. এখানে appropriate phrase marker "During" ব্যবহার করতে হবে।
12. (E) Sentence এ কোন Error নেই।
13. (C) had been দিয়ে past tense express করা হয়েছে sentence টি। present tense এ আছে। তাই have হবে।

14. (C) এখানে each ব্যবহার করা হয়েছে। সুতরাং verb অবশ্য singular – 'is' হবে।
15. (A) বলা হচ্ছে যে Apple grower রা new variety এর কথা বললে এমন কোন variety এর কথা বলে না যেটি last decade এর মধ্যে হয়েছে। কোথাও বলা নেই new variety develop করতে কতদিন লাগে। (E) বাদ, (C) তে grammatical Error আছে। সুতরাং best answer (A)
16. (D) বলা আছে, আগে blood cholesterol পর্বে শুধু adult দের problem ভাবা হতো। অর্থাৎ এখন আর হয়না। সুতরাং; এখন এটি adult এবং children উভয়ের problem ভাবা হয়।
17. (B) বলা হচ্ছে, যেসব spider বাড়ি বানাতে silk ব্যবহার করেনা তারাও অন্যান্য কাজে ব্যবহার করে। অর্থাৎ যারা silk দিয়ে বাড়ি বানায়না তাদেরও silk কাজে দেয়; সুতরাং; সব spider silk ব্যবহার করে।
18. (D) বলা হয়েছে সব culture এ gesture ব্যবহার করা হয়। তবে সব culture এর সব gesture same না। সুতরাং; কোন ১টি specific culture এর একজন মানুষ; অন্য culture এর সব gesture সঠিকভাবে নাও বুঝতে পারে।
19. (D) এখানে categories দিয়ে চিহ্নিত করা বোঝানো হয়েছে।
20. (E) এখানে peculiar ব্যবহার করা হয়েছে "অন্যান্য" বুঝাতে।
21. (A) Albatross এর wing পাতলা, এবং slim মানেও তাই।
22. (C) detect দিয়ে বোঝানো হয়েছে 'দেখতে পাওয়া' অথবা 'দৃশ্যমান'।
23. (D) এখানে diversity দ্বারা বৈচিত্র বোঝানো হয়েছে। সুতরাং closest meaning টি হবে variety.
24. (B) এখানে 'hardly' দ্বারা বোঝানো হয়েছে 'প্রায় নয়' অথবা একদম অল্প।
25. (C) startling দ্বারা বোঝানো হয়েছে উলেখ্যযোগ্য অথবা 'অত্যন্ত'।
    Correction : (D)
    এখানে startling মানে হলে চমকে যাওয়ার মত। তার সাথে মিলে "surprising".
26. (A) এখানে বাকি option গুলোর কোনটির জন্যই sufficient information দেয়া নেই।
27. (A) Passage এ male figure এর front view এবং rear view দুটোর কথাই বলা আছে।
28. (D) এখানে শুধু children রাই ছবি আকছে যা immediate আগের line এ mention করা আছে। তাই they দ্বারা children refer করা হচ্ছে।
29. (B) বাকি সবগুলো option এ যাদের mention করা আছে তারা প্রত্যেকেই children এর সাথে related.
30. (E) Children রা মুখের facial expression দেখানোর জন্য মুখটি বড় আঁকে। সুতরাং অবশ্যই তারা মুখের facial expression এর কথা আগে থেকে ভেবে থাকে।

## WRITTEN ENGLISH: PART (2)

**Question no (1)**
I consider myself as a very friendly person. Therefore, among all the qualities I have, I consider 'friendliness' as the best trait in my characteristics.

From my very boyhood, I think, this quality of mine has helped me in numerous situations. Apart from making some excellent friends, this nature of mine has helped me to cope up with different kinds of people & in different situations.

I also believe, I have been able to overcome some adverse traits of human nature through the proper exercise of 'friendless'. My success in life, my relationships with people, my image & reputation – all of these have been the positive results of this distinct nature of mine.

Therefore, I believe, qualities or traits like this, make people different from others and help them in different situations.

**Question no (2)**

a. Lake, Polluted, Fish.
The lives of fishes are endangered if the lakes get polluted

b. Shopping, drive, evening
After shopping, we went for drive in the evening.

c. Brush, toothpaste, squeeze.
Before brushing your teeth you have to squeeze the toothpaste out.

4. Student, room, nervous
Students usually get nervous in the examination room.

5. Gift, excited, box.
The boy got very excited getting the gift box.

**Question no (3)**

- ☑ While working for her English class assignment, Bina moved the hard chair uneasily
- ☑ Two children played sitting on the wet & sticky mud.
- ☑ Since the apartment was cramped & one-bedroom, Arif & Anushka decided to move out.
- ☑ After taking a couple o wrong turns, when I realized I was going to be late for my first class, I looked at my watch.
- ☑ With sweating palms and thumping heart Kamal began to speak with a cracking voice.

# BBA (IBA)

## Admission Test Question (2003-2004) with Solution

## PART-I : MCQS

### Section-I: Mathematics

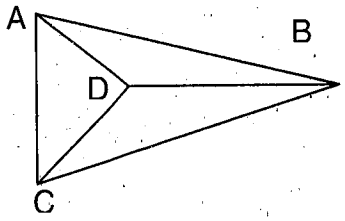
[1 × 30 = 30 Marks]

**Direction:** Solve each of the following problems and mark the correct answer on your Answer Sheet. **DON NOT USE A CALCULATOR.** Figures not drawn to scale

1. If $x \geq 8$ and $y \leq 3$, then which of the following must be true?
   (A) x/y=5 (B) x+y≤11 (C) x-y ≥5 (D) xy≤24 (E) none of these
2. Which of the following is true?
   (A) $0<\frac{1}{10}<0.01$ (B) $0.12<\frac{1}{8}<0.13$ (C) $0.3<\frac{1}{4}<.5$ (D) $0.3<\frac{1}{3}<0.33$ (E) None of these
3. A motorist travels x miles in y hours and z minutes. What is his average speed in miles per hour?
   (A) x/(y+60z) (B) (60y+z)/x (C) 60x/(y+z) (D) 60x/(60y+z) (E) none of these
4. If one number exceeds another number by 18 and the larger number is $5/2$ times the smaller, then the smaller number is
   (A) 12 (B) 14 (C) 15 (D) 16 (E) None of these
5. Asif purchased a radio from a store and sold it to Rahman and made a profit of 20%. After few months Rahman sold the same radio to Fahad and incurred a loss of 15%. If Fahad bought the Radio for Tk. 510 what was the original price of the radio?
   (A) 425 (B) 450 (C) 475 (D) 500 (E) none of these
6. This year the school allotted 60% of its budget for development of the computer center and its budget this year is 15% higher than that of the last year. If the last year's budget was Tk. 1,000,000 and the allocation to the computer center has increased by 20% compared that of the last year, calculate the allocation to the computer center last year (in taka).
   (A) 500,000 (B) 525,000 (C) 550,000 (D) 575,000 (E) none of these
7. if $x=(0.1)^2$, $y=\frac{1}{5}$ and $z=\sqrt{1/100}$, which of the following is true.
   (A) x/y>z (B) x/z>y (C) x<y<z (D) xy>z (E) none of these
8. If 4x-7<2x+13, then which of the following must be true?
   (A) x>7 (B) x>13 (C) x<10 (D) x<6 (E) None of these
9. A company pays a tax of 10% on its first Tk. 100,000 earnings and 15% on all earnings in excess of Tk. 100,000. What will be the amount of tax, in taka, if its earning Tk. 275,000?
   (A) 36,250 (B) 37,500 (C) 35,000 (D) 35,250 (E) none of these
10. A rope, x feet long, is cut into two pieces such that the length of one piece is 1 foot more than twice the length of the other piece. Which of the following is the length, in feet, of the larger piece?
    (A) (x+2)/2 (B) (2x+1)/2 (C) (2x+3)/3 (D) (2x+3)/3 (E) none of these
11. If y = 8x + 12 and x = z + 2, what is y in terms of z ?
    (A) z + 14 (B) 8z - 4 (C) 8z + 10 (D) 8z + 16 (E) none of these
12. Which of the following fractions is the largest?
    (A) 12/15 (B) 5/6 (C) 17/21 (D) 11/14 (E) 16/23
13. Which of the following is greater than 1?
    (A) 0.00004/0.005 (B) 0.000006/0.0001 (C) 0.01/0.003
    (D) 0.003/0.006 (E) 0.001/0.01
14. A manufacturer of TV wants to make a profit of Tk. 3,00,000 on sale of 200 TV sets. It costs Tk. 10,000 each to make the first 100 TV sets and Tk. 7,500 each to make TV sets after the first 100 sets. What should be the selling price of each TV sets in taka?
    (A) 10,250 (B) 10,350 (C) 10,500 (D) 10,750 (E) None of these
15. During a particular day, x number of applicants came to IBA to submit their applications before lunch. Of them 70% were male applicants. On the same day, y number of applicants came to submit their applications after lunch and all of them were male applicants. On that particular day, the ratio of male applicants to female applicants was 4:1. Calculate y in terms of x.
    (A) 0.28x (B) 0.35x (C) 0.4x (D) 0.5x (E) None of these

16. In the figure, AD=DB=CD. If <DCB=$30^0$ and <ABD=$50^0$ calculate <DCA.

(A) 10° (B) 20°
(C) 45° (D) 60°
(E) none of these



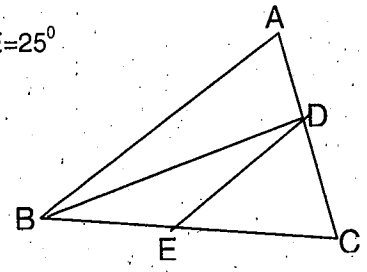

17. If y/x = 1/5 and 2x+y= 33, then what is the value of x?
(A) 33/5 (B) 13 (C) 15 (D) 17.5 (E) none of these

18. If x, y, w and z correspond to four numbers - 3, ½, - 4 and 2 but not necessarily in the same order, what is the largest possible value of the expression $(wx/y)z^2$?
(A) 92 (B) 36 (C) 24 (D) 12 (E) none of these

19. If x and y are both odd integers, which of the following numbers must be an even integer?
(A) $x^2 + y - 1$ (B) $xy + y^2$ (C) x + y + 1 (D) xy + 2 (E) none of these

20. In the figure, DE is parallel to AB. <BAC=$50^0$, <BDE=$25^0$ and <DBE=$35^0$. Calculate <DCE.

(A) 45° (B) 55° (C) 60°
(D) 70° (E) none of these



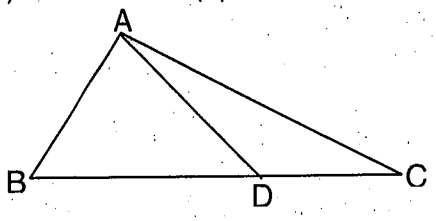

21. $10^2(10^8+10^8) / 10^4$ =
(A) $10^{14}$ (B) $2(10^6)$ (C) $10^8$ (D) $2(10^8)$ (E) none of these

22. If x is an odd integer, for which of the following equations must y be an even integer?
(A) xy = 5 (B) x + y = 8 (C) x + 2y = 7 (D) 2x + y = 6 (E) none of these

23. If you buy x apples at a cost of (y+1.5) taka per piece and y oranges at a cost of Tk (x+1.5) per piece, and you spend higher amount of money on buying apples, then which of the following is true?
(A) x > y (B) y < x (C) x = y (D) x > y + 3 (E) can not be determined

24. If 1.4 is halfway between two point x and y, what are the possible values of x and y?
(A) -1.4 and 2.4 (B) -1 and 2 (C) -0.3 and 3.1 (D) 0.15 and 1.55 (E) none of these

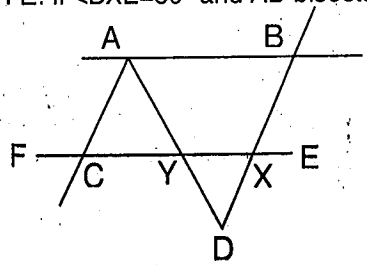
25. In the figure AB=AD=CD. <BAD=$70^0$
Which of the following must be true?
I. AB + AD > AC
II. BD > DC
III. BD< DC




(A) Only I (B) only III (C) I and II (D) I and III (E) II and III

26. In the figure, AC is parallel to BD and AB is parallel to FE. If <BXE=$50^0$ and AD bisects <FAB, find <ADB.

(A) 50° (B) 60° (C) 65°
(D) 70° (E) none of these

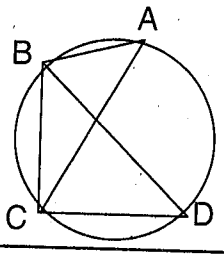



27. What is the minimum number of chocolates that must be added to the existing stock of 270 chocolates so that the total stock can equally be divided among 6, 8 or 12 persons?
(A) 12 (B) 16 (C) 18 (D) 20 (E) none of these

28. The cost of a pen is 20% more than that of a book and the cost of a CD is 3/4 as much as the cost of the pen. If the cost of the pen is Tk. 90 more than that of the CD, what is the cost of the book in taka?
(A) 120 (B) 126 (C) 192 (D)200 (E) none of these

29. If x is less than y, which of the following numbers must be greater than x and less than y?
(I) (x+y)/2 (II) xy/2 (III) $x^2 - y^2$
(A) only I (B) only II (C) I and III (D) I and II (E) none of these

30. BD is the diameter of the circle. <CAB=$40^0$. Calculate <CBD




(A) 45° (B) 50° (C) 60°
(D) 70° (E) none of these

## Section II: Analytical Ability [15 × 4/3marks]

**Directions:** Solve each of the following problems and mark the correct answer on your Answer Sheet.

**Questions 1 to 5 are based on the following narration:**
IBA has to select exactly three volunteers for a seminar. The Volunteers are to be selected from seven students, of whom four - Ana, Kajol, Lopa and Mira are from 6th batch and the rest three Shamol, Tipu and Parvez are from 7th batch. In selecting the three volunteers, the organizers must observe the following restrictions:

- At least one student from each batch must be selected as volunteer.
- If Ana is selected, Tipu cannot be selected.
- If either Lopa or Mira is selected, the other must also be selected.
- If either Kajol or Parvez is selected, the other must also be selected.

1. Which of the following could be the group of volunteers selected?
(A) Ana, Lopa and Mira (B) Ana, Shamol and Tipu (C) Kajol, Shamol and Parvez
(D) Lopa, Shamol and Parvez, (E) Mira, Tipu and Parvez.
2. If Ana is selected as a volunteer, which of the following must also be among those selected.
(A) Lopa (B) Mira(C) Shamol (D) Tipu (E) Parvez
3. Which of the following is a pair of students that can be selected together as volunteers?
(A) Ana and Lopa (B) Ana and Shamol (C) Kajol and Lopa
(D) Mira and Shamol (E) Mira and Parvez
4. The group of volunteers selected must include either
(A) Ana or Shamol (B) Kajol or Shamol (C) Kajol or Tipu
(D) Lopa or Mira (E) Lopa or Parvez
5. The members of the goup of volunteers would be completely determined if which of the following additional restrictions is imposed?
(A) Student from the 6th batch must be in the majority.
(B) Student from the 7th batch must be in the majority.
(C) Neither Ana nor Tipu can be selected.
(D) Neither Kajol nor Shamol can be selected.
(E) Neither Lopa nor Shamol can be selected.

**Questions 6 to 10 are based on the following narration:**
Ten delegates-one Nepalese, two Pakistanis, three Bangladeshis and the rest four Indians - will sit in a single row consisting of 10 chairs while attending a conference. The chairs are numbered consecutively from one to ten. The sitting arrangement should be made according to the following restrictions.

- Delegates from Bangladesh must occupy chair one and ten.
- The two Pakistanis must sit next to each other.
- No Indian delegate will sit adjacent to a Pakistani.
- No Bangladeshi delegate will sit adjacent to a Nepalese.

6. If a Bangladeshi is on chair two and Indians are on chair three and four, the Nepalese must be on which of the following chairs?
   (A) five (B) six (C) seven (D) eight (E) nine
7. If the four Indians are on four consecutive chairs, the Nepalese and one of the Pakistanis could be on which of the following chairs?
   (A) tow and three (B) three and four (C) five and six
   (D) six and seven (E) seven and eight
8. Which of the following sequences of people cannot be on chairs two, three and four?
   (A) Bangladeshi, Indian, Nepalese (B) Bangladeshi, Pakistani, Pakistani
   (C) Pakistani, Pakistani, Bangladeshi (D) Indian, Indian, Nepalese
   (E) Indian, Indian, Indian.
9. If a Bangladeshi is on chair three and a Pakistani on chair four, the Nepalese must be on which of the following chairs?
   (A) two (B) five (C) six (D) seven (E) nine
10. If the Nepalese is on chair five and a Pakistani is on chair four, which of the following must be true?
   (A) an Indian is on chair two (B) an Indian is on chair nine
   (C) a Bangladeshi is on chair six (D) a Bangladeshi is on chair seven
   (E) a Bangladeshi is on chair eight

**Directions for Questions 11 to 15**

Each of the following problems has a question and two statements which are labeled (I) and (II). Use the data given in (I) and (II) together to decide whether the statements are sufficient to answer the question.

Select (A) If you can get the answer from (I) alone but not from (II) alone.
Select (B) If you can get the answer from (II) alone but not from (I) alone.
Select (C) if you can get the answer from (I) and (II) together, although neither statements by itself suffices.
Select (D) if statement (I) alone suffices and statement (II) alone suffices.
Select (E) if you cannot get the answer from statements (I) and (II) together, and need more data.

11. Where is Jeni?
   (I) If Jeni is in Dhaka, Then Mishal is also in Dhaka (II) Mishal is not in Dhaka
12. If a certain factory has completed 92 orders, what percent of the total number of orders has been completed?
   (I) The total number of orders received is 230
   (II) The number of orders the factory has already completed represents two-fifths of the total number of orders received.
13. Is x an integer?
   (I) 5x is a positive integer (II) 5x=1
14. Is the electricity on?
   (I) If the electricity is on, then the fan is running (II) the fan is not running.
15. Did the price of sugar rise last year?
   (I) If the price of sugar rose last year, then the price of salt would rise this year
   (II) The price of salt rose this year.

**Section III: Language & Communication** **1 × 30 = 30 marks**

**Directions:** Each sentence below has one or two blanks. Beneath the sentence are five words or sets of words. Choose the word or set of words that best fits the meaning of the sentence, and mark your Answer Sheet accordingly.

1. Before one _____ (an artist? Something seems to be missing here), one should make an attempt to discover the artist's_____.
   (A) monitors.....issue (B) criticizes...purpose (C) deliberates...scheme
   (D) assigns...worth (E) purchases...goal.

2. When (there's an I missing here) listened to his convincing arguments, all my _____ were _____ and I was forced to agree with his point of view.
(A) doubts --- dispelled (B) criticizes --- purpose (C) deliberates --- scheme
(D) questions --- asked (E) senses ---- stimulated

3. It is said that the custom of shaking hands originated when primitive men held out empty hands to indicate that they hand (had) no_____ weapons and were thus____ disposed.
(A) Lethal .... clearly (B) concealed...amicably (C) hidden...harmoniously
(D) murderous...well (E) secret...finally

4. Plants that grow in the desert can survive long periods of _____ because they store water in their leaves, stems and roots.
(A) darkness (B) inactivity (C) dormancy (D) warmth (E) drought

5. Despite year (years) of poverty and _____, the artist Mahmud Islam produced work that is now _____ by most art critics.
(A) security ... hailed (B) depression...criticized (C) celebrity...publicized
(D) inactivity...undermined (E) adversity...acclaimed.

6. A small proportion of Bangladesh's population may live _____, but most have no hope of _ (the blank seems too small) even the basic amenities of life.
(A) poorly ... enjoying (B) pretentiously ... yielding (C) responsibility ... acquiring
(D) lavishly ... attaining (E) simply ... missing

7. This is another tool _____your English language skills.
(A) to help you improve (B) for help you to improve (C) of help to improve
(D) for you improve (E) to helping you improve.

8. Volcanic activities have also resulted in the creation of large land masses, ___(small dash) the popular impression of their sheer destructive potential.
(A) a basis for (B) an example of (C) comparable to (D) contrary to (E) confirming.

9. Many modern architects insist_____ materials native to the region that will blend into the surrounding landscape.
(A) use (B) the use of (C) to use (D) using (E) on using

10. The general public _____ a large number of computers now, because prices are beginning to drop.
(A) must buy (B) must have bought (C) must be buying
(D) must have been buying (E) bought

**Directions:** Each passage below is followed is followed by questions based on its contents. Answer the question on the basis of what is stated or implied in each passage, and mark your Answer Sheet accordingly.

**Passage I**

Since the mid-1990s, the IT value chain has gradually developed to become both horizontally and vertically more disintegrated. To improve the level of competitiveness in the market, more companies chose to focus their businesses on only one single segment or one specific process of a particular segment (such as fabrication in semiconductor production) along the IT value chain instead of spanning a number of segments in the industry.

With the Internet gaining increasing popularity since 1995, past efforts in continually upgrading computer components and hardware has (have) gradually given way to the need for acquiring the capability to provide information, software and emerging "edutainment" services through the web, for both corporate and individual users. There has been a growing trend toward integrating computer, communications and consumer electronics (3C) products to become Information Appliances (IA), These devices are still in their early stages of development with no established architectural and technical standards.

11. The phrase "given way" in line 8 is closest meaning to:
(A) created the foundation for (B) indicated (C) relinquished
(D) taken precedence over (E) donated

12. The word "established" in line 13 is closest in meaning to:
(A) recently created (B) very successful (C) specially authorized
(D) greatly succeeded (E) widely accepted.

13. The main objective of the passage is to:
(A) Predict the future of technological progress
(B) Outline the nature of change of technology and the market for it from a particular time period
(C) Identify how the Internet has steadily gained popularity over the years
(D) Identify the particular type of technology firms that have survived over a specific time period
(E) Locate the position in the development stages where many technology firms are at present.

14. According to the passage which of the following can be inferred to be more common in the early 2000s?
(A) Technology firms with marketing efforts focused on many different segments
(B) Declining need for information
(C) Regular upgrades of computer components
(D) Growing disparity between corporate and individual users in terms of the extent of need for information and software
(E) Pursuit of setting standards for Information Appliances.

15. According to the passage, fabrication semiconductor production is:
(A) A particular market segment (B) A type of business
(C) A technique of improving market competitiveness
(D) A particular process (E) The IT value chain

**Passage II**

The fulcrum of Saudi history can be pinpointed exactly in the Persian Gulf city of Dammam on March 3, 1938, when American engineers unleashed the kingdom's first commercially viable oil gusher after 15 months of drilling. The joint venture between U.S. petroleum companies and Saudi Arabia's ruler, King Abdul Aziz Ibn Saud, put the fledgling nation on the global economic map.

Ibn Saud had launched his conquest of Arabia three decades earlier. Initially he led just a few dozen men against the ruling Al Rasheed clan, who had driven the rival Sauds into exile in 1891 and seized control of Nadj, the area surrounding the caravan crossroads of Riyadh, and the Al Qasim region to its north. The Al Rasheeds were allied with the Turkish Ottoman Empire which then governed the Red Sea coast, including Jeddah, Mecca, and Medina, while the Sauds were buoyed by alliances of their own. One was with followers of Muhammad ibn Abd al-Wahhab, the charismatic 18th century religious reformer who (whose) fervour helped propel the Sauds to power and defined their view of Islam and the world. The other was with Britain, whose support during and after the fall of the Ottoman Empire in World War I made the Saudi state possible.

During the first three decades of the 20th century, Ibn saud's forces and territory steadily grew as he combined brilliant military campaigns with adept diplomacy and strategic marriage pacts with other tribes- to expand his realm to its present borders.

In 1993, a year after Saudi Arabia was founded with Riyadh as its capital, Ibn Saud granted an exclusive oil exploration concession to the Standard Oil Company of California. The partnership evolved into Saudi Aramco, the government-controlled enterprise that now presides over some 260 billion barrels of oil reserves and 225 trillion cubic feet of natural gas- and accounts for about three quarters of the kingdom's revenue. This vast wealth has funded the Arab world's most modern and well-equipped military force, a monumental welfare system, a network of religious missionaries dispersed throughout the Muslim world, and spectacular royal residences in Beverly Hills, London, and the south of France.

From the moment the oil concession was granted, "modern" in Saudi Arabia came to mean American modern and more precisely, the outsized, mass-consumer version of modern that American oilmen carried with them from the U.S. southwest, primarily Texas. Even apart from oil, the fit was in some ways natural. Like Texas, Saudi Arabia juxtaposes a long humid sea coast and a huge arid interior scorched by extreme desert temperatures. Between its 1,600 miles of

Red Sea and Persian Gulf beaches lie 865,000 square miles of flat desire plains and mountains, more than three times the size of Texas Itself and two and half times the combined size of Germany and France.

It would be impossible to exaggerate the shock waves that the discovery of oil sent through this landscape-and the life of its inhabitants. The Arabian Peninsula has seen more change in the past six decades than in the previous 13 centuries. As recently as 1950, Riyadh was a sleepy oasis town of 60,000 inhabitants, most of them still living in mud-brick houses. Then came the 1970s oil boom, and with it a construction binge unlike anything the middle East had ever seen. In the estimate of its harried Urban Development Authority Officials, Riyadh now houses four and a half million people, and is well on the way to becoming an Arabian megalopolis.

16. The support of which of the following country or regime helped in the formation of the Saudi state?
(A) Britain (B) Ottoman Empire (C) Al Rasheed clan
(D) America (E) Aramco

17. According o the author, Texas and Saudi Arabia are alike in all of the following aspects EXCEPT
(A) very high desert temperatures (B) long humid sea coast (C) dry interior
(D) oil reserves (E) 1,600 miles of beaches.

18. The expansion of Ibn Saud's kingdom to its present borders during the first thirty years of the 20th century was made possible by.
(A) the discovery of oil
(B) successful military campaigns and skilful diplomacy
(C) an exclusive oil exploration concession
(D) an alliance with the Turkish Ottoman empire
(E) a monumental welfare system

19. The vast oil wealth of Saudi Arabia has helped fund all of the following EXCEPT
(A) lavish royal houses abroad (B) religious missionaries
(C) huge welfare system (D) the city of Dammam
(F) well-equipped military force

20. The main impetus behind the rapid increase in Riyadh's population was provided by
(A) the Urban Development Authority (B) Texan Oilmen
(C) the oil boom of the 1970s
(D) an oil exploration concession to an American company (E) none of these

***Direction:*** *Each question below consists of a related pair of words, followed by five lettered pairs of words. Select the lettered pair that best expresses a relationship similar to that expressed in the original pair.*

21. **EMBROIDER : CLOTH**
(A) carve : knife (B) catch : quit (C) gild : gold
(D) chisel : metal (E) stain : glass

22. **JUDGE : COURTHOUSE**
(A) carpenter : bench (B) lawyer : brief (C) physician : infirmary
(D) architect : blueprint (E) landlord : studio

23. **WOODPILE : LOGS**
(A) forest : trees (B) husk : corn (C) mist : rain
(D) bouquet : flowers (E) drift : snow

24. **TAILOR : SCISSORS**
(A) stenographer : typewriter (B) painter : brush (C) carpenter : saw
(D) lawyer : brief (E) drift : snow

25 **EVENT: MEMORIES**
(A) accident : delay (B) fire : ashes (C) water : waves
(D) wood : splinters (E) regret : melancholy

***Direction :*** *Each of the following sentences contains four underlined words or phrases. Select the word or phrase that is incorrect and mark your answer Sheet accordingly. If the sentence is correct as it stands, then mark (E) on your Answer Sheet.*

26. If an excerpt from any published materials is used, the source of such an extract
(A) (B) (C)
should be mentioned. No Error
(D) (E)

27. If his accusations were true, there would be a number of senior officials
(A) (B) (C)
hold accountable for corruption. No Error
(D) (E)

28. If we cooperate together by dividing the work, we shall be able to finish it quickly.
(A) (B) (C) (D)
No Error
(E)

29. He has not only violated the law, but also he has escaped punishment. No Error
(A) (B) (C) (D) (E)

30. The research is based on unreliable data, which was collected by an irresponsible
(A) (B) (C) (D)
Research Assistant. No Error
(E)

## PART II: WRITTEN ENGLISH

**Direction:** *This part contains three questions. Answer these questions in this test booklet in the designated spaces.*

**1.** In the box below, ***describe the most terrifying experience you had in your life.***

**2. Thematic Writing**

***Direction:*** *Write five sentences related to a theme using at least one of the following words in each sentence. Give a title to the theme.*

***pollution congestion accidents vehicles manholes construction***

**Title:**

**3.** In the following paragraph there are some **misspelled** words. Make a list of those words with correct spelling.

Ms Lopa, the Secretery of a kindergerden school, went to a resturent to meet Mr. Aftab Hossain, an entrepreneur in the pharmacutical sector. Mr. Aftab discused the prospect of establishing a new business venture with one of his adversaries. He also showed her a memorrendum of understanding that he has recently signed with a Chinese company. He then requested Ms Lopa to leave her current job and join his company as a senior executive. She did not like the suggesstion and told him to recruit a retired bureaucrat for the post. During the buffe the table was approached by a waiter whom Lopa addresed as "bearer". At this the person objected vehemantly. Mr. Aftab had a heated arguement with the waiter over the matter.

# Answer Key

**Section 1**

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | C | 2 | B | 3 | D | 4 | A | 5 | D | 6 | D | 7 | E | 8 | C | 9 | A | 10 | E |
| 11 | E | 12 | B | 13 | C | 14 | A | 15 | D | 16 | A | 17 | C | 18 | E | 19 | B | 20 | D |
| 21 | B | 22 | D | 23 | A | 24 | C | 25 | C | 26 | C | 27 | C | 28 | E | 29 | A | 30 | B |

**Section 2**

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | C | 2 | E | 3 | D | 4 | E | 5 | D | 6 | C | 7 | E | 8 | A | 9 | C | 10 | B |
| 11 | E | 12 | D | 13 | B | 14 | C | 15 | E | | | | | | | | | | |

**Section 3**

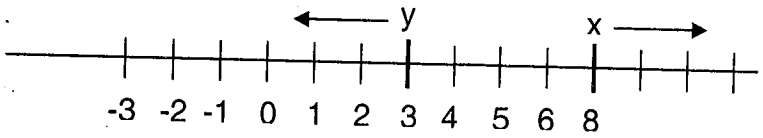
| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | B | 2 | A | 3 | B | 4 | E | 5 | E | 6 | D | 7 | A | 8 | D | 9 | E | 10 | C |
| 11 | C | 12 | E | 13 | B | 14 | E | 15 | D | 16 | A | 17 | E | 18 | B | 19 | D | 20 | C |
| 21 | C | 22 | C | 23 | D | 24 | C | 25 | B | 26 | E | 27 | D | 28 | A | 29 | D | 30 | C |

**Part II : See Answer explanation**

## BBA (IBA) Admission Test (2003-04) Solution

### Section -1 : Mathematics

1. (C) $x \geq 8$ এবং $y \leq 3$ হতে আমরা যে number line পাই-




পর্যবেক্ষণ করলে দেখা যায়, $x + y = 11$ হওয়া যেমন সম্ভব, তেমনি 11 এর চেয়ে কম বা বেশি হওয়াও সম্ভব। $\frac{x}{y} = 5$ কোনভাবেই গ্রহণযোগ্য নয়। xy এর মান 24 হতে পারে, 24 এর কম বা বেশিও হতে পারে। $x - y$ এর মান 5 হতে পারে এবং 5 এর চেয়ে বেশি হতে পারে, কিন্তু $x - y < 5$ হওয়া সম্ভব নয়।
সুতরাং, answer: C

2. (B) A) $0 < \frac{1}{10}$ ঠিক আছে; কিন্তু $\frac{1}{10} < 0.01$ হতে পারে না।

C) 0.3, $\frac{1}{4}$ অর্থাৎ 0.25 এর চেয়ে ছোট নয়।

D) $0.3 < \frac{1}{3}$ ঠিক আছে; কিন্তু $\frac{1}{3} < 0.33$ নয়।

B) $0.12 < \frac{1}{8} (0.125) < 0.13 \rightarrow$ এটি ঠিক statement. সুতরাং, answer: B

3. (D) মোট দূরত্ব = x miles; মোট সময় = y hr. z min = y hr + $\frac{z}{60}$ hr. = y + $\frac{z}{60}$ hr.

অতএব, speed = $\frac{\text{দূরত্ব}}{\text{সময়}} = \frac{x \text{ miles}}{y + \frac{z}{60} hr} = \frac{60x}{(60y + z)}$ miles/hr. সুতরাং, answer: D

4. (A) ধরি, smaller number = x ∴ larger number = $\frac{5x}{2}$

প্রশ্নমতে, $\frac{5x}{2} = x + 18$ ⇒ x = 12 সুতরাং, answer: A

5. (D) ধরি, original price = 100 টাকা
Asif 20% লাভ করলে price = 120 টাকা অর্থাৎ Rahman কিনেছে 120 টাকায়।

Rahman 15% ক্ষতিতে বিক্রি করলে বিক্রয়মূল্য = $120 - (120 \times \frac{15}{100})$ = 102 টাকা।

অর্থাৎ, Fahad কিনেছে 102 টাকায়; এখন, Fahad 102 টাকায় কিনলে original price = 100 টাকা

Fahad 510 টাকায় কিনলে original price = $\frac{100 \times 510}{102}$ টাকা = 500 টাকা

সুতরাং; answer: D

6. (D) গত বছরের বাজেট = 1000,000 টাকা

∴ এই বছরের বাজেট = $\{1000,000 + (1000,000 \times \frac{15}{100})\}$ টাকা = 11,50,000 টাকা

এ বছরে computer center এর জন্য allocation = $1,150,000 \times \frac{60}{100}$ = 690,000 টাকা

এটি গত বছরের চেয়ে 20% বেশি অর্থাৎ, এ বছর 120 টাকা হলে গত বছর ছিল = 100 টাকা

∴এ বছর 690,000 টাকা হলে গত বছর ছিল = $\frac{100 \times 690,000}{120}$ টাকা = 575,000 টাকা

সুতরাং; answer: D

7. (E) $x = (0.1)^2 = 0.01$ $y = \frac{1}{5} = 0.2$

$z = \sqrt{\frac{1}{100}} = \frac{1}{10} = 0.1$ (A) $\frac{x}{y} = \frac{0.01}{0.2}$ = 0.05 which is not greater than z

(B) $\frac{x}{z} = \frac{0.01}{0.1}$ = 0.1 which is not greater than y

(C) 0.01 < 0.2 কিন্তু 0.2 in not less than 0.1

(D) xy = 0.01 × 0.2 = 0.002 which is not greater than z , সুতরাং; answer E.

8. (C) 4x – 7 < 2x + 13 ⇒ 2x < 20 ⇒ x < 10 সুতরাং; answer C

9. (A) প্রথম 100,000 এর জন্য tax = $(100,000 \times \frac{10}{100})$ = 10,000 টাকা

পরবর্তী (275,000 – 100,000) = 175,000 এর জন্য tax = $(175,000 \times \frac{15}{100})$ = 26,250 টাকা

মোট tax = 10,000 + 26,250 = 36,250 টাকা। সুতরাং; answer: A

10. (E) ধরি larger piece এর দৈর্ঘ্য = y feet ∴ smaller piece এর দৈর্ঘ্য = $\frac{y-1}{2}$ feet

এখন, $y + \frac{y-1}{2} = x \Rightarrow \frac{3y-1}{2} = x \Rightarrow 3y - 1 = 2x \Rightarrow y = \frac{2x+1}{3}$ সুতরাং; answer: E

11. (E) y = 8x + 12 ⇒ y = 8 (z + 2) + 12 [x = z + 2 দেয়া আছে]
⇒ y = 8z + 28, সুতরাং; answer: E.

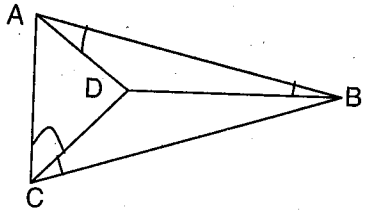
12. (B) $12 \times 6 = 72$; $15 \times 5 = 75$ $\therefore \frac{5}{6} \rangle \frac{12}{15}$ $5 \times 21 = 105$; $6 \times 17 = 102$ $\therefore \frac{5}{6} \rangle \frac{17}{21}$
$5 \times 14 = 70$; $6 \times 11 = 66$ $\therefore \frac{5}{6} \rangle \frac{11}{14}$ $5 \times 23 = 115$; $6 \times 16 = 96$ $\therefore \frac{5}{6} \rangle \frac{16}{23}$
সুতরাং; answer: B

13. (C) 1 এর চেয়ে বড় হতে হলে numerator এর মান denominator এর মানের চেয়ে বড় হবে।
একমাত্র (C) তেই এরকম option আছে। সুতরাং; answer: C

14. (A) প্রথম 100 TV set এর cost = (100 × 10,000) টাকা = 1,000,000 টাকা
পরবর্তী 100 TV set এর cost = (100 × 7,500) টাকা = 750,000 টাকা
∴ Total cost = (1,000,000 + 750,000) = 1,750,000 টাকা profit = 3,00,000 টাকা
∴ মোট বিক্রয় মূল্য = (1750,000 + 300,000) = 20,50,000 টাকা
অর্থাৎ প্রতিটি TV set এর বিক্রয়মূল্য = $\frac{20,50,000}{200}$ টাকা = 10,250 টাকা সুতরাং; answer: A

15. (D) Lunch এর আগে মোট male applicant = $x \times \frac{70}{100} = \frac{7x}{10}$
Lunch এর পরে মোট male applicant = y
∴ মোট male applicant = $\frac{7x}{10} + y$ এবং মোট female applicant = $x + y - \left(\frac{7x}{10} + y\right) =$
$x - \frac{7x}{10} = \frac{3x}{10}$ ∴ male : female = $\frac{7x}{10} + y : \frac{3x}{10} = 4:1 \Rightarrow \frac{\frac{7x}{10} + y}{\frac{3x}{10}} = \frac{4}{1} \Rightarrow \frac{7x+10y}{10} \times \frac{10}{3x} = 4$
$\Rightarrow 7x + 10y = 12x \Rightarrow 10y = 5x \Rightarrow y = \frac{5x}{10} = \frac{x}{2} = 0.5x$ সুতরাং; answer: D

16. (A)



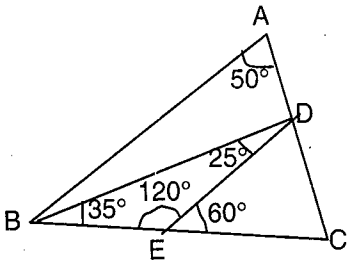

দেয়া আছে, AD = DB = CD
< DCB = 30° হলে <DBC = 30°
<ABD = 50° হলে <DAB = 50°
আবার, <DAC = <DCA
<ABC + <BAC + <ACB = 180°
$\Rightarrow$ (<ABD + <DBC) + (<BAD + <DAC) + (<DCB + <DCA) = 180°
$\Rightarrow$ (50° + 30°) + ( 50° + <DCA) + (30° + <DCA) = 180°
$\Rightarrow$ 160° + 2 <DCA = 180° $\Rightarrow$ <DCA = 10°। সুতরাং; answer: A

17. (C) $\frac{y}{x} = \frac{1}{5}$ $\Rightarrow y = \frac{x}{5}$ আবার, $2x + y = 33$ $\Rightarrow 2x + \frac{x}{5} = 33 \Rightarrow \frac{11x}{5} = 33$
$\therefore x = 15$ সুতরাং, answer: C

18. (E) w, x এর value -3 এবং -4 এর যে কোনটি ধরলে positive গুনফল পাওয়া যাবে এবং y এর value $\frac{1}{2}$ ধরলে পুরো expression কে 2 দিয়ে গুণ করা যাবে।
অর্থাৎ সর্বোচ্চ = $\left\{\frac{(-3)(-4)}{\frac{1}{2}}\right\} 2^2$
$12 \times 2 \times 4 = 96$। সুতরাং, answer: E

19. (B) A) $x^2 + y - 1$ = odd + odd − odd = odd B) $xy + y^2$ = odd × odd + odd = even
C) x + y + 1 = odd + odd + odd = odd D) xy + 2 = odd × odd + even = odd
সুতরাং; answer B

20. (D)




চিত্রানুসারে, <DEB = 180° - (35 + 25)° = 120° ∴ <DEC = 180° - 120° = 60°
যেহেতু, DE || AB, অতএব, <DEC = <ABC = 60° অর্থাৎ Δ ABC – এ, <ABC = 60°, <BAC = 50°
∴ <ACB or <DCE = 180° - (60 + 50°) = 70° । সুতরাং; Answer: D

21. (B) $10^2 (10^8 + 10^8)/10^4 = \frac{10^2 \times 10^8 + 10^2 \times 10^8}{10^4} = \frac{10^{10} + 10^{10}}{10^4} = \frac{10^{10}}{10^4} + \frac{10^{10}}{10^4}$

$= 10^6 + 10^6 = 2(10^6)$ । সুতরাং; answer: B

22. (D) A) $xy = 5 \Rightarrow \frac{x}{5} = y \Rightarrow \frac{odd}{odd} = y$ ∴ y is odd

B) x+y = 8 ⇒ x – 8 = y ⇒ odd – even = y ∴ y is odd

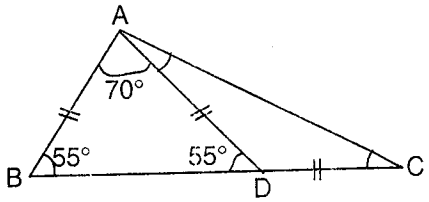
C) $x + 2y = 7 \Rightarrow \frac{x-7}{2} = y \Rightarrow \frac{odd - odd}{2} = y$ ∴ y is even/odd

D) 2x + y = 6 ⇒ 2x - 6= y ⇒ even – even = y ∴ y must be even
সুতরাং; answer: D

23. (A) Total cost of apples = x(y + 1.5) = xy + 1.5x
total cost of oranges = y(x + 1.5) = xy + 1.5y
প্রশ্নমতে, xy + 1.5x > xy + 1.5y ⇒ 1.5x > 1.5y ∴ x > y সুতরাং, answer: A

24. (C) তে 1.4 ও - 0.3 এর distance এবং 1.4 ও 3.1 এর distance দুটোই 1.7 সুতরাং, answer C.

25. (C)

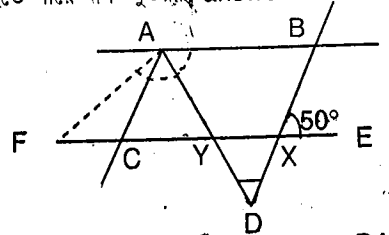



AB = AD হলে <ABD = <ADB = $\left(\frac{180-70}{2}\right)^\circ = 55^\circ$ ∴ <ADC = 180° - 55° = 125°

অর্থাৎ, <ACD = <CAD = $\left(\frac{180-125}{2}\right)^\circ = 27.5^\circ$

(i) AB + AD > AC ⇒ DC + AD >AC অবশ্যই true কারণ ত্রিভুজের যে কোন দুই বাহুর সমষ্টি তৃতীয় বাহু অপেক্ষা বড়।
(ii) BD > DC ⇒ BD > AB or BD > AD অবশ্যই true (বিপরীত কোণের মান দেখে)
(iii) ii true হলে iii true হতে পারে না। সুতরাং; answer: C

26. (C)




AD, < FAB কে সমদ্বিখন্ডিত করে, অর্থাৎ, <FAD = <DAB. আবার, AC || BD এবং AD ছেদক হলে,
<ADB = <FAD = <DAB আবার, AB || FE এবং AD ছেদক হলে,

<B × E = <ABD = 50° এখন, Δ ABD এ <ABD = 50° এবং <ADB = DAB

অর্থাৎ <ADB = $\left(\frac{180-50}{2}\right)^\circ = 65^\circ$ । সুতরাং; answer: C

27. (C) 6, 8 এবং 12 এর ল. সা. গু = 24
অর্থাৎ মোট no of chocolates হবে 24 এর গুণিতক। 270 এর থেকে minimum উপরে 24 এর গুণিতক = 288
অর্থাৎ, add করতে হবে (288 – 270) = 18 টি। সুতরাং; answer: C

28. (E) ধরি book এর cost = x টাকা ∴ pen এর cost = $x + \frac{x}{5} = \frac{6x}{5}$ টাকা

∴ CD এর cost = $\frac{6x}{5} \times \frac{3}{4} = \frac{9x}{10}$ টাকা প্রশ্নমতে, $\frac{6x}{5} - 90 = \frac{9x}{10} \Rightarrow \frac{12x-9x}{10} = 90 \Rightarrow 3x = 900$

$\Rightarrow$ x = 300 টাকা সুতরাং; answer: E

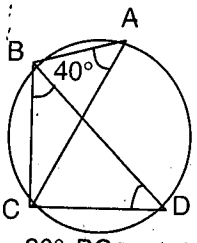
29. (A) x < y

i) $\frac{x+y}{2}$ হচ্ছে x এবং y এর average অর্থাৎ x এর চেয়ে বড় এবং y এর চেয়ে ছোট।

ii) $\frac{xy}{2}$ কোন কোন ক্ষেত্রে y এর চেয়েও বড় হয়ে যায়।

iii) $x^2$-$y^2$ কোন কোন ক্ষেত্রে x এর চেয়েও ছোট হয়ে যায়। সুতরাং; answer: A

30. (B)




BD diameter, সুতরাং <BCD = 90° BC বৃত্তচাপের উপর <BAC = <BDC = 40°
∴Δ BCD - এ <CBD = 180° - (90° + 40°) = 180° - 130° = 50° । সুতরাং. answer: B

## Section II: Analytical Ability

**Questions 1 – 5**

6th Batch ⇒ Ana, Kajoi, Lopa, Mira
7th Batch ⇒ Shamol, Tipu, Parvez

এই সাতজনের মধ্য থেকে তিনজনকে নির্বাচিত করতে হবে।
শর্তগুলো হচ্ছে-

(১) প্রতি ব্যাচ থেকে নূন্যতম ১ জনকে নিতে হবে।
(২) Ana কে নিলে Tipu কে নেয়া যাবে না।
(৩) Lopa ও Mira এর যে কোন ১ জনকে নিলে আরেক জনকেও নিতে হবে।
(৪) Kajol ও Parvez এর যেকোন ১ জনকে নিলে আরেক জনকেও নিতে হবে।

1. A) হবেনা কারণ 7th batch এর কেউ নেই। B) Ana এর সাথে Tipu কে নেয়া যাবেনা। C) correct selection. D) Pavez এর সাথে Kajol কেও নিতে হবে। E) Mira এর সাথে Lopa কেও নিতে হবে। সুতরাং; answer: C

2. Ana কে নিলে যেহেতু Tipu কে নেয়া যাবেনা, তাই obvious choice Parvez বা Kajol কারণ তারা দুজনে একসাথে ছাড়া selected হবে না। সুতরাং; answer:E

3. A) হবেনা কারণ Lopa কে নিলে Mira ও আসবে। B) হবেনা কারণ Ana ও Shamol কে নিলে only option হচ্ছে Tipu কে নেয়া Tipu ও Ana একসাথে কাজ করবে না। C) হবে না কারণ Kajol এর সাথে Parvez এবং Lopa এর সাথে Mira আসবে। D) সম্ভব কারণ সাথে Lopa কে নিলে কোন সমস্যা থাকে না। E) same as C । সুতরাং; answer: D

4. Possible teams
1) Ana, Kajol, Parvez 2) Shamol, Lopa, Mira 3) Tipu, Lopa, Mira
4) Shamol Kajol, Parvez 5) Tipu, Kajol, Parvez
অর্থাৎ, Lopa অথবা Parvez ছাড়া team হয় না। সুতরাং; answer: E

5. (D) Kajol বা shamol কেউই যদি না থাকে তাহলে only option হচ্ছে Tipu, Lopa, Mira
সুতরাং; answer: D

**Questions 6 – 10**

Nepalese ⇒ ১ জন, Pakistanis ⇒ ২ জন, Bangladeshis ⇒ ৩ জন, Indians ⇒ ৪ জন
এরা একটা সারিতে বসবে (মোট ১০টি চেয়ার আছে ঐ সারিতে) নিম্নের শর্তানুয়ায়ীঃ

- ❖ ১ নং ও ১০ নং চেয়ারে বাংলাদেশী বসবে।
- ❖ পাকিস্তানী দুজন পাশাপাশি বসবে।
- ❖ ইন্ডিয়ান কেউ পাকিস্তানী কারো পাশে বসবে না।
- ❖ বাংলাদেশী কেউ নেপালী কারো পাশে বসবে না।

6. (C) বাংলাদেশী ১ জন যদি ২ নং এ বসে তাহলে ১, ২, ও ১০ নং এ বাংলাদেশী থাকবে।
ইন্ডিয়ানদের মধ্যে দুজন যদি ৩ ও ৪ নং এ বসে, তাহলে ৫ নং এ পাকিস্তানী থাকবে না।
আবার নেপালী যে সে ৯ নং এ বসতে পারবে না।
পাকিস্তানী দুজনকে যেহেতু পাশাপাশি বসতে হবে, সুতরাং একমাত্র option হচ্ছে ৮ ও ৯।
অর্থাৎ নেপালী বসবে ৭ নং এ। সুতরাং; answer: C

7. (E) চারজন ইন্ডিয়ান যদি পাশাপাশি বসে তাহলে option গুলো হচ্ছে ⇒ ২, ৩, ৪, ৫ / ৩, ৪, ৫, ৬ / ৪, ৫, ৬, ৭ / ৫, ৬, ৭, ৮ / ৬, ৭, ৮, ৯। প্রথম option অনুসারে বাংলাদেশী ৬ এবং পাকিস্তানী ৭, ৮; আবার নেপালী ৯ নং এ বসতে পারে। (এরকম answer নেই) দ্বিতীয় option অনুসারে বাংলাদেশী ২ এবং নেপালী ৭ এ বসে পাকিস্তানী দুজন ৮ ও ৯ বসতে পারে। এটি answer choice E এর সাথে মেলে। সুতরাং; answer: E.

8. (A) A তে ২, ৩, ৪ এ বাংলাদেশী, ইন্ডিয়ান, নেপালী বসানো হয়েছে। এটি সম্ভব নয় কারণ আরও তিনজন ইন্ডিয়ান রয়েছে। এই option নিলে তাদের যেকোন ১ জনকে পাকিস্তানীর পাশে বসতে হবে যা শর্ত বিরুদ্ধ।

9. (C) $\underset{1}{B}\ \underset{2}{_}\ \underset{3}{B}\ \underset{4}{P}\ \underset{5}{(P)}\ \underset{6}{(N)}\ \underset{7}{_}\ \underset{8}{_}\ \underset{9}{_}\ \underset{10}{B}$
৪ নং এ পাকিস্তানী থাকলে ৫ নং এও পাকিস্তানী থাকবে। অর্থাৎ, ৬ নং এ নেপালী থাকবে। সুতরাং answer: C

10. (B) $\underset{1}{B}\ \underset{2}{(B)}\ \underset{3}{(P)}\ \underset{4}{P}\ \underset{5}{N}\ \underset{6}{(I)}\ \underset{7}{(I)}\ \underset{8}{(I)}\ \underset{9}{(I)}\ \underset{10}{B}$
৪নং এ পাকিস্তানী থাকলে ৩ নং এও পাকিস্তানী থাকবে, অর্থাৎ ২-এ বাংলাদেশী থাকবে এবং ৬, ৭, ৮, ৯ এ ইন্ডিয়ান থাকবে। সুতরাং; answer: B

**Questions 11 – 15**

এগুলো Data Sufficiency Questions

11. (E) শুধু (1) নং থেকে Jeni এর অবস্থান বের করা যায় না।
শুধু (2) নং থেকে Jeni এর অবস্থান বের করা যায় না।
(1) ও (2) থেকে পাই, Mishel Dhaka তে নেই, সুতরাং Jeni ও Dhaka তে নেই।
কিন্তু Jeni কোথায় আছে তা বলা অসম্ভব। সুতরাং; answer: E

12. (D) শুধু (1) নং থেকে বের করা য়ায়। Total= 230; completed = 92; সুতরাং % completed = $\frac{92\times100}{230}$

শুধু (1) নং থেকেও বের করা যায়। Total = x; completed = 92; সুতরাং, x এর $\frac{2}{5}=92\ ;\Rightarrow \frac{2x}{5}=92\Rightarrow$

$x=\frac{92\times5}{2}$ এবং Total থেকে % completed ও বের করা যায়। সুতরাং; answer: D

13. (B) শুধু (i) থেকে পাই, 5x একটি ধনাত্মক পূর্ণসংখ্যা।
এখন, 5x = 1, 5x = 2, 5x = 10 অনেক কিছুই হতে পারে। কোন ক্ষেত্রে x integer, কোন ক্ষেত্রে নয়।

শুধু (ii) পাই, 5x = 1; অর্থাৎ $x=\frac{1}{5}$; অতএব, x integer নয়। সুতরাং answer: B

14. (C) শুধু (1) নং থেকে পাই, electricity on থাকলে fan চলবে, decision নেয়া সম্ভব নয়।
শুধু (2) নং থেকে পাই, fan চলছেনা, electricity এর সাথে কোন সম্পর্ক দেখানো হয়নি।
(1) ও (2) থেকে পাই, electricity on থাকলে fan চলবে; এবং fan চলছে না, তার মানে, electricity is not on এই decision নেয়া যায়। সুতরাং; answer: C

15. (E) শুধু (1) নং থেকে পাই, গত বছর চিনির দাম বেড়ে থাকলে এ বছর লবনের দাম বাড়বে।
শুধু (2) নং থেকে পাই, এ বছর লবনের দাম বেড়েছে।
কিন্তু গত বছর চিনির দাম না বেড়ে থাকলে যে এ বছর লবনের দাম বাড়তে পারবে না, এমন কিছু বলা হয়নি।
সুতরাং; answer: E.

## ***Section III: Language & Communication***

1. (B) Criticize অর্থ সমালোচনা করা, purpose হচ্ছে উদ্দেশ্য।
2. (A) Doubts অর্থ দ্বিধা, Dispelled অর্থ দূর হয়ে যাওয়া।
3. (B) Concealed অর্থ লুক্কায়িত, amicably অর্থ বন্ধুত্বপূর্ণভাবে।
4. (E) Drought অর্থ খরা।
5. (E) Adversity অর্থ দূরবস্থা, acclaimed অর্থ প্রশংসিত।
6. (D) Lavishly অর্থ স্বচ্ছলভাবে, attaining অর্থ অর্জন করা।
7. (A) for you/for helping you/to help you to improve ⇒ এগুলো grammatically correct.
সুতরাং; answer: A.
8. (D) এখানে contrary to অর্থ বিপরীতে। Contrary to the popular impression বলতে বোঝাচ্ছে প্রচলিত ধারার বিপরীতে। answer: D
9. (E) insist এর পর on বসে। answer: E
10. (C) must be buying হচ্ছে 'নিশ্চয়ই কিনছে', এতে logical conclusion বোঝানো হচ্ছে। answer: C.

**Questions 11 – 15 (Passage-I)**

11. (C) given way বলতে এখানে বোঝানো হচ্ছে জায়গা ছেড়ে দেয়া। Relinquished অর্থ জায়গা ছেড়ে দেয়া।
12. (E) এখানে established বলতে বোঝানো হচ্ছে গ্রহণযোগ্য। 'Widely accepted' অর্থ ব্যাপকভাবে গ্রহণযোগ্য।
13. (B) আলোচ্য passage এ প্রযুক্তির পরিবর্তন এবং এর বাজার সম্পর্কে আলোকপাত করা হয়েছে। answer: B.
14. (E) Passage টি শেষ করা হয়েছে এভাবে, "3c products এর integration এর জন্য যেসব যন্ত্রপাতি রয়েছে, সেগুলো এখনো শিশু পর্যায়ে এবং স্থাপত্য ও প্রযুক্তিগত মানদন্ডে এগুলোর গ্রহণযোগ্যতা এখনো নেই।
অর্থাৎ early 2000-এ সবচেয়ে বেশি focus থাকবে এ ধরণের Information appliance এর মানদন্ড (standard) set করার ক্ষেত্রে। সুতরাং; answer: E
15. (D) Passage এ fabrication in semiconductor production কে দেখানো হয়েছে one specific process of a particular segment হিসেবে। সুতরাং; answer: D.

**Questions 16-20 (Passage-II)**

16. (A) Passage এ Saudi Stage formation এ দুজনের কথা বলা হয়েছে- followers of Muhammad ibn abdul-wahhab এবং Britain, answer choice এ প্রথম জনের উলেখ নেই। answer: A.
17. (E) Texas ও Saudi Arabia এর সাদৃশ্য দেখাতে গিয়ে লেখক high desert temperature, long humid sea, dry/arid interior, oil reserves এর কথা বলেছেন। কিন্তু 1600 miles of beaches এর কথা শুধু Saudi Arabia এর ক্ষেত্রে বলা আছে। answer: E.
18. (B) তৃতীয় paragraph এ বলা আছে Ibn Saud এর রাজস্ব বৃদ্ধির কারণগুলো military campaigns এর সাথে দক্ষ diplomacy এর সমন্বয় এবং strategic marriage pacts with other tribes.
19. (D) চতুর্থ paragraph এ বলা আছে modern এবং well-equipped military force, monumental welfare system, network of religious missionaries, দর্শনীয় আবাসন Beverly Hills, London, এবং দক্ষিণ France এ। City of Dammam এর কথা বলা নেই। সুতরাং; answer: D
20. (C) শেষ paragraph এ বলা আছে 1970 এর oil boom এর কথা এবং ফলশ্রুতিতে Riyadh এর জনসংখ্যা বৃদ্ধির কথা। সুতরাং; answer: C
21. (C) Cloth (কাপড়ের) উপর embroider (কারুকার্য) করা হয়।
gold (স্বর্ণের) উপর gild করা হয়। সুতরাং; answer: C
22. (C) Judge (বিচারক) এর কর্মক্ষেত্র court house (আদালত)
physician (চিকিৎসক) এর কর্মক্ষেত্র infirmary (চিকিৎসালয়) সুতরাং; answer: C

23. (D) logs (কাষ্ঠখন্ড) মিলে woodpile (কাঠের গুচ্ছ) তৈরী করে।
flowers (ফুল) মিলে bouquet (ফুলের তোড়া) তৈরী করে। সুতরাং; answer: D

24. (C) Tailor (দর্জি) এর মূল অস্ত্র scissors (কাঁচি)
carpenter (ছুতার) এর মূল অস্ত্র saw (করাত) সুতরাং; answer: C

25. (B) event (ঘটনা) এর পরে memory (স্মৃতি) থেকে যায়।
fire (আগুন) এর পরে ashes (ছাই) থেকে যায়। সুতরাং; answer: B

26. (E) কোন ভুল নেই। answer: E

27. (D) hold নয় held accountable হবে। answer: D

28. (A) cooperate এর together হয়না (redundancy) answer: A

29. (D) but also এর পরে pronoun + verb repeat করার দরকার নেই। answer: D

30. (C) Data একটি plural word (datum = singular)
সুতরাং; was collected হবে না, were collected হবে। answer: C

***Part II: Written English***

**1. Most terrifying experience I had in my life**

I would like to describe the only experience that ruffled my nerves so far in my short span of life. I was ready to enjoy my summer holidays. I had planned to go to my grandparents' house in Comilla. The house is a big sprawling bungalow surrounded by a lot of plants and mango trees.
One day, in the dead of the night, I was sitting in the study reading a horror story. I had put my chair just under the window. It was 11.45 p.m. and there was pin drop silence with no TV's blaring, none of the neighbors shouting and no vessels clanking. This made the book more thrilling. Suddenly, I heard the rustling of leaves. It sounded like someone was walking on them. The footsteps stopped right behind my window. I was sitting still awaiting for something to happen. But after sometime, the footsteps moved away to my relief. Immediately, I threw the book on the table, switched off the lights and ran to my bed to sleep. Next morning, we learnt that a thief had stolen all the mangoes from the trees.
As I shared my experience everyone said I should have raised a noise. I had thought that I would make a fool of myself if it was only a cat or a dog. I hope not to face any other incident playing with my nerves in the future.

**3. Dhaka: The first impression**

i) Pollution and traffic congestion are the words that come to our mind when we think of Dhaka city.
ii) Thousands of vehicles create congestion in the streets and add to the pollution of both sound and air.
iii) Moreover, lack of proper knowledge of traffic rules and tendency to drive fast cause traffic accidents.
iv) Traffic congestion and pollution enhances as most of the manholes of the city streets are open and emitting bad essence.
v) Unplanned and improper construction of streets happens to be the sector where the authority should work on to reduce traffic congestion and pollution.

**4.**

| Wrong | Correct |
|---|---|
| Ms | Ms. |
| Kindergerden | Kindergarten |
| Resturent | Restaurant |
| Pharmacutical | Pharmaceutical |
| Discused | Discussed |
| Memorrendum | Memorandum |
| Suggesstion | Suggestion |
| Buffe | Buffet |
| Addresed | Addressed |
| Vehemantly | Vehemently |
| Arguement | Argument |

# BBA (IBA)

## Admission Test Question (2004-2005) with Solution

**PART I : MCQs** **90 minutes**

***Section I: Mathematics; 30 questions; 30 marks***

**Directions:** *Solve each of the following problems and mark the correct answer on your Answer Sheet.* **DO NOT USE A CALCULATOR**. *Figures are not drawn to scale.*

1. If $0 \leq x \leq 4$ and $y<12$, which of the following cannot be the value of xy?

(A) -2 (B) 48 (C) 6 (D) 24 (E) none of these

2. If the product of 2,3 and (x +5) is equal to one half the sum of 68 and x, what is the value of x?

(A) 2 (B) 3 (C) 4 (D) 5 (E) none of these

3. If the 1st number in a series of consecutive odd numbers is 8 less than the last number in the series, how many numbers are there in the series?

(A) 4 (B) 5 (C) 7 (D) 8 (E) none of these

4. If a:b =3:4, b:c=4:5, c:d =5:4; and d:e =4:7 then what is a:e ?

(A) 3/7 (B) 4/7 (C) 3/5 (D) 4/5 (E) none of these

5. If 20% of x is 30% of y and $xy \neq 0$, then percent of y is x?

(A) 10% (B) 60% (C) 90% (D) 150% (E) none of these

6. If 3 is added to both the numerator and denominator of a fraction, it becomes 5/7. If 9 is subtracted from both numerator and denominator, it becomes 1/3. What is the fraction?

(A) 15/21 (B) 12/18 (C) 18/32 (D) 10/17 (E) none of these

7. What is the last digit of $4^{218}$?

(A) 2 (B) 4 (C) 6 (D) 8 (E) none of these

8. If $8<\sqrt{((n+6)(n+1))}<9$, then n would be equal to

(A) 5 (B) 6 (C) 7 (D) 8 (E) 9

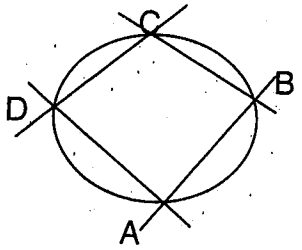
9. $\sqrt{(2985)}/\sqrt{(0.2985)} = ?$

(A) 0.0001 (B) 0.01 (C) 100 (D) 1000 (E) none of these

10. In the figure, $\angle DCB=2x^0$, $\angle BAD=x^0$ and $\angle CBA=81^0$. Calculate x.

(A) 79 (B) 72 (C) 60

(D) 45 (E) none of these




11. The cost of a cake is Tk x which is to be shared by 8 people. But at the last moment, 2 people left the group without paying. How many more taka in terms of x will it cost each person?

(A) x/8 (B) x/12 (C) x/24 (D) 3x/16 (E) none of these

12. At a school, the teacher-student ratio is 1:9. if 2/3 re of the students are female and one quarter of the teachers are female, what fraction of the total students and teachers are female?

(A) 11/24 (B) 5/8 (C) 25/56 (D) 7/12 (E) none of these

13. If the price of a product is increased by 15% then the seller would get Tk 450 more. If instead, the price were increased by 10% then how much more would he get?

(A) 150 (B) 200 (C) 300 (D) 325 (E) none of these

14. Which of the following must be an integer if x is a positive integer and (4/x+5/x+6/x) is also an integer?

(A) x/5 (B) 5/x (C) x/30(D) 30/x(E) none of these

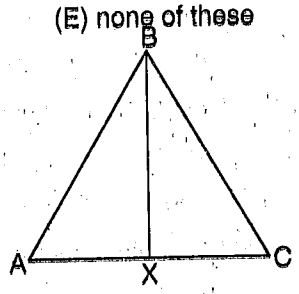
15. A room has 160 people, 15% of whom are women. A group of people, 30% of whom are women leaves the room. If 10% of the people remaining in the room are women, how many people left the room?

(A) 10 (B) 20 (C) 30 (D) 40 (E) none of these

16. If $1 \leq x \leq 3$ and $2 \leq y \leq 4$ then which of the following must be true?

(A) $xy \geq 5$ (B) $xy \leq 12$ (C) $xy = 12$ (D) $xy > 3$ (E) none of these

17. In the figure, AB=5 cm, BC =4cm and AC =7cm.
If BX bisects $\angle ABC$, calculate the length of AX.




(A) 35/9(B) 7/9 (C) 2/7

(D) 4 (E) none of these

18. Two varieties of sugar are mixed in a certain ratio. The cost of the mixture per kg is Tk 0.50 less than that of the superior variety and Tk 0.75 more than that of the inferior variety. What was the ratio of superior variety to inferior variety in the mixture?

(A) 5:2 (B) 3:2 (C) 2:1 (D) 1;1 (E) none of these

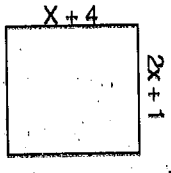
19. Forty percent of the employees of a certain company are men and 75% of the earn more than Tk 25,000 per month. If 45% of all the employees earn more than Tk 25,000 per year, what fraction of the women employed by the company earn Tk 25,000 per month or less?

(A) 2/11(B) 1/4 (C) 1/3 (D) 2/3 (E) none of these

20. Two cartons weigh (3x-2) kgs and (2x-3) kgs respectively. If the average weight of the cartons is 10 kgs, the heavier carton weighs how many kgs more than the lighter carton?

(A) 2 (B) 4 (C) 5 (D) 6 (E) 10

21. If the figure is a square, what is the perimeter of the figure?




(A) 9 (B) 12 (C) 16

(D) 28 (E) 49

22. In one classroom exactly two third of the seats are occupied. In another classroom with double the seating capacity of the first, exactly three quarters of the seats are occupied. If the students from both rooms are transferred into a third empty classroom that has a seating capacity exactly equal to the first two combined, what fraction of the seats in the third class room is occupied?

(A) 3/4 (B) 2/3 (C) 6/11 (D) 13/18 (E) 12/17

23. Suppose $z=a \times b \times c \times d \times e$ where $a > b > c > d > e$. A decrease by 1 in which of the factors would result in the greatest decrease in the value of z?

(A) a (B) b (C) c (D) d (E) e

24. Arif wished to use his VCR to record a 60 – minute documentary scheduled to be aired at 10:30 PM. At 8:00 that morning, he set the timer to begin recording at 10:30 PM the same day and to stop recording exactly 60 minutes later. If the timer on the VCR slows down by 30 seconds every hour and the documentary was aired on schedule, then how much of the next program after the documentary did the VCR record?

(A) 6 minutes and 45 seconds (B) 7 minutes

(C) 7 minutes and 15 seconds (D) 7 minutes and 30 seconds

(E) 7 minutes and 45 seconds

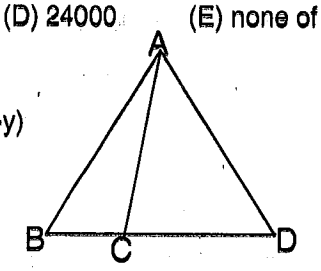
25. A union contract specifies a 6% salary increase plus a Tk 450 bonus for each employee. For a certain employee, this is equivalent to an 8 percent increase in total salary. What was the employee's salary in taka before the new contract?

(A) 21500 (B) 22500 (C) 23500 (D) 24000 (E) none of these

26. In the figure, $\angle ABC = X^0$, $\angle ADC = (y-30)^0$ and $\angle CAD = (3x-2y)^0$. Given that AC=BC, calculate (5x-y)

(A) 210 (B) 220 (C) 240

(D) 360 (E) none of these




27. If $10>x>9$ and $x^2 = (10-y)(10+y)$, which of the followings is a possible value of y?

(A) -7 (B) -6 (C) 3 (D) 4 (E) none of these

28. The manager of Agora purchased some tomatoes for Tk 45 per kg. Due to improper handling, 10% of the tomatoes, by weight, were ruined and discarded. At what price per kg should the manager sell the remaining tomatoes if he wishes to make a profit of 12 percent on the cost of the tomatoes?

(A) 52 (B) 54 (C) 56 (D) 58 (E) none of these

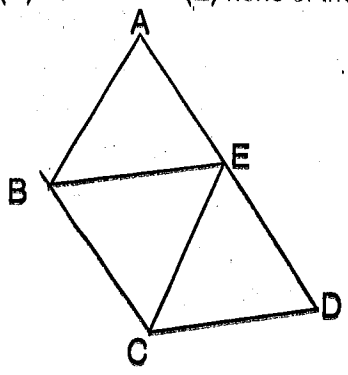
29. A club collected exactly Tk 599 from its members. If each member contributed at least Tk 12, what is the greatest number of members the club could have?

(A) 48 (B) 49 (C) 50 (D) 51 (E) none of these

30. ABE is an equilateral triangle, $\angle BEC=48^0$ and BE=EC=ED. Calculate the size of $\angle BCD$.

(A) 120 (B) 135 (C) 140

(D) 60 (E) none of these



***Section II: Analytical Ability; 15 questions, 15 marks***

**Directions:** *Solve each of the following problems and mark the correct answer on your Answer Sheet*

**Questions 1 to 4 are based on the following narration:**

Every night at Café Bangladesh, Tasvir, the manager, chooses five items to be offered for dinner from a list of seven items -- beef, rice, bread, fish, vegetable, chicken and duck. In making his decision each night. Tasvir always adheres to the following conditions:

- Either rice of bread is offered every night but not both.
- Whenever there is fish, there is also vegetable.
- Bread is never offered on a night when beef is offered.

1. One night when Tasvir offers beef, which of the followings must also be offered?

(A) rice (B) Bread (C) fish (D) vegetable (E) duck

2. Which of he followings could be a list of the five dishes offered for one night?

(A) Beef, rice, vegetable, bread, fish (B) Beef, fish, vegetable, chicken, duck

(C) Beef, rice, fish, chicken, duck (D) Beef, bread, fish, vegetable, duck

(E) Beef, rice, fish, vegetable, chicken

3. If rice is not in the menu one night, which of the other dishes will also not be included in the menu?

(A) Beef (B) bread (C) vegetable (D) chicken (E) duck

4. One night, Tasvir decides to offer only four dishes, one of which is beef. In how many ways can he make up the list of dishes offered?

(A) 2 (B) 3 (C) 4 (D) 5 (E) 6

**Questions 5 to 9 are based on the following narration:**

An artist will have to paint two modern paintings – "cyber Age" and "Nostalgia". The colours available to him are blue, green, brown, purple, red, black and yellow. He must follow the following conditions while painting:

- Of the 7 colours, he must use 3 colours for "Cyber Age" and 4 colours for "Nostalgia".
- Blue cannot be used with purple.
- Brown cannot be used with either red or yellow

5. If blue is used in "Cyber Age" which of the following must be true?

(A) Brown is used in "cyber Age" (B) Yellow is used in "cyber Age"

(C) Purple is used in "Nostalgia" (D) Green is used in "Nostalgia"

(E) Red is used in "Nostalgia"

6. If red and blue are used on the "Nostalgia", which of the following could be the other two colors used on that painting?

(A) green and purple (B) green and black (C) green and yellow

(D) brown and black (E) purple and yellow

7. If red is used in "Nostalgia", which of the following colors must be used in "Cyber Age"?
(A) blue (B) brown (C) purple (D) black (E) yellow

8. If yellow and purple are used in "cyber Age", the third color used on that painting must be
(A) blue (B) green (C) brown (D) red (E) black

9. There will be only one acceptable assignment of colors to each of the paintings, if which of the following conditions is added to the original ones?

(A) Purple and black must be used on "Cyber Age"

(B) green and purple must be used on "Nostalgia"

(C) blue cannot be used with green on the same painting

(D) green cannot be used with yellow on the same painting

(E) purple cannot be used with red on the same painting.

**Questions 10 to 13 are based on the following narration:**

Seven pieces of electrical equipment – C,D,L,S,H,W, and P- are to be arranged along one wall of a factory building. Each machine must be placed at one of the seven electrical outlets, numbered 1 through 7 consecutively, along that wall, according to the following conditions:

- C must be placed at an outlet adjacent to the outlet at which the H is placed.
- D must be placed at an outlet that is adjacent to an outlet at which either S or W is placed.
- P cannot be placed at an outlet adjacent to the outlet at which L is place.
- L must be placed at outlet two.

10. If C is placed at outlet seven, which of the followings must be true?
(A) H is placed at outlet five (B) D is placed at outlet three
(C) P is placed at outlet five (D) S is placed at outlet four
(E) W is placed at outlet one

11. If W is placed at outlet five; S must be placed at outlet
(A) one (B) three (C) four (D) six (E) seven

12. If D is placed at outlet seven, which of the following must be true?
(A) W is placed at outlet six (B) P is placed at outlet five
(C) H is placed at outlet four (D) C is placed at outlet three
(E) S is placed at outlet one

13. P can be placed at which of the following outlets?
(A) One (B) Three (C) Four (D) Six (E) Seven

14. The widespread development of industrial robots is contributing to unemployment, therefore. "intelligent" machines are dangerous.
The argument above is most like which of the following?

(A) Mussolini was an evil man; therefore, he became a fascist.

(B) Eating mutton is harmful to health; therefore, fatty foods are unsafe.

(C) Some judges are dishonest because they take bribes

(D) Whales are in danger of becoming extinct; therefore, we should not trade with countries that allow whales to be hunted.

(E) Birds are dangerous because they all spread disease.

15. Rajshahi has one of the lowest motor vehicle fatality rates in the country, and it is one of the few cities that require extensive annual automobile safety inspections. Therefore, all states should adopt similar safety inspection procedures.

The argument above is based on which of the following assumptions?

(A) Most cities tend to impose few rules and regulations on the automobile drivers operating within those cities.

(B) Most cities are skeptical that annual automobile safety inspections can reduce fatality rates.

(C) Annual automobile safety inspections contribute significantly to holding down Rajshahi's fatality rate.

(D) Drivers in Rajshahi are more safety conscious than are drivers in other parts of the country.

(E) A smaller number of people die on the roads in Rajshahi than in most other cities.

**Section III: Language & communication; 30 questions, 30 marks**

**Directions:** *Each sentence below has one or two blanks. Beneath the sentence are five words or sets of words. Choose the word or set of words that best fits the meaning of the sentence, and mark your Answer Sheet accordingly.*

1. Many artists believe that successful imitation, far from being symptomatic of a lack of ----- ---- , is the first step in learning to be creative.

(A) elegance (B) resolution (C) goodness (D) originality (E) sympathy

2. Psychology has slowly evolved into an ---------- scientific discipline that now functions autonomously with the same privileges and responsibilities as other sciences.

(A) independent (B) unusual (C) outmoded (D) uncontrolled (E) inactive

3. At several points in his discussion, John, in effect, -------- evidence when it does not support his argument, (comma missing) tailoring it to his needs.

(A) address (B) creates (C) alters (D) suppresses (E) substitutes

4. Considering how long she had yearned to see Italy, her first reaction was curiously -------. Underlined blank was missing.

(A) meditative (B) insightful (C) categorical (D) unoriginal (E) tepid

5. For the last few years, mobile homes have gained more popularity as ------- to increasingly expensive conventional housing.

(A) a reaction (B) an addition (C) an introduction (D) an alternative (E) a challenge

6. The merger will eliminate ------- and provide more -------- cross training to staff.

(A) duplication ..... Effective (B) paper work ..... or less
(C) profit .... And more (D) bosses....wasteful
(E) competitors ... aggressive

7. High school students should not be_____ as being immature or naïve.
(A) helped (B) shoved (C) directed (D) categorized (E) discouraged

8. Money _____ to a political campaign should be used for political purposes and nothing else.
(A) used (B) contributed (C) forwarded (D) spent (E) plundered.

9. Having published more than three hundred books in less than fifty years, science fiction writer Isaac Asimov may well be the most _____ author of our day.
(A) fastidious (B) insecure (C) outmoded (D) prolific (E) obsolete

10. Although gregarious by nature, Lima became quiet and _____ after she was unexpectedly laid off from the work.
(A) withdrawn (B) susceptible (C) assertive (D) autonomous
(E) belligerent

**Directions:** *Each key word is followed by a set of five words. Choose the most appropriate word that is* ***synonymous*** *to the key word, and mark your Answer Sheet accordingly.*

11. PROFUSION
(A) certainty (B) proliferation (C) insipid (D) fervor (E) abundance

12. DILAPIDATED
(A) conscious (B) unconscionable (C) decaying (D) bizarre (E)renovated

13. ELUCIDATE
(A) embark (B) lodge (C) plank (D) enhance (E) explain

14. RECLUSE
(A) loner (B) ecstatic (C) humorous (D) imaginary (E) sudden

15. EMBLEM
(A) charm (B) flood (C) wastage (D) symbol (E) skill

**Directions:** *In each o the following lists, one word is wrongly placed. Find the wrongly placed word that is not similar to the other words of the list.*

16. (A) stream (B) brook (C) island (D) torrent (E) river
17. (A) winter (B) hail (C) sleet (D) fog (E) mist
18. (A) outraged (B) cross (C) spiteful (D) benevolent (E) annoyed
19. (A) fur (B) wings (C) shell (D) scales (E) feather
20. (A) hillock (B) mound (C) ocean (D) peak (E) pile

**Directions:** *In each of the following sentences, some part or the whole is underlined. Each sentence is followed by five alternative versions of the underlined portion. Select the alternative that you consider most correct according to the requirements of standard written English. Answer A is the same as the original version; if you think the original version is best, select answer A.*

21. When buying clothes, smart customers usually consider how much the item costs, how good it looks, and <u>its durability</u>.

(A) its durability (B) if it is durable (C) the durability of it
(D) the ability of the item to last (E) how well it wears

22. <u>Having slammed his books on the desk, Kamal felt angry about failing the test.</u>

(A) Having slammed his books on the desk, Kamal felt angry about failing the test.
(B) Having felt angry about failing the test, Kamal slams his books on the desk.
(C) Slamming his books on the desk, angry about failing the test.
(D) Angry about failing the test, Kamal slammed his books on the desk.
(E) Kamal failed the test, therefore, angrily slammed his books on the desk.

23. <u>The award was presented to the actor that was engraved with gold letters.</u>

(A) The award was presented to the actor that was engraved with gold letters.
(B) The award that was presented to the actor engraved with gold letters.
(C) The award was presented to the actor who was engraved with gold letters.
(D) The award, engraved with gold letters, and presented to the actor.
(E) The award presented to the actor was engraved with gold letters.

24. The difference between the jobs is that <u>one is exciting; the other boring.</u>

(A) one is exciting; the other, boring.
(B) of one being exciting, the other is boring
(C) one is exciting; the other being boring
(D) one is exciting, although the other is boring
(E) of an exciting one and one that is boring

25. His ambition was <u>not only to study but also mastering</u> the craft of journalism.

Underline was missing.

(A) not only to study but also mastering
(B) not only studying but to try and master
(C) not studying only, but also mastering
(D) not only to study but also to master
(E) to study, and, as well, to master

**Directions:** *The passage below is followed by questions based on its contents. Answer the question on the basis of what is stated or implied in each passage and mark your Answer Sheet accordingly.*

Art theft is only a little younger than art itself. The pillaging and robbing of valuable artistic works has been a problem since ancient times. A recent reminder of just how common such robbery was in antiquity came with the startling announcement in early 1995 of the finding of burial chambers in a tomb in Egypt's valley of the kings that were completely untouched. Before the discovery, archaeologists had not gone beyond the tomb's first chambers because, like so many other tombs, these areas had obviously been ransacked of their valuable treasures thousands of years earlier. Today, however, art theft not only involves the loss of art worth billions of dollars but also is an issue charged with nationalism and tangled in complex cultural debates. The end of the Cold War has brought to light many great works missing in the aftermath of World War II and has forced nations to deal with the issue of repatriation of art.

Art, like other property, can be privately owned, sold, transferred, and bequeathed. Only in a romantic sense does art "belong to the world," but much great art is already owned by public custodians and is readily accessible. In both private and public hands, however, art is becoming increasingly vulnerable. Estimates vary widely for the total value of the world's art that is stolen each year. Experts have put the value of stolen art at between $2billion and $5 billion, numbers that are steadily increasing. The damage to and loss of this cultural heritage for study and enjoyment is a tragic circumstance.

The most basic type of art theft, common law art theft, comes in all the familiar forms: burglary (breaking and entering), armed robbery, shoplifting, and hijacking of shipments in transit. Since World War II, however, the world and the art market have been transformed by such factors as readily available international air transportation, electronic mail and satellite communication. With today's instantaneous communication and speedy travel, it is possible to arrange for the transfer of stolen art and then move it quickly over great distances. In such a world, illicit trade in stolen art is hidden within a much larger legitimate art market that moves faster and is more international than ever before.

26. A reminder of how common art theft was in ancient times is provided by
(A) the discovery in 1995 of empty burial chambers in a tomb in Egypt's Valley of the kings.
(B) archaeologists who were involved in the removal of precious works of art from Egyptian burial chambers.
(C) the fact that archaeologists during the first excavations did not bother to fully explore burial chambers of Egypt's Valley of the Kings due to the belief that any treasures would
(D) a startling announcement about a robbery in burial chambers in Egypt's Valley of the Kings.
(E) the ransacking of art treasures from tombs thousands of years ago.

27. According to the passage, the stealing of art started
(A) in 1995 in burial chambers in tombs in Egypt's Valley of the Kings.
(B) since World War II (C) during the era of the Cold War.
(D) relatively soon after the first instances of art appeared. (E) roughly around 2,500 B.C.

28. The passage implies that the illicit trade in stolen art
(A) is hidden in legitimate art markets and museums.
(B) is much harder to track given the ease with which art can be transferred and moved over great distances.
(C) has been a persistent headache for government authorities.
(D) has tripled in value compared to a century ago (E) began during the Cold War era.

29. The word "bequeathed" in the first line of second paragraph means
(A) stolen (B) contested (C) registered (D) defrauded (E) handed down

30. The common methods of committing art theft include
(A) breaking and entering, stealing from art shops, and armed robbery.
(B) burglary, hijacking of ships, and shoplifting.
(C) robbery of armaments, hijacking of arts shipments in transit, burglary.
(D) pillaging the burial chambers in tombs in Egypt's valley of the Kings.
(E) the sophisticated use of electronic mail and satellite communication.

## PART II: WRITTEN ENGLISH 30 minutes

**Directions:** *This part contains two questions. Answer these questions in this test booklet in the designated spaces.*

1. In the box below, ***describe an event where you have proved your managerial skill.***

2. *Write* ***a dialogue*** *between two friends immediately after the BBA admission test.*

## Answer Key

**Section 1: Mathematics**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. B | 2. E | 3. B | 4. A | 5. D | 6. B | 7. C | 8. A | 9. C | 10. C |
| 11. C | 12. B | 13. C | 14. D | 15. D | 16. B | 17. A | 18. B | 19. E | 20. D |
| 21. D | 22. D | 23. E | 24. E | 25. B | 26. A | 27. C/D | 28. C | 29. B | 30A |

**Section 2: Analytical Ability**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. A | 2. E | 3. A | 4. A | 5. C | 6. C | 7. B | 8. D | 9. A | 10. C |
| 11. A | 12. B | 13. E | 14. B | 15. C | | | | | |

**Section 3: Language & Communication**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. D | 2. A | 3. C | 4. E | 5. D | 6. A | 7. D | 8. B | 9. D | 10. A |
| 11. E | 12. C | 13. E | 14. A | 15. D | 16. C | 17. A | 18. D | 19. B | 20. C |
| 21. E | 22. D | 23. E | 24. A | 25. D | 26. A | 27. D | 28. B | 29. E | 30. B |

# BBA (IBA) Admission Test (2004-05) Solution

## Section 1: Mathematics

1. (B) $0 \le x \le 4$ এই expression থেকে আমরা বুঝতে পারি x অবশ্যই একটি positive number: $y < 12$ expression থেকে y positive নাকি negative তা বোঝার উপায় নেই। আবার প্রথম expression এ আমরা দেখি x এর সর্বোচ্চ value 4 এবং দ্বিতীয় expression এ y এর সর্বোচ্চ value 12 এর থেকে কম। অতএব, xy এর value অবশ্যই $4 \times 12 = 48$ এর চেয়ে কম হবে।

2. (B) প্রশ্নমতে $2 \times 3 \times (x+5) = \frac{68+x}{2}$

   অর্থাৎ, $x = \frac{8}{11}$ সুতরাং answer (E)

3. (B) consecutive odd number এর series হতে পারে এরকম x, x+2, x+4, x+6, x+8, -------- অর্থাৎ, ৫ম number এর সাথে ১ম number এর difference 8.
   সুতারাং : answer (B)

4. (A) a : b = 3: 4, b :c = 4: 5, c : d = 5:4, d : e = 4:7

   $\therefore a: c = (3 \times 4 \times 5 \times 4) : (4 \times 5 \times 4 \times 7) = 3 : 7 = \frac{3}{7}$ সুতরাং, answer (A)

5. (D) প্রশ্নমতে, $\frac{x}{5} = \frac{3y}{10} \Rightarrow x = \frac{3y}{2}$ অর্থাৎ, x, y এর 150% সুতরাং, answer (D)

6. (B) ধরি fraction টি $\frac{x}{y}$

   প্রশ্নমতে, $\frac{x+3}{y+3} = \frac{5}{7}$ ------ (1) এবং $\frac{x-9}{y-9} = \frac{1}{3}$ -------(2)

   (1) $\Rightarrow 7x + 21 = 5y + 15$ ------(3)
   (2) $\Rightarrow 3x - 27 = y - 9$ ------- (4)

   (4) নং কে 5 দিয়ে গুন করলে,
   $15x - 135 = 5y - 45$
   (3) – (4) $\Rightarrow -8x + 156 = 6 \Rightarrow x = 12$

   x এর মান (4) নং এ বসিয়ে পাই $y = 18$ অর্থাৎ, fraction টি = $\frac{12}{18}$

   সুতরাং, answer (B)
   (Bach calculation করে ও problem টি quickly solve করা যায়)

7. (C) যেহেতু power টি একটি জোড়া সংখ্যা সুতরাং $4^2$ এর value consider করে অগ্রসর হলে $\frac{218}{2} = 109$ বার $4^2$ করতে হবে। $4^2 = 16$ হওয়ায় $(16 \times 16)$ এরকম 109 বার করলে ও last digit 6 হবে।
   সুতরাং answer (C).

8. (A) $8 < \sqrt{\{(x+6)(x+1)\}} < 9$

   অর্থাৎ, (x+6) (x+1) এর value $8^2 = 64$ এক $9 = 81$ এর মাঝামাঝি হবে। x এর value 5 বসালেই এটি সম্ভব। সুতরাং answer (A).

9. (C) $\frac{\sqrt{2985}}{\sqrt{0.2985}}$ এর value হবে 100. সুতরাং, answer (C)

10. (C) চতুর্ভুজের দুই বিপরীত কোনের সমষ্টি $180^0$ $\therefore 3x\ 180^0, x = 60^0$ $\therefore$ answer (C)

11. (C) ১ম ক্ষেতে, cost per person = $\frac{x}{8}$ টাকা ২য় ক্ষেতে, cost per person = $\frac{x}{6}$ টাকা

∴ ২য় ক্ষেতে cost বেশি পড়ল = $\left(\frac{x}{6}-\frac{x}{8}\right)$ টাকা = $\frac{x}{24}$ টাকা সুতরাং, answer (C)

12. (B) ধরি, teacher এর সংখ্যা = 20 ∴ student এর সংখ্যা = 180

female students = $180\times\frac{2}{3}=120$ female teachers = $20\times\frac{1}{4}=5$

∴ total student + teacher = 20+180=200 female student + teacher = 120 +5 = 125

∴ fraction = $\frac{125}{200}=\frac{5}{8}$ সুতরাং, answer (B)

13. (C) 15% increase = Tk. 450

∴ 10% increase = Tk. $\frac{450\times10}{15}$ = Tk. 300 সুতরাং, answer (C)

14. (D) x একটি positive integer এবং $\frac{4}{x}+\frac{5}{x}+\frac{6}{x}=\frac{15}{x}$ ও একটি integer.

অতএব, x অবশ্যই odd integer (1 or 3 or 5 or 15) অর্থাৎ, $\frac{30}{x}$ ও অবশ্যই একটি integer হবে।

15. (D) মোট women = $160\times\frac{15}{100}=24$

ধরি, x জন বেরিয়ে গেলেন। ∴ women বেরিয়ে গেলেন = $x\times\frac{30}{100}=\frac{3x}{10}$

অর্থাৎ, room এ রয়ে গেলেন = 160 – x জন লোক

এক room এ women রয়ে গেলেন $24-\frac{3x}{10}=\frac{240-3x}{10}$

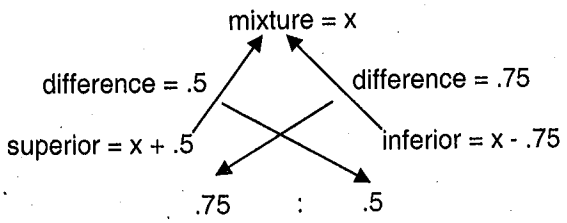
প্রশ্নমতে $\frac{240-3x}{10}=\frac{160-x}{10}$ $\Rightarrow$ 240 – 3x = 160 – x $\Rightarrow$ x = 40 সুতরাং answer (D)

16. (B) ১ম expression থেকে পাই x এর সর্বনিম্ন value 1 এবং সর্বোচ্চ value 3: হয় expression থেকে পাই y এর সর্বনিম্ন value 2 এবং সর্বোচ্চ value 4.
অর্থাৎ x ও y এর গুনফল 12 এর থেকে বড় হতে পারবেনা এবং 2 এর থেকে ছোট হতে পারবেনা।
সুতরাং answer (B)

17. (A) ধরি, Ax = x ; অর্থাৎ cx = 7-x

অতএব, $\frac{5}{4}=\frac{x}{7-x}$ $\Rightarrow$ 35 – 5x = 4x $\Rightarrow$ 35 = 9x $\Rightarrow$ x = $\frac{35}{9}$ ∴ answer (A)

18. (B)




= 75 : 50 = $\frac{75}{50}=\frac{3}{2}$ = 3:2 ∴ answer (B)

19. (E) ধরি, মোট employees= 100, অর্থাৎ মোট men = 40। 25,000 এর বেশি salary পায় = $40\times\frac{75}{100}$ = 30 জন man; আবার, 100 এর 45% অর্থাৎ মোট 45 employees 25,000 এর বেশি salary পায়। তাদের মধ্যে 30 জন man হওয়াতে 25,000 এর বেশি salary পাওয়া woman = 45 – 30 = 15 জন। মোট woman = 100 – 40 = 60 জন; 25,000 বা এর চেয়ে কম salary পাওয়া woman = 60 – 15 = 45 জন।

অতএব, নির্নেয় fraction = $\frac{45}{60}=\frac{3}{4}$ সুতরাং, answer (E)

20. (D) প্রশ্নমতে $\frac{(3x-2)+(2x-3)}{2} = 10 \quad \Rightarrow x = 5$

একটির weight = (3 x 5) -2 = 13 Kg এক অপরটির weight = (2x5) -3 = 7 Kg. অর্থাৎ, ভারীটির weight (13 – 7) = 6 kg. বেশি। ∴ answer (D)

21. (D) figure টি square হলে, x + 4 = 2x +1, অর্থাৎ x = 3
অতএব, perimeter = 4(X+4) = 28 ∴ answer (D)

22. (D)

| | capacity | occupied |
|---|---|---|
| 1st room | x | $x \times \frac{2}{3} = \frac{2x}{3}$ |
| 2nd room | 2x | $2x \times \frac{3}{4} = \frac{3x}{2}$ |
| 3rd room | 3x | $\frac{2x}{3} + \frac{3x}{2} = \frac{13x}{6}$ |

অতএব, নির্নেয় fraction = $\frac{3x}{\frac{13x}{6}} = \frac{13}{18}$ ∴ answer (D)

23. (E) Z = a × b × c × d× e এক a> b> c> d> e>; এক্ষেতে সর্বনিম্ন value অর্থাৎ e এর value 1 decrease করলে পুরো expression এর decrease greatest হবে। ∴ answer (E)

24. (E) Documentary শুরু হবে 10:30 p.m এ এবং শেষ হবে 11:30 p.m এ timer টি set করা হয়েছে 8 a.m এ। অর্থাৎ program শেষ হওয়া পর্যন্ত মোট time = $15\frac{1}{2}$ ঘন্টা। প্রতি ঘন্টায় 30 seconds = $\frac{1}{2}$ minute show হলে 15 ঘন্টায় $15\times \frac{1}{2} = 7\frac{1}{2}$ minute show হবে এবং বাকী আধা ঘন্টায় 15 sec show হবে। অর্থাৎ মোট 7 min 45 seconds show হয়ে পরবর্তী অনুষ্ঠানের সমপরিমান সময় recorded হয়ে যাবে।
∴ answer (E)

25. (B) ধরি, salay ছিল = x

$\frac{6x}{100} + 450 = \frac{8x}{100} \quad \Rightarrow \frac{2x}{100} = 450 \quad \Rightarrow x = 22,500$ ∴ answer (B)

26. (A) যেহেতু AC = BC; অতএব, $\angle ABC = \angle BAC = x$
অতএব, ত্রিভুজটিতে x + y – 30 + 3x – 2y + x = 180
⇒ 5x –y = 180 + 30 = 210 ∴ answer (A).

27. (D) ১ম expression এ x এর value 10 এবং 9 এর মধ্যে; অর্থাৎ x integer নয়। অর্থাৎ $x^2$এর value 81 থেকে বড় এবং 100 এর থেকে ছোট যেকোন number.
২য় Expression এ $x^2 = (10 –y) (10 +Y) = 100 + 10y – 10y –y^2 = 100 – y^2$
⇒ $y^2 = 100 –x^2$ (অর্থাৎ, $y^2$ এর value 100 – 81 = 19 থেকে ছোট এবং 100-100=0 থেকে বড়) অতএব,y এর value 3 বা 4 দুটোই হতে পারে। সুতরাং, এই প্রশ্নের দুটি answer হতে পারে (C) এবং (D).

28. (C) ধরি, x Kg টমেটো কেনা হয়েছিল; অর্থাৎ মোট cost = 45x 10% নষ্ট হয়েছে; অর্থাৎ $x - \frac{x}{10} = \frac{9x}{10} kg$ টমেটো রয়ে গেছে।

12% profit করতে চাইলে বিক্রয়মূল্য $= 45x + \frac{45x\times 12}{100} = \frac{4500x + 540x}{100} = \frac{5040x}{100} = 50.4x$

∴ তখন প্রতি kg এর বিক্রয়মূল্য $= 50.4x + \frac{9x}{10} = 50.4x \times \frac{10}{9x}$
= 56 টাকা

সুতরাং; answer (C)

29. (B) মোট 599 টাকা collected হয়েছে এবং minimum contribution 12 টাকা হলে সম্ভাব্য সর্বোচ্চ লোকের সংখ্যা = 49 করেন 49 ×12 = 588 কিন্তু 50× 12 = 600, যা সীমার অতিরিক্ত। ∴ Answer (B)

30. (A) যেহেতু BE = EC; অতএব, $\angle BCE = \angle CBE$ অর্থাৎ, $\angle BCE = \frac{180-48}{2} = 66^0$

আবার, $\triangleleft ABE$ সমবাহু অর্থাৎ, $\angle AEB = 60^0$ $\therefore \angle CED = 180 - (60 + 48) = 72^0$

যেহেতু, EC = ED, অতএব, $\angle EDC = \angle ECD$ অর্থাৎ, $\angle ECD = \frac{180-72}{2} = 54^0$

অতএব, $\angle BCD = 66+54 = 120^0$ $\therefore$ answer (A)

## Section 2: Analytical Ability

**Questions 1-4**

সাতটি item ( beef, rice, bread, fist, vegetable, chicken, duck) এর মধ্যে পাঁচটি প্রতিরাতে dinner এর জন্য choose করতে হবে নিচের শর্তানুযায়ী -

- শুধু rice (r) অথবা শুধু bread (br) প্রতিরাতে থাকবে, কিন্তু দুটি একসাথে থাকতে পারবেনা।
- fish (f) থাকলে সাথে অবশ্যই vegetable (v) থাকবে।
- beef (b) থাকলে bread (br) থাকবেনা।

1. (A) ৩য় শর্তনুযায়ী b থাকলে যেহেতু br থাকবেনা, সেহেতু ১ম শর্তানুযায়ী অবশ্যই r থাকতে হবে।
   $\therefore$ answer (A)
2. (E) A) তে br ও r একসাথে আছে; ১ম শর্তানুযায়ী ৩ টা সম্ভব নয়।
   B) তে br ও r কোনটিই নেই; ১ম শর্তানুযায়ী ৩ টা সম্ভব নয়।
   C) তে f আছে v কিন্তু নেই ; ২য় শর্তানুযায়ী ৩ টা সম্ভব নয়।
   D) তে b ও br দুটোই আছে ; ৩য় শর্তানুযায়ী ৩ টা সম্ভব নয়।
   E) তে কোন শর্ত ভাঙ্গা হয়নি।
   $\therefore$ answer (E)
3. (A) যেহেতু menu তে r থাকবেনা, সেহেতু ১ম শর্তানুযায়ী br থাকতে হবে। br থাকলে ৩য় শর্তনুয়ায়ী b থাকতে পারবেনা। $\therefore$ answer (A)
4. (A) b, r, c, d, ; b, r, f, g, - শুধু এই দুটি combination সম্ভব।
   $\therefore$ answer (A)

**Questions 5-9**

দুটি painting (c, a এক n) এর জন্য সাতটি color (b, g, br, p, r, bl, y) ব্যবহার করা যাবে নিচের শর্তনুযায়ী

- c, a এর জন্য ৩টি এবং n এর জন্য ৪টি color ব্যবহার করা যাবে।
- b এর সাথে p ব্যবহার করা যাবেনা।
- br এর সাথে r বা y কোনটা ব্যবহার করা যাবেনা।

5. (C) c. a তে b ব্যবহার করার অর্থ হচ্ছে এখানে p ব্যবহার করা যাবেনা। অর্থাৎ n ও p ব্যবহার করতে হবে।
   $\therefore$ answer (C)
6. (C) n এ b ও r ব্যবহার করলে p এক br ব্যবহার করা যাবেনা, অর্থাৎ বাকী রইল g bl ও y answer choice ও শুধু i ও y আছে।
   $\therefore$ answer (C)
7. (B) N এ যদি r ব্যবহৃত হয়, এখানে br ব্যবহার করা যাবেনা। অর্থাৎ c.a তে br ব্যবহার করতেই হবে।
   $\therefore$ answer (B)
8. (D) c.a তে y ও p ব্যবহার করার অর্থ হচ্ছে এখানে p এবং br ব্যবহার করা যাবেনা। অতএব, বাকী রইল g,r ও bl. আবার br যেহেতু N এ ব্যবহৃত হবেনা সেহেতু সেখানে r দেয়া যাবেনা। অতএব r কে অবশ্যই c.a তে ব্যবহার করতে হবে।
   $\therefore$ answer (D)
9. (A) p ও b I কে যদি অবশ্যই c.a তে ব্যবহার করতে হয়, তাহলে এখানে b ব্যবহার করা যাবেনা। আবার r ও y কে একসাথে থাকতে হবে, কারন কোনটিই br এর সাথে যাবেনা। অতএব, br কে c.a তে ব্যবহার করতে হবে।
   $\therefore$ answer (A)

**Questions 10-13**

সাত টুকরো যন্তপাতি (C, D, L, S, H, W, P) একটি factory building এর দেয়ালে সজাতে হবে। প্রত্যেকটি যন্ত সাতটি electrical outlet এর যেকোন একটির সাথে রাখতে হবে। outlet গুলো 1-7 numbering করা আছে ধারাবাহিক ভাবে। নিচের শর্তগুলো লক্ষ্য রাখতে হবে -

- C এর পাশে H থাকতে হবে।
- D এর পাশে S বা W থাকতে হবে।
- P এর পাশে L থাকতে পারবেনা।
- L কে 2 no outlet এ রাখতে হবে।

10. (C) C কে যদি 7 no outlet এ রাখা হয় 6 no outlet অবশ্যই H কে রাখতে হবে। D এর S বা W কে রাখতে হবে তাই D কে 1 no এ রাখা সম্ভব নয়। P কে 1 বা 3 no এ রাখা যাবেনা কারন L 2 no এ আছে। অর্থাৎ, P এর position 4 বা 5; এখন D এর পাশে যেহেতু S বা W কে রাখতে হবে, তাই P এর position এক্ষেতে 5 হতে বাধ্য।
    ∴ answer (C)
11. (A) W কে 5 নং এ রাখলে C বা H বা P বা D কোনটাকেই 1 নং এ রাখা যাবেনা। অর্থাৎ 5 কে 1 no এ রাখতেই হবে।∴ answer (A)
12. (B) D কে 7 নং এ রাখলে 5 বা W এর একটিকে 6 নং এক অপরটিকে 1 no এ রাখতে হবে। অতএব, P কে 5 নং এ রাখতেই হবে কারন C ও H কে পাশাপাশি রাখতে হবে।
    ∴ answer (B)
13. (E) P কে 1 বা 3 নং এ রাখা যাবেনা কারন পাশে L আছে। 4 নং বা 6 নং এ রাখলে D এর পাশ S বা W এবং C এর পাশে H কে রাখা সম্ভব নয়।
    ∴ answer (E)

14. (B) এটি একটি resembling question widespread development of industrial robots = x ; unemployment = y এক dangerous = z ধরলে argument টি এরকম → x এর ফলে যেহেতু Y হয়, তাই x হচ্ছে z একই structure আছে শুধু (B) তে। Eating mutton = x , harmful to health = y এক unsafe= z ধরলে একই structure পাওয়া যায়।
    ∴ answer (B)
15. (C) এই argument এর premise আছে দুটো। একটি হচ্চে রাজশাহীতে গাড়ী দুর্ঘটনার হর সবচেয়ে কম এক অপরটি হচ্চে রাজশাহীতে annual safety inspection হয় খুব কঠিনভাবে যা বেশিরভাগ শহরে হয়না। Argument এর conclusion হচ্চে এই যে অন্যান্য জায়গাতে ও একই রকম safety inspection হওয়া উচিত। Assumption এর কাজ হচ্ছে premise (S) এবং conclusion এর gap fill-up করা। এখানে premise ও conclusion এর মধ্যে যে ফাঁকটি রয়েছে সেটি হলো safety inspection এর কারনেই যে দুর্ঘটনা কমেছে সেটি বলা হয়নি।
    ∴ answer (C)

## Section III Language & Communication

1. (D) Originality অর্থ স্বকীয়তা। প্রদত্ত sentence এ এটিই most appropriate. ∴ Answer D
2. (A) Independent অর্থ স্বাধীন। psychology ধীরে ধীরে স্বাধীন বিষয়ে বিবর্তিত হয়েছে। ∴ answer A
3. (C) John প্রয়োজনানুসারে evidence পরিবর্তন করে। alter অর্থ পরিবর্তন। ∴ answer C
4. (E) contrast (বৈপরীত্য) দেখানো হয়েছে। তাই reaction টি এমন কিছু হবে যা তার বাসনার সাথে মেলেনা। Tepid অর্থ উদাসীন। ∴ answer E
5. (D) ব্যয়বহুল গতানুগতিক আবাসনের বিকল্প হিসেবে mobile housing জনপ্রিয় হচ্ছে। alternative অর্থ বিকল্প।
    ∴ answer D
6. (A) Merger দুটি প্রতিষ্ঠানের একত্রীকরন। এর ফলে duplication (নকল) বন্ধ হবে এক কর্মচারীদের মধ্যে cross training আরো কার্যকারী (effective) হবে। ∴ answer A
7. (D) High school student দের immature (অপরিনত) বা naïve (উদাসীন) হিসেবে categorize (শ্রেনীভুক্ত) করা উচিত নয়। ∴ answer D

8. (B) Political campaign এ টাকা দান (donate / contribute) করা হয়। ∴ answer B
9. (D) প্রচুর পরিমানে বই প্রকাশিত হওয়ায় Asimov কে সবচেয়ে মুখ্য / প্রধান (prolific) লেখক বলা যায়। ∴ answer D
10. (A) যদি ও Lima অত্যন্ত মিশুক (gregarious) চাকরি যাবার পর সে শান্ত (quiet) এক withdrawn (চুপচাপ) হয়ে গেছে। ∴ answer A
11. (E) Profusion অর্থ 'প্রচুর' Abundance অর্থ ও তাই। ∴ answer E
12. (C) Dilapidated অর্থ 'ক্ষয়িষ্ণু' decaying এর অর্থ একই। ∴ answer C
13. (E) Elucidate অর্থ 'বোধগম্য করা' Explain অর্থ একইরকম। ∴ answer E
14. (A) Recluse অর্থ 'যে একাকীত্ব পছন্দ করে'। Loner এর অর্থও তাই। ∴ answer A
15. (D) Emblem অর্থ 'বিশেষ চিহ্ন'। Symbol এর অর্থ একই। ∴ answer D
16. (C) Stream আর broth এর অর্থ স্রোত। Torrent অর্থ বন্যা / জলোচ্ছ্বাস। River অর্থ নদী। এরা প্রত্যেকে সম্পর্কযুক্ত। Island অর্থ দ্বীপ। এটি এখানে খাপ খায়না। ∴ answer C
17. (A) Wail (Hail) অর্থ বরফবৃষ্টি, sleet অর্থ ও তাই। Fog আর mist অর্থ কুয়াশা। winter অর্থ শীতকাল। যদিও প্রত্যেকটির সাথে শীতের সম্পর্ক আছে। এই পাঁচটির মধ্যে uninter (winter) শব্দটি Wrongly placed কারন ৩টি (এটি) কোন প্রাকৃতিক ঘটনার কথা ব্যক্ত করেনা। ∴ answer A
18. (D) Outraged, cross, spiteful অর্থ রাগী। Annoyed অর্থ বিরক্ত। তাই beneuoled (পরোপকারী) এখানে মেলেনা। ∴ answer D
19. (B) Fur অর্থ পশম. wings অর্থ ডানা, Shell অর্থ খোলস, Scales অর্থ ওজন মাপার যন্ত্র বা balance, CORRECTION : Scales অর্থ কুমির বা এক প্রকার রেপটাইল প্রাণির গায়ের চামরা। feather অর্থ পালক। ∴ answer B
20. (C) Hillock, mound, pile প্রতেকটি পাহাড় / পর্বত নির্দেশ করে। peak অর্থ পাহাড় চূড়া। ocean (মহাসাগর) এখানে বেমানান। ∴ answer C
21. (E) এটি একটি parallel structure problem how much the item costs, how good it looks এর পরে its durability হবেনা, বরং একটি "How" যুক্ত উত্তর হবে।
22. (D) এটি একটি dangling modifier problem প্রথম clause ও দ্বিতীয় clause এর subject এর কাজের সমঞ্জস্য থাকতে হবে। ∴ answer D
23. (A) এখানে award টি gold letters দিয়ে engrained ছিল, actor নয়।
24. (A) কোন ভুল নেই। ∴ Answer A
25. (D) Not only to study এর পর but also to master হবে। ∴ answer D
26. (A) দ্বিতীয় প্যারাতে বলাই আছে A recent reminder of just how common such robbery was in antiquity came with the startling announcement in early 1995 of the finding of burial chambers in a tomb in Egypt's valley of the kings that were completely untouched
27. (D) প্রথম line এ উত্তর দেয়া আছে। শিল্প শুরুও কিছুদিনের মধ্যেও শিল্পচুরি শুরু হয়েছে। ∴ answer D
28. (B) passage এর শেষের ২/৩ line এ answer দেয়া আছে। এখনকার উন্নত যোগাযোগে ব্যবস্থার কারনে চুরি যাওয়া শিল্পকর্ম এত দ্রুত স্থানান্তরিত হয় যে, এগুলোর track রাখা কঠিন। ∴ Answer B
29. (E) Bequeathed অর্থ সম্প্রদান। wended down এর অর্থ অনেকটা একই। ∴ answer E
30. (B শেষ Paragraph এ answer আছে। যেসব উপায় বলা আছে সেগুলো হল burglary, armed robbery, shoplifting, hijacking of shipment in transit. Answer choice গুলোর শুধু (B) তে এগুলোর মধ্য থেকে pick করা হয়েছে। ∴ Answer B

## Part 2

1. Please refer to page 317 for the answer to this question.

# BBA (IBA)

## Admission Test Question (2005-2006) with Solution

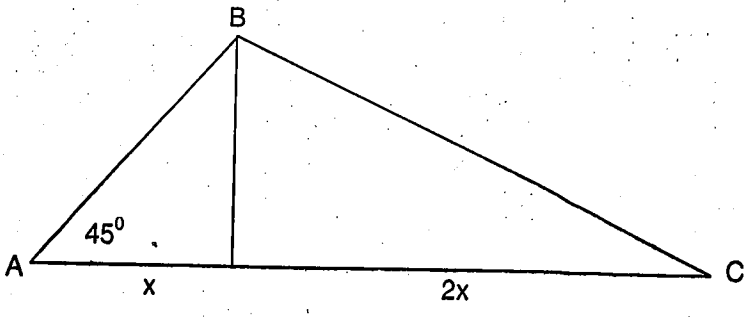
## PART I: MULTIPLE CHOICE QUESTIONS (MCQs)

*(You can use the space around the MCQs to do your rough work)*

**Section I: Mathematics** **1 × 30 = 30 Marks**

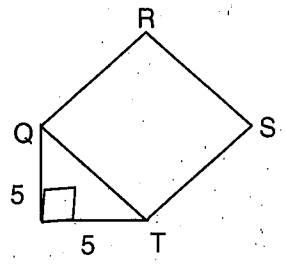
**Instructions:** ***Solve each of the following problems and mark the correct answer on your Answer Sheet. DO NOT USE CALCULATOR. Figures are not drawn to scale.***

1. A house is 40 ft high. A ladder is inclined on the house keeping its foot 30ft away from the house and its top touches the roof of the house. What is the length of the ladder?
   (A) 70 ft (B) 1200 ft (C) 50 ft (D) 35 ft (E) None of these
2. The average weight of 3 young men is 53 kg. None of them weighs less than 51 kg. What is the maximum weight of any one man?
   (A) 53 (B) 14 (C) 55 (D) 59 (E) None of these
3. Seven pounds of mangoes cost as much as 10 pounds of apples and 1 pound of oranges. Seven pounds of oranges cost as much as 1 pound of mangoes and 2 pounds of apples. How many pounds of apples can be purchased for the amount of money required to purchase 12 pounds of mangoes?
   (A) 8 (B) 14 (C) 16 (D) 18 (E) None of these
4. If a<b and c<d, then
   (A) $-c-a > -d-b$ (B) $c+a > d+b$ (C) $c = d$ (D) $a = b$
   (E) None of these
5. If 4 is subtracted from one-fourth of a number, the result is 20. Which of the following is the number?
   (A) 12 (B) 24 (C) 36 (D) 96 (E) None of these
6. Rahman is twice as old as Shermin. In any years Shermin will be 1.5 times older than she is now. What is Shermin's age?
   (A) y/4 (B) 2y/3 (C) y (D) 3y (E) None of these
7. Which of the following is equal to the average of $(x+2)^2$ and $(x-2)^2$
   (A) $x^2$ (B) $x^2+2$ (C) $x^2+4$ (D) $x^2+2x$ (E) None of these
8. The sum of 6 consecutive odd numbers exceeds twice the largest by 38. Find the sum of the six numbers.
   (A) 42 (B) 50 (C) 57 (D) 70 (E) None of these
9. The daily rate of a hotel room that accommodates 4 people is Taka 3900 for one person and Taka x for each additional person. If 3 people take the room for one day and each pays Taka 2100 for the room, what is the value of x?
   (A) 600 (B) 800 (C) 1200 (D) 1300 (E) None of these
10. If the diameter of a circle is doubled, the area will be:
    (A) 4 times (B) 3 times (C) 2 times (D) 1 time (E) None of these
11. In triangle ABC below, what is the length of the side AC?




(A) 24 (B) 18 (C) 12 (D) 10 (E) None of these

12. Point A (1, 0) is drawn to B (5, 0) and is joined to C (3, 4). Which of the following is true?
(A) CA = CB (B) AB = BC (C) AC = AB (D) AC > BC (E) None of these
13. ABC is a triangle where the angle $\angle ABC = 100^0$ and AB = BC, find the measure of the angle $\angle BAC$.
(A) $80^0$ (B) $60^0$ (C) $40^0$ (D) $20^0$ (E) None of these
14. A square paper has its each side d cm. How much paper will be wasted (in terms of d) if the largest possible circle is cut of the square?
(A) $(4d^2 - \pi d^2)/4$ (B) $(\pi d^2 - 4d^2)/4$ (C) $\pi d^2$
(D) $16d^2 - \pi d^2$ (E) None of these
15. In the following figure, what is the area of square QRST?




(A) 25 (B) $20\sqrt{2}$ (C) $25\sqrt{2}$ (D) 50 (E) None of these
16. The average of a set of 12 numbers which includes 34 is N. If 34 is removed from the set and 38 is added to the set, what is the average of the new set of numbers in terms of N?
(A) N + 1/3 (B) N + 19/6 (C) N + 4 (D) N + 6 (E) None of these
17. If $x \geq 8$ and $y \leq 3$, it must be true that:
(A) $x + y \geq 5$ (B) $x + y \leq 11$ (C) $x - y \geq 5$ (D) $x - y \leq 5$ (E) None of these
18. If one number exceeds another number by 13 and the large number is 3/2 times the smaller, then the smaller number is
(A) 13 (B) 26 (C) 31 (D) 39 (E) None of these
19. $(\sqrt{3}-2)(\sqrt{3}+2) = ?$
(A) $\sqrt{3} - 4$ (B) $\sqrt{6} - 4$ (C) $-1$ (D) 1 (E) None of these
20. If the degree measures of the angles of a triangle are in the ratio of 3:4:5, what is the measure of the smallest angle in degrees?
(A) $15^0$ (B) $30^0$ (C) $45^0$ (D) $60^0$ (E) None of these
21. How many positive integers are both multiples of 4 and divisors of 64?
(A) Two (B) Three (C) Four (D) Five (E) None of these
22. When 10 is divided by a positive integer n, the remainder is n – 4, which of the following could be the value of n?
(A) 3 (B) 4 (C) 7 (D) 8 (E) None of these
23. Ruma earns $ 8.5 per hour on days other than Sundays and twice that rate on Sundays. Last week she worked a total of 40 hours, including 8 hours on Sunday. What were her earnings for the week?
(A) $272 (B) $340 (C) $398 (D) $408 (E) None of these
24. If x + y = a and x – y = b, then 2xy = ?
(A) $(a^2 - b^2)/2$ (B) $(b^2 - a^2)/2$ (C) (a – b) /2 (D) ab / 2 (E) None of these
25. Three machines individually can do a job in 4, 5, and 6 hours respectively. What is the greatest part of the job that can be done in one hour by two of the machines working together at their respective rates?
(A) 11/30 (B) 9/20 (C) 3/5 (D) 11 /15 (E) None of these

26. Thirty percent of the members of a swimming club have passed the lifesaving test. Among the members who have not passed the test, 12 have taken the preparatory course and 30 have not. How many members are there in the swimming club?
(A) 80 (B) 60 (C) 100 (D) 120 (E) None of these

27. A cashier reversed the digits of one customer's correct amount of change and thus gave the customer an incorrect amount of change. If the cash register contained Taka 45 more than it should have as a result of this error, which of the following could have been the correct amount of change in Taka?
(A) 83 (B) 45 (C) 54 (D) 65 (E) None of these

28. If $a = 1$ and $(a-b)/c = 1$, which of the following is NOT a possible value of b?
(A) – 2 (B) – 1 (C) 0 (D) 1 (E) None of these

29. If m is the average of the first 10 positive multiples of 5 and if M is the median of the first 10 positive multiple of 5, what is the value of M – m?
(A) – 5 (B) 0 (C) 5 (D) 25 (E) None of these

30. If $x = (0.08)^2$, $y = 1/(0.08)^2$ and $z = (1-0.08)^2 - 1$, which of the following is true?
(A) $x = y = z$ (B) $y < z < x$ (C) $z < x < y$ (D) $y < x$ and $x = z$ (E) None of these

## Section II : Language & Communication 1 × 30 = 30 Marks

**SENTENCE CORRECTION (Questions 31 to 35)**

**Instructions:** ***Select the most effective expression for the underlined part of the following sentences:***

31. He could not scarcely but hold back his tears when he heard the sad song
(A) could not but scarcely (B) could not hardly but hold (C) could scarcely hold
(D) can scarcely hold (E) None of these

32. They arrive on time and were able to witness the entire graduation ceremony.
(A) arrived on (B) have arrived on (C) were arriving on
(D) arrived at (E) None of these

33. He was aggravated than we were by the boy's behavior.
(A) more aggravated than we were (B) more aggravated than us
(C) more annoyed than us (D) more annoyed than we were
(E) None of these

34. The job application did not state to whom to be sent the personal references.
(A) to whom to be sent the personal references
(B) to who the personal references should be sent
(C) to whom to send the personal references
(D) to whom the personal references will be sent E) none of these

35. The receipts that you must no loose are locked in the cabinet.
(A) that you must not loose are (B) which you must not loose are
(C) that you must not lose is (D) that you must not lose are (E) None of these

**FILL – IN – THE BLANKS (Questions 36 to 45)**

**Instructions:** ***Select the word or pair of words that best complete the meaning of the sentence.***

36. The director's _____ from fiscal _____ has led the company to bankruptcy.
(A) devotion, prudence (B) dislike, debt (C) avoidance, propensity
(D) retreat, responsibility (E) gratitude, management

37. We are in need _____ furniture for the reception room
(A) of (B) for (C) from (D) to (E) at

38. Learning is a _____ pleasure, _____ and instructive, it is one of the real joys of life.
(A) genuine, perverse (B) pathetic, dramatic (C) natural, inborn
(D) compulsive, disciplined (E) immature, delightful

39. They enjoy the _____ of being part of a _____ movement.
(A) fear, group (B) deprivation, popular (C) opponent, mass
(D) excitement, political (E) scarcity, general

40. You are responsible _____ your immediate supervisor
(A) for (B) to (C) of (D) into (E) of

41. Having missed the bus, Shaila had to wait _____ the next one
(A) for (B) of (C) on (D) of (E) in

42. The point of this _____ is to explore the environment in which she was _____.
(A) outcry, placated (B) dilemma, gathered (C) outline, raised
(D) critique, startled (E) anecdote, wiped out

43. The store manager waited _____ customers all morning
(A) at (B) for (C) on (D) of (E) in

44. Your grandfather _____ the finest elements of the aristocratic _____
(A) embodied, ideal (B) gathered, rabble (C) exhumed, group
(D) relinquished, mass (E) criticized, rustics

45. He lives _____ Mirpur Road in Dhaka
(A) on (B) at (C) into (D) for (E) from

**INDENTIFICATION OF THE WRONG OPTION (Questions 46 to 50)**

**Instruction:** ***Identify the incorrect part of the following sentences.***

46. Soon after Rashed has finished (A) his thesis, he will leave (B) for Dhaka, where (C) he has (D)
a job waiting on him. (E)

47. The (A) athlete was disqualified from (B) the (C) tournament for (D) participating at (E) an illegal
demonstration.

48. Our (A) new branch will be (B) located downtown in the corner (C) of Mirpur Road and (D) Asad
Avenue. (E)

49. Admittance for (A) the inauguration ceremonies (B) was only by (C) special invitation of the (D)
committee. (E)

50. The need (A) for (B) a well rounded (C) education was an idea espoused by (D) the Greeks in
time of Socrates. (E)

**ANALOGY (Questions 51 to 60)**

**Instructions:** ***Choose the pair that best expresses the relationship similar to the one expressed by the pair of word in capital letters.***

51. TROPHY: CONTESTANT
(A) baton : runner (B) pride : parent (C) book : bibliography
(D) loan : cashier (E) honors : student

52. SCRIPT : PLAY
(A) refrain : song (B) assignment : course (C) score : symphony
(D) collection : story (E) debate : candidate

53. DECELERATE : SPEED
(A) desiccate : dryness (B) extinguish : oxygen (C) interpolate : interval
(D) decontaminate : sterility (E) enervate : vitality

54. LEAVE : ABSCOND
(A) take : steal (B) evacuate : flee (C) interest : astound
(D) build : renovate (E) evaluate : downgrade

55. FOIL : METAL
(A) pebble : concrete (B) suede : leather (C) glaze : pottery
(D) veneer : wood (E) Paper : cardboard

56. KERNEL : CORN
(A) Neck : Bottle (B) Eye : Storm (C) Grain : Wheat (D) Stem : Carrot (E) None of these

57. ABHOR : DISLIKE
(A) Calcify : Petrify (B) Torture : Discomfort (C) Rebuke : Ridicule
(D) Admire : Disdain (E) None of these

58. TELLER : BANK
(A) Artist : Museum (B) Cashier : Check (C) Vehicle : Truck
(D) Borrower : Loan (E) None of these

59. VESSEL : FLEET
(A) Wolf : Pack (B) Forest : Clearing (C) Vehicle : Truck
(D) Carriage : Horse (E) None of these

60. SEER : PROPHECY
(A) mentor : reward (B) sage : wisdom (C) pilgrim : diligence
(D) diplomat : flattery (E) virtuoso : penance

## Section III : Analytical Ability — 1 × 20 = 20 Marks

**Instructions:** ***Solve the following problems and mark the correct answer on your Answer Sheet.***

**Questions: 61 to 68**

A supervisor assigns duties to five watchmen (P, Q, R, S and T) for each office days, Sunday through Thursday. The supervisor must assign exactly two watchmen to work each day of the week according to the following conditions.

Each of the watchmen must work at least once.
None of the watchmen can work on three consecutive days.
Q must work on Monday. S must work on Wednesday and Thursday.
P cannot word on any day on which Q works.

61. Any of the following watchmen could be assigned on Wednesday EXCEPT
(A) P (B) Q (C) R (D) S (E) None of these

62. P is assigned on which three days of the week?
(A) Sunday and Tuesday (B) Monday and Tuesday
(C) Monday and Thursday (D) Tuesday and Thursday (E) None of these

63. If Q is assigned on exactly four days of the week, which of the following could be the pair of watchmen assigned on Wednesday?
(A) P and R (B) P and S (C) Q and R (D) Q and T (E) None of these

64. If P is assigned whenever and only when S is assigned, which of the following could be true?
(A) P is assigned on Sunday (B) P is assigned on Tuesday
(C) Q is assigned on Thursday (D) R is assigned on Thursday (E) None of these

65. If Q is assigned on only one day and R is assigned on four days, which of the following pairs of watchmen must be assigned on Tuesday?
(A) P and R (B) P and T (C) Q and R (D) R and S (E) None of these

66. If each watchman is assigned twice, which of the following must be true?
(A) Either P or Q is assigned at least one of the days on which S is assigned
(B) Q is assigned on both of the days on which R is assigned
(C) R is assigned on Monday
(D) R is assigned on one of the days on which P and Q are assigned
(E) None of these

67. A meadow in springtime is beautiful, even if there is no one to appreciate it. The statement above will be a logical rebuttal to which of the following claims?
    (A) People will see only what they want to see.
    (B) Beauty is only skin deep. (C) There's no accounting for taste.
    (D) Beauty exists only in the eye of the beholder. (E)None of these.

**Questions: 68 to 71**

A map representing countries R, S, W, X, Y and Z is to be drawn. Adjacent countries cannot be of the same color on the map. The countries adjacent to each other are as follows:

R, S, X and Y are each adjacent to W.
X is adjacent to Y.
R and S are each adjacent to Z.

68. Which of the following is a pair of countries that must be different in color from each other?
    (A) R and X (B) S and X (C) S and Z (D) X and Z (E) None of these
69. If X is the same color as Z, which one must be true?
    (A) R is the same color as Y (B) S is the same color as X
    (C) X is the same color as Y (D) S is a different color from any other country
    (E) None of these
70. Which of the following is a pair of countries that cannot be same color as each other?
    (A) R and S (B) S and W (C) W and X (D) W and Y (E) None of these
71. Which of the following countries can be the same color as W?
    (A) R (B) X (C) Y (D) Z (E) None of these
72. A shoe seller sold one pair of shoes for 20 taka. The buyer did not have change and gave the seller a 100 taka note. The seller took taka 100 change since he had none in his cash box from a neighbor businessman and returned the buyer required change plus the shoe he bought. Moments later after the client had left the seller found that he was given a fake note. What was the amount of loss for the seller?
    (A) taka 100 plus the shoe value (B) taka 200 plus the shoe value
    (C) taka 100 only (D) taka 200 (E) None of these
73. In city, A greater number of newspapers is sold than in city B. There fore, citizens of city A are better informed about major world events that are the citizens of City B. All of the following weakens the above statement except?
    (A) City A has a larger population than City B
    (B) Most citizens of City B works in City A and buys their newspaper from there.
    (C) Average time citizens spend on reading newspaper is higher in City A.
    (D) Average price of newspaper in City A is higher than in City B.
    (E) None of these

**Questions: 74 to 80**

Seven students R, S, T, V, W, X, and Y are to be divided into two study groups. Group 1 must have three members and group 2 must have four members. The students are being assigned to groups according to the following conditions:

R cannot be in the same group as T.
If S is in group 1, V must be in group 1.
If W is in group 1, T must be in group 2.
X must be in group 2.

74. Which of the following is an acceptable assignment of the students to the two groups?

| Group 1 | Group 2 |
|---|---|
| (A) R, S, Y | T, V, W, X |
| (B) R, T, V | S, W, X, Y |
| (C) T, V, X | R, S, W, Y |
| (D) T, V, Y | R, S, W, X |
| (E) None of these | |

75. If R is in group 2, which of the following must also be in group 2?
(A) S (B) T (C) V (D) W (E) None of these
76. If W is in group 1, which of the must also be in group 1?
(A) R (B) S (C) T (D) V (E) None of these
77. If T and Y are both in group 1, which of the following must be true?
(A) S is in the same group as V. (B) S is in the same group as W.
(C) V is in the same group as R. (D) W is in the same group as T.
(E) None of these
78. If W is in the same group as T, any of the following is a pair of students who could be in a together EXCEPT
(A) R and S (B)j S and Y (C) T and Y (D) V and Y (E) None of these
79. If V is in the same groups as Y, which of the following must be true?
(A) R is in group 1. (B) S is in group 1. (C) T is group 1.
(D) W is in group 2. (E) None of these
80. If S is in group 1, which of the following must be true?
(A) R is in group 1. (B) T is in group 1. (C) T is in group 2.
(D) Y is in group 2. (E) None of these

## PART II: WRITTEN ENGLISH

### A. Replacements of Words [ 5 marks ]

**Instruction:** ***Replace the words and phrases on bold type in the following paragraph with the phrasal verbs of the box.***

| | | | |
|---|---|---|---|
| **ask for** | **catch up with** | **get into** | **run out of** |
| **bring about** | **get away from** | **get through** | **watch out for** |

A tornado is whirling wind that can **cause** tremendous damages, even leveling a whole street or area. If a tornado watch has been announced fro your area, you should usually **be careful of** a twister coming from the south or southwest. Don't use the telephone to **request** information about what to do. Stay tuned to your radio. As son as a tornado warning has been issued, enter a sheltered area immediately, preferably a storm cellar or basement. If you are outside in open country, try to **escape from** the tornado's path by driving at a right angle to it. If you **lose your supply of** time before the twister overtakes you, take cover in the nearest ditch or ravine and hope you can survive the violent windstorm.

| Original Words | To be replaced with |
|---|---|
| cause | Bring about |
| be careful of | Watch out for |
| request | Ask for |
| escape from | Get away |
| Lose your supply of | Run out of |

### B. Translation into Bengali [ 5 Marks]

**Instruction:** ***Translate the following paragraph into Bangla.***

In the land of Spain, in a village of La Mancha, there lived long ago a gentleman named Alongo Quixada. He was very tall, thin and bony, with a long, fare face. Reading was what he loved most, but he liked to read only books of a certain kind. These were stories of the knights and heroes of olden times, of their brave deeds and wonderful adventures. At last his brain became quite crazed upon this matter and he made up his mind to become a knight like the knights of old.

## C. Situation Analysis

**Instruction:** ***Read the following situation and advise the management of Sun City Silk according to the guidelines given under the heading "your task".***

**The Situation**

"The recent drive against adulterated food is probably the most popular move in contemporary history of the protection of consumer rights in Bangladesh. Besides exceptional popular support, it has got unprecedented media coverage and government backup: the mobile court moves freely, randomly all over the city and fines anyone judged guilty. From tiny food stalls on the footpath to posh restaurants in the commercial and diplomatic zones of the city, many have come under scrutiny."

"While the operation has largely been successful, a few tiny errors put some black spots on the success map of the mission. Sun City Silk (not the real name) is such unlucky victim of error. On one eventual morning, the mobile court came to inspect this restaurant and discovered some "unhealthy" food additives. The manager voiced his protest saying that these are world famous brands. Unfortunately, the manager's protest made the punishment only heavier. In addition, the next day, there come big headlines in leading dailies with photos of "cockroaches in shrimp", which was in reality "shrimp with tails". The management of Sun City Silk was at a loss as to how to protest this erroneous, killing report."

**Your Task**

Given this situation, you are requested to help the management of Sun Silk. To this end, propose course (s) of action that the management may pursue to overcome the bad publicity and to put the record straight.

## Answer Key

**Section I : Mathematics**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1.C | 2.E | 3.D | 4.E | 5.D | 6.E | 7.C | 8.E | 9.C | 10.A |
| 11.A | 12.A | 13.C | 14.A | 15.D | 16.A | 17.C | 18.B | 19.C | 20.C |
| 21.D | 22.C | 23.D | 24.A | 25.B | 26.B | 27.A | 28.D | 29.B | 30.E |

**Section II : Language and Communication**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31. C | 32.A | 33.A | 34.C | 35.D | 36.D | 37.A | 38.C | 39.D | 40.B |
| 41.A | 42.C | 43.B | 44.A | 45.B | 46.A | 47.E | 48.D | 49.A | 50.E |
| 51.E | 52.C | 53.E | 54.A | 55.A | 56.C | 57.A | 58.E | 59.A | 60.B |

**Section III: Analytical Ability**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 60.E | 62. | 63.B | 64.A | 65.B | 66.A | 67.D | 68.C | 69.E | 70 |
| 71.D | 72.C | 73.C | 74.D | 75.D | 76.A | 77.B | 78.B | 79.D | 80.D |

## BBA (IBA) Admission Test (2005-06) Solution

## Section 1: Mathematics

1. (C) এই problem টি solve করার জন্য ছবি এঁকে নিলে সুবিধা হবে।

এবার বুঝতে হবে ৩টি একটি সহজ পীথাগোরাস, পীথাগোরিয়ান অনুপাত অনুসারে ladder তার দৈর্ঘ্য 50 ft. (3: 4: 5)

∴ answer C

2. (E) Total weight = 53 × 3 = 159 kg.

একজনের সর্বোচ্চ সম্ভব weight বের করতে হলে বাকী দুজনের সর্বনিম্ন weight এর যোগফল = 51 + 51 = 102 kg.

অর্থাৎ, সর্বোচ্চ সম্ভব weight = 159 – 102 = 57 kg. ∴ answer E

3. (D) প্রশ্নমতে, 7 mn = 10 ap + 1 or

=) 49 mn = 70 ap + 7 or (উভয়পক্ষকে 7 দিয়ে গুন করে)

=) 49 mn = 70 ap + (1 mn + 2ap) [বলা আছে, 7 or = 1 mn + 2ap]

=) 48 mn = 72 ap =) 12 mn = 18 ap [উভয়পক্ষকে 4 দিয়ে ভাগ করে] ∴ answer D

4. (D) a < b এবং c < d

ধরি, a = 2, b = 3, c = 4, d = 5

সেক্ষেত্রে, a) তে – c – a > – d – b =) – 4 – 2 > – 5 – 3 =) – 6 > – 8 ; সম্পূর্ণ ঠিক

আবার, a = – 2, b = – 3, c = – 4, d = – 5 ধরলে

– c – a > – d – b =) – (– 4) – (– 2) > – (– 5) – (– 5) – (– 3) =) 4 + 2 > 5 + 8

=) 6 > 8; সম্পূর্ণ ভুল

একইভাবে, প্রথম value ধরে, b) তে c + a > d + b

=) 4 + 2 > 5 + 3 =) 6 > 8; সম্পূর্ন ভুল

c) এবং d) answer choices প্রশ্ন অনুসারেই ঠিক নয়। অর্থাৎ, answer E.

ধরি, নির্নেয় number = x ∴ $\frac{x}{4} - 4 = 20$ =) $\frac{x}{4} = 24$

=) x = 96 ∴ answer D

5. (E) ধরি, Shermin's age = x years

প্রশ্নমতে, x + y = 1.5x =) $\frac{1}{2}x = y$ =) x = 2y ∴ answer E

6. (C) average = $\frac{(x+2)^2 + (x-2)^2}{2}$

$= \frac{x^2 + 4x + 4 + x^2 - 4x + 4}{2} = \frac{2x^2 + 8}{2}$ = $x^2 + 4$ ∴ answer C

7. (E) ধরি, largest number = x

∴ sum = 2x + 38

অর্থাৎ, 2x = sum – 38 =) x = $\frac{sum - 38}{2}$

আবার, answer choices থেকে back calculation করলেই দেখবেন কোন answer choice এই x odd number নয়।

∴ answer E

8. (C) মোট pay করা হলো = 3 × 2100 = Tk. 6300

সুত্রানুযায়ী করার কথা = Tk. 3900 + 2x

∴ Tk. 3900 + 2x = Tk. 6300 =) 2x = 2400 =) x = 1200 ∴ answer C

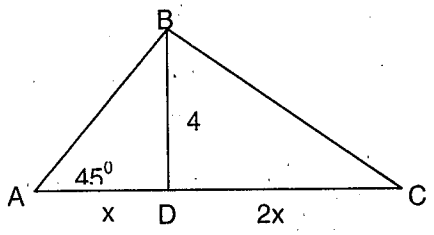
9. (A) ধরি, diameter = 10 অর্থাৎ, radius = 5

$\therefore$ area = $\pi r^2 = \pi 5^2 = 25\pi$

Double করা হলে, diameter = 20, radius = 10

$\therefore$ area = $\pi r^2 = \pi 10^2 = 100\pi$ অর্থাৎ, area 4 times হয়ে গেল $\therefore$ answer A

10. () এই Question টিতে ভুল আছে। চিত্রটি লক্ষ্য করুন,

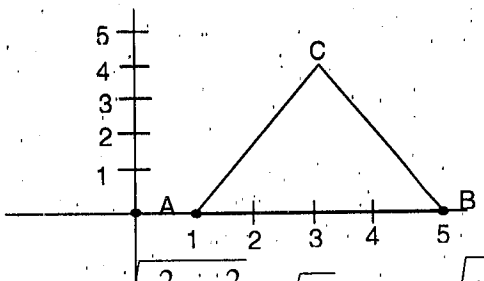



যদি বলা থাকত $\angle ADB = 90^0$ সেক্ষেত্রে সমাধান করা যেত এভাবে,

BD = 4; AD = 4; $\therefore$ AC = 4 + 8 = 12

কিন্তু সমকোণ বলে না দেয়ার সমাধান সম্ভব নয়।

11. (A)




চিত্র থেকে পাই, AB = 4, AC = $\sqrt{4^2+2^2} = \sqrt{20}$; $BC = \sqrt{4^2+2^2} = \sqrt{20}$

অর্থাৎ, AC = CB $\therefore$ answer A

এটি অন্যভাবেও করা যায়।

AB = $\sqrt{(1-5)^2+(0-0)^2} = \sqrt{16} = 4$ CA = $\sqrt{(3-1)^2+(4-0)^2} = \sqrt{20}$

CB = $\sqrt{(3-5)^2+(4-0)^2} = \sqrt{20}$

12. (C) যদি $\angle ABC = 100^0$ এবং AB = BC হয়,

সেক্ষেত্রে, $\angle BAC = \angle BCA = \frac{180^0 - 100^0}{2} = \frac{80^0}{2} = 40^0$ $\therefore$ answer C.

13. (A) paper এর area = $d^2$

circle এর diameter = d; radius = $\frac{d}{2}$; area = $\pi\left(\frac{d}{2}\right)^2 = \frac{d}{4}\pi$

অর্থাৎ, নষ্ট হবে = $d^2 - \frac{d^2}{4}\pi = \frac{4d^2 - \pi d^2}{4}$ $\therefore$ answer A.

14. (D) পীথাগোরাসের উপপাদ্য অনুসারে,

QT = $\sqrt{5^2+5^2} = 5\sqrt{2}$ $\therefore$ area of QRST = $\left(5\sqrt{2}\right)^2 = 50$ $\therefore$ answer D

15. (A) প্রথম set এর average = N; প্রথম set এর sum = 12N

দ্বিতীয় set এর average = $\frac{12N+(38-34)}{12}=\frac{12N+4}{12}=\frac{12N}{12}=N+\frac{1}{3}$

∴ Answer: A

16. (C) $x \geq 8$ এবং $y \leq 3$

এক্ষেত্রে অবশ্যই $(x-y)$ এর মান $(8-3)=5$ এর সমান বা তারচেয়ে বেশি হবে। ∴ answer C

17. (B) ধরি, smaller number = x; larger number = x + 13

অর্থাৎ, $x+13=\frac{3x}{2}$ =) $2x+26=3x$ =) $x=26$ ∴ answer B

19. (C) $\left(\sqrt{3}-2\right)\left(\sqrt{3}+2\right)=\left(\sqrt{3}\right)^2-\left(\sqrt{2}\right)^2=3-4=-1$ ∴ answer C

20. (C) Degree measure of the smallest angle = $\frac{3}{3+4+5}\times 180=\frac{3}{12}\times 180=45^0$ ∴ answer C

21. (D) Multiples of 4 =) 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52, 56, 60, 64
Divisions of 64 =) 4, 8, 16, 32, 64 (all these an multiples of 4)
অর্থাৎ, মোট পাঁচটি integer দুই category তেই আছে। ∴ answer D

22. (C) Back calculation করলে দেখবেন 7 দিয়ে 10 কে ভাগ করলে $(7-4)=3$ ভাগফল থাকে। ∴ answer C

23. (D) Sumlay এর 8 hours এর জন্য পাবে = $8 \times (8.5 \times 2) = 8 \times 17 = 136$
বাকী $(40-8)=32$ hours এর জন্য পাবে = $32 \times 8.5 = 2 \times 2$
অর্থ্যাৎ, মোট পাবে = \$ (136 + 272) = \$408 ∴ answer D

24. (A) $a^2=x^2+2xy+y^2$ =) $2xy=a^2-x^2-y^2$
$b^2=x^2-2xy+y^2$ =) $x^2+y^2-b^2$

(+) করে $4xy=a^2-b^2$ =) $2xy=\frac{a^2-b^2}{2}$ ∴ answer A

25. (B) তিনটি মেশিনের মধ্যে 4 hours এ যে দুটি কাজ শেষ করতে পারে তারা বেশি কার্যক্রম।

প্রথমটি 1 ঘন্টায় করতে পারে $\frac{1}{4}$ দ্বিতীয়টি 1 ঘন্টায় করতে পারে $\frac{1}{5}$

∴ একত্রে 1 ঘন্টায় করতে পারে $\frac{1}{4}+\frac{1}{5}=\frac{9}{20}$ ∴ answer B

26. 30% পাশ করলে পাশ করেনি = (100 − 30)% = 70%

70% = 12 + 30 = 42 জন; অর্থাৎ, $100\% = \frac{42}{70}\times 100 = 60$ জন ∴ answer B

27. (A) Back calculation করলে দেখা যায়, 83 − 38 = 45 ∴ answer A

28. (D) B এর value 1 হতে পারবেনা কারন সেক্ষেত্রে numerator 0 হয়ে যায়। ∴ answer D

29. (B) যেহেতু 5 এর positive multiples গুলো একটি consecutive series তৈরী করে; সেহেতু average এবং median একই হবে। (এক্ষেত্রে 27.5) অর্থাৎ, M − m = 0 ∴ answer B

30. (E) x = 0.0064 $y=\frac{1}{0.0064}$ $z = (.92)^2 - 1$ (বের করার দরকার নেই; এটি negative হবে সেটা নিশ্চিত)
অর্থাৎ, $z < y < x$ অথবা, $x > y > z$

## SECTION II : Language & Communication

31. (C) Could scarcely hold হবে। এই sentence এ scarcely মানে hardly (কোনমতে)।
32. (A) Simple past tense (arrived on) হবে।
33. (A) Comparative (more) যুক্ত হবে।
34. (C) Past tense এ রাখতে হবে, সেক্ষেত্রে D এর চেয়ে C better choice.
35. (D) হারোনো অর্থে বলা হচ্ছে। loose এর পরিবর্তে lose হবে।
36. (D) retreat মানে সড়ে দাঁড়ানো। responsibilities মানে দায়িত্ব। এটিই best choice.
37. (A) need এর পরে of হয়।
38. (C) দুটি word-ই positive হতে হবে। একমাত্র natural (স্বাভাবিক) এবং inborn (জন্মগত) দিয়েই fill up করা যায়।
39. (D) excitement (উত্তেজনা) ও political (রাজনৈতিক) দিয়ে gap fill up করলে sentence টি স্বার্থক হয়।
40. (B) responsible to মানে কারও কাছে জবাবদিহি করতে বাধ্য।
41. (A) wait for হচ্ছে suitable expression.
42. (C) দ্বিতীয় gap টি থেকে বোঝা যায় যে এখানে raised হবে।
43. (B) waited for হচ্ছে best expression.
44. (A) Embodied মানে নিজের মাঝে ধারণ করা। Ideal মানে আদর্শ।
45. (B) Specific location বোঝাতে at ব্যবহৃত হয়।
46. (E) Waiting on him এর পরিবর্তে Waiting for him হবে।
47. (E) at এর পরিবর্তে in হবে।
48. (D) of এর পরিবর্তে between হবে।
49. (A) Admittance এর পরিবর্তে admission হবে।
50. (A) in time of এর পরিবর্তে in the time of হবে।
51. (A) Contestant (প্রতিযোগী) trophy পাওয়ার জন্য contest করে। student (ছাত্র) honors পাওয়ার জন্য পড়ালেখা করে।
52. (C) Play (নাটক) এর জন্য script (পান্ডুলিপি) লেখা হয়। Symphony ( সঙ্গীতের অংশ) এর জন্য score (স্বরলিপি) লেখা হয়।
53. (E) Decelerate অর্থ speed কমানো। enervate অর্থ vitality (শক্তি) কমানো।
54. (A) leave মানে চলে যাওয়া; abscond মানে পালানো; take মানে নেয়া; steal মানে চুরি করা।
55. (A) Foil এক ধরনের ধাতু (metal); pebble এক ধরনের concrete
56. (C) Kernel হচ্ছে Corn এর central part. Eye হচ্ছে Storm এর central part.
57. (A) Abhor ও dislike দুটোর অর্থই ঘৃণা করা। calcify ও petrify দুটোর অর্থই শক্ত কিছুতে পরিনত করা
58. (E) Teller (টাকা গণনা ও প্রদানকারী)। bank এ চাকরী করে। waiter restauranঃএ চাকরী করে।
59. (A) অনেকগুলো vessel (জাহাজ) মিলে জাহাজবহর (fleet) হয়। অনেকগুলো wolf (নেকড়ে) মিলে pack (নেকড়ের দল) হয়।
60. (B) Seer অর্থ prophet (নবী) যাঁর সম্পদ হচ্ছে prophecy. Sage অর্থ জ্ঞানী যাঁর সম্পদ হচ্ছে wisdom (জ্ঞান)।

## SECTION III : Analytical Ability

### Questions 61-66

Puzzle টি solve করার জন্য আগে আমরা শর্তগুলো ঠিকভাবে বুঝে নেই। পাঁচজন watchmen (P, Q, R, S, T) কে Sunday থেকে Thursday এই পাঁচদিনে দায়িত্ব বুঝিয়ে দিতে হবে। প্রতিদিন দুজন করে watchmen রাখতে হবে নিচের শর্ত অনুযায়ী ঃ

১) প্রত্যেককে কমপক্ষে একবার দায়িত্ব নিতে হবে।
২) পরপর তিনদিন কেউ কাজ করতে পারবেনা।
৩) Q অবশ্যই Monday তে কাজ করবে।
৪) S অবশ্যই Wednesday ও Thursday তে কাজ করবে।
৫) Q কাজ করে এমন কোন দিনে P কাজ করতে পারবে না।

61. (E) দেখতে হবে কোনজন Wednesday তে কাজ করলে শর্ত ভঙ্গ করা হয়। প্রদত্ত শর্তানুসারে প্রত্যেকেই Wednesday তে কাজ করতে পারবে।
∴ Answer E.

62. Question এ three days এর পরিবর্তে two days হবে। দেখা যায় P Sunday, Tuesday এবং Tuesday, Thursday এই দুই schedule এই কাজ করতে পারে। শুধু Monday তে Q থাকায় Monday তে পারবেনা। তাই answer হওয়া উচিত "cannot be determined." ∴ Answer নেই।

63. (B) Wednesday তে S কে থাকতে হবে।
∴ Answer B.

64. (A) যেহেতু Wednesday এবং Thursday তে S কে থাকতে হবে, তাই এই প্রশ্নের শর্তানুযায়ী P কেও Wednesday ও Thursday তে থাকতে হবে। অর্থাৎ answer choice C এবং D বাদ। একইসাথে answer choice B ও বাদ কারন একজন পরপর তিনদিন থাকতে পারবে না। ∴ Answer A.

65. (B) Q কে একদিন দায়িত্ব দেয়া হলে সে দিনটি অবশ্যই Monday. R কে চারদনি দায়িত্ব দিলে দেখতে হবে পরপর তিনদিন যেন দায়িত্ব না পড়ে। সেটা সম্ভব যদি R Sunday, Monday এবং Wednesday, Thursday কাজ করে অর্থাৎ Tuesday তে R এর থাকা সম্ভব নয়। Answer choice A, C ও D বাদ। এখন Q কে এবং S কে Tuesday তে দেয়া সম্ভব না কারন- এই প্রশ্নে বলা আছে Q শুধু একদিন কাজ করবে। আবার S কে দিলে পরপর তিনদিন হয়ে যায়। অর্থাৎ P ও T কে Tuesday তে কাজ করতেই হবে।
∴ Answer B.

66. (A) যেহে তু P এবং Q একসাথে থাকতে পারবেনা, তাই যেকোন একজনকে কমপক্ষে একবার S এর সাথে Wednesday বা Thursday তে কাজ করতেই হবে।
∴ Answer A.

67. (D). Question এ বলা হচ্ছে : কেউ প্রশংসা করুক আর নাই করুক "mealow in spring time" সুন্দর। অর্থাৎ এখানে বলা হচ্ছে সুন্দর জিনিস এমনিতেই সুন্দর। কিন্তু answer choice D তে বলা হচ্ছে সৌন্দর্য শুধুমাত্র যে দেখছে তার চোখেই exist করে। অর্থাৎ, D তে প্রদত্ত statement এর যুক্তি খন্ডিত (rebuttal) হয়েছে।
∴ Answer D.

### Questions 68-71

ছয়টি দেশের (R, S, W, X, Y, Z) একটি ম্যাপ আঁকতে হবে। সংলগ্ন দেশগুলোর রং এক হতে পারবেনা।
R, S, X, Y প্রত্যেকে W এর সংলগ্ন।
X, Y এর সংলগ্ন।

68. (C) R ও S দুটোই Z এর সংলগ্ন। S ও Z পরস্পর সংলগ্ন। সুতরাং অবশ্যই different color হবে।
∴ Answer C.

69. (E) প্রদত্ত শর্ত থেকে কোনটিকেই সন্দেহাতীতভাবে সত্যি প্রমান করা যায় না।
∴ Answer E.

70. S ও W এর colour এক হতে পারবেনা। একইভাবে W, X এবং W, Y কোন pair এই একই colour হওয়া সম্ভব নয়। অর্থাৎ, আমরা ৩টি answer পাচ্ছি। question ভুল আছে।

71. (D) Z এর সাথে W adjacent বলা নেই, তাই Z ও W একই colour এক হতে পারে। ∴ Answer D.

72. (C) জুতার দাম 20 টাকা। অর্থাৎ, ফেরত দেওয়া হলো 80 টাকা। মোট loss = (80 টাকা + জুতা) বা, (80+20) = 100 টাকা। ∴ Answer C.

73. (C) যেহেতু city A তে city B এর তুলনায় বেশি newspaper বিক্রি হয়, সেহেতু city A এর লোকজন city B এর তুলনায় major world events সম্পর্কে বেশী অবহিত। এই যুক্তিতে দুর্বল করেনা এমন একটি statement হচ্ছে C কারন C তে বলা হচ্ছে city A এর লোকজন বেশি সময় ধরে newspaper পড়ে। এতে করে প্রদত্ত যুক্তিতে দুর্বল করা যায় না।
∴ Answer C.

**Questions 74-80**

R, S, T, V, W, X, Y – এই সাতজনকে দুটি group ও ভাগ করে দিতে হবে। group 1 এ তিনজন এবং group 2 তে চারজন থাকবে।
শর্তগুলো হচ্ছে – R ও T এক group এ থাকতে পারবেনা।
S যদি group 1 এ থাকে, V ও group 1 এ থাকবে।
W যদি group 1 এ থাকে, T group 2 এ থাকবে।
X group 2 তে থাকবে।

74. (D) A হবে না কারন S group 1 এ থাকলে V ও 1 এ থাকবে।
B হবে না কারন R ও T এক group এ থাকবেনা।
C হবে না কারন X group 2 তে থাকবে।
D তে কোন শর্ত ভঙ্গ করা হয়নি।
∴ Answer D.

75. (D) R group 2 তে থাকলে T কে অবশ্যই 1 এ থাকতে হবে। আবার W 1 থাকলে T কে 2 তে থাকতে হয়; তাই R group 2 তে থাকলে W কে অবশ্যই 2 তে থাকতে হবে।
∴ Answer D.

76. (A) W group 1 এ থাকলে T কে 2 তে থাকতে হবে। অর্থাৎ, R 1 এ থাকবে।
∴ Answer A.

77. (B) T, Y এর সাথে group 1 এর একমাত্র member হতে পারে V, অর্থাৎ S এবং W একই group এ থাকবে।
∴ Answer B.

78. (B) W আর T এক group এ থাকার অর্থ হচ্ছে দুজনেই group 2 তে আছে; কারন W 1 এ থাকলে T থাকবে 2 তে। group 2 এর আরেকজন অবশ্যম্ভাবী member হচ্ছে X. এখন combination হতে পারে দুরকম

| Group 1 | Group 2 |
|---|---|
| R Y V | W T X S |
| R S V | W T X Y |

অর্থাৎ, S ও Y এক group এ থাকতে পারেনা। ∴ Answer B.

79. (D) V ও Y এক group এ থাকা মানে তারা group 1 এ আছে। কারন group 2 তে V ও Y কে একসাথে রেখে combination সম্ভব নয়। এখন S এর পক্ষে 1 এ থাকা সম্ভব না কারন তাহলে R ও T একসাথে হয়ে যাবে। এখন R ও group 1 এ থাকতে পারে অথবা T ও group 1 এ থাকতে পারে কিন্তু কোনটিই must নয়। W কোনভাবেই 1 এ থাকবেনা কারন সেক্ষেত্রেও R ও T একসাথে পড়ে যায়। ∴ Answer D.

80. (D) S 1 থাকলে V ও 1 এ থাকবে। 1 এর বাকীজন হবে R অথবা T; অর্থাৎ Y অবশ্যই ২ তে থাকবে।
∴ Answer D.

# BBA (IBA)

## Admission Test Question (2006-2007) with Solution

# Part I: MCQ

## Section 1: Mathematics [1 × 30 = 30 marks]

1. Jubair has Tk. 1,80,000 in his bank account. He made the following transactions: checks were written for Tk 20,000, Tk 13,000, Tk 40,000 and Tk 18,000. Deposits of Tk 60,000 and Tk 1,03,000 were made in the account. Interest amount added in the balance was Tk 50,000 and service fees charged by the bank was Tk 15,000. What is the final balance to the account?

(A) Tk 45,000 (B) Tk 2,85,000 (C) Tk 2, 15,000
(D) Tk 1,85,000 (E) None of these

02. Alam bought a roll of crepe paper streamers 35 feet long and 4 feet wide to make banners for a party. If each banner is $2^1/_2$ feet long and 2 feet wide, what is the maximum number of banners that he can make from this roll?

(A) 70 (B) 17.5 (C) 14 (D) 28 (E) None of these

03. Find the volume of a triangular solid cylinder with the following dimensions: 4 feet base, 3 feet height of triangle, and 10 feet height of the cylinder.

(A) 120cft (B) 60cft (C) 80cft (D) 65cft (E) None of these

04. At a photocopy center, the first 10 copies cost .x Taka each. Each of the next 50 copies costs 2 Taka less per copy. From the 61st copy, the cost is 1 Taka per copy. In terms of .x how much does it cost in Taka to have 200 copies made?

(A) 10x+240 (B) 50x-10 (C) 50(x-5) (D) 60x-110 *(E)* None of these

05. In Rajshahi 5 adults are unemployed for every 120 adults who have jobs. Out of 2125 adults, how many have jobs?

(A) 89 (B) 425 (C) 2040 (D) 1896 (E) None of these

06. If $x^2$-7x+18=6, which of the following must be false?

(A) x=4 (B) x=-4 (C) x>=3 (D) x >0 (E) None of these

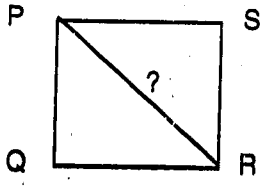
07. Which of the following is greater than 2/3?

(A) $\frac{13}{21}$ (B) $\frac{16}{25}$ (C) $\frac{7}{11}$ (D) $\frac{5}{7}$ (E) None of these

08. The average of 5 numbers is 40. If 2 more numbers, with an average of 21, are added to these numbers, what will be the average of the combined 7 numbers?

(A) 8.7 (B) 30.1 (C) 30.3 (D) 34.6 (E) None of these

09. If a square region PQRS has an area of 2 square feet, what is the length of its diagonal (PR)?




(A) 4 feet (B) 2 feet (C) 8 feet (D) $2\sqrt{2}$ feet (E) None of these

10. Mr. Jaman is insured completely for Tk. 1,50,000 against damages to his machinery. For any damage over Tk 1,50,000, the insurance company will pay Tk 1,50,000 plus only 15% of the additional damage. For a recent accident, Mr. Jaman was paid Tk 1,56,000 by the insurance company. What was the total amount of the damage estimated?
(A) Tk 1,04,000 (B) Tk 90,000 (C) Tk 40,000
(D) Tk 80,000 (E) None of these

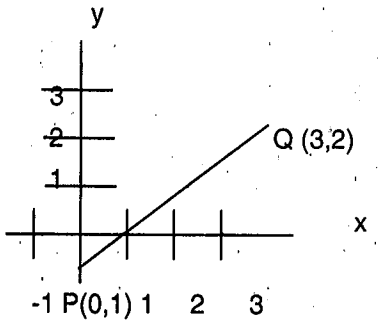
11. Starting from Town A, Mr. Ahsan drove straight North for 4 kms, then he turned right and drove straight East for 3 kms and stopped at Town B. What is the stralght-line distance from Town A to Town B?

(A) $\sqrt{7}$ kms (B) 5kms (C) 8 kms (U)$2\sqrt{3}$ kms (E) None of these

12. Of the 45 families in a locality, 25 families have working mothers and 10 families have retried individuals as members to look after the children at home. Of the families, 8 have both working mothers and retired individuals as members. How many of the families have working mothers but no retired individuals as members?
(A) 0 (B) 2 (C) 18 (D) 17 (E) None of these

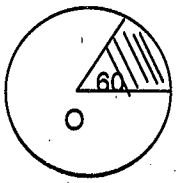
13. If a family was randomly picked from the families in the previous question, what is the probability (approximately) of that family having working mothers as members?
(A) 56% (B) 70% (C) 80% (D) 86% (E) None of these

14. In the figure below, the middle point on segment PQ is:
(A) (1:5,1.5) (B) (1.5, 0.5) (C) (1.5,1) (D) (2,1) (E) None of these




15. In the figure above (from the previous question), the length of PQ is:
(A) $\sqrt{2}$ (B) $3\sqrt{2}$ (Q2$\sqrt{2}$ (D)$2\sqrt{3}$ (E) None of these

16. In the circle below, if O is the center of the circle, what fraction of the circle is shaded?




(A) $\frac{1}{12^{th}}$ (B) $\frac{1}{10^{th}}$ (C) $\frac{1}{8^{th}}$ (D) $\frac{1}{6^{th}}$ (E) None of these

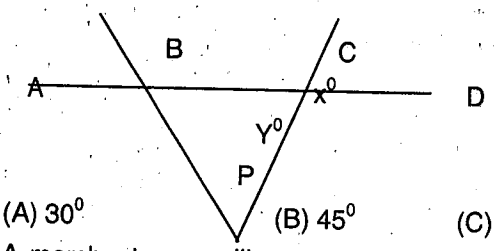
17. If the shaded region in the circle above (previous question) has an area of $\Pi$, then the diameter of the circle is:

(A) $2\sqrt{3}$ (B) $2\sqrt{6}$ (C) $\sqrt{3}$ (D) $\sqrt{6}$ (E) None of these

18. The reciprocal of *p/n* is *n/p* and vice versa. Which of the following is the reciprocal of $\frac{2}{\sqrt{18}}$

(A) $\frac{\sqrt{2}}{3}$ (B) $\frac{2}{\sqrt{3}}$ (C) $\frac{12}{9}$ (D) $\frac{4\sqrt{3}}{3}$ (E) None of these

19. In the figure below, if CP=BP and x =120$^0$, then y=?




(A) 30$^0$ (B) 45$^0$ (C) 60$^0$ (D)75$^0$ (E) None of these

20. A merchant was selling an item at a certain price, then marked it down 20% for a spring sale. During the summer, he marked the item down another 20% from its spring price. If the item is sold at the summer price, then what percent of the original price did it sell for?

(A) 40% (B) 60% (C) 64% (D) 67% (E) None of these

21. Half the graduating class of a college was accepted by a business school. One- third of the class was accepted by a law school. If one- fifth of the class was accepted by both schools, then what fraction of the class was accepted only by the law school?

(A) $\frac{1}{60}$ (B) $\frac{2}{15}$ (C) $\frac{1}{3}$ (D) $\frac{1}{2}$ (E) None of these

22. Today Jim is twice as old as Fred and Sam is 2 years younger than Fred. Four years ago. Jim was 4 times as old as Sam. How old is Jim now?

(A) 8 (B) 12 (C) 16 (D) 20 (E) None of these

23. There are 8 job applicants sitting in a waiting room -4 women and 4 men. Two of the applicants are selected one after another at random. what is the probability that both will be women?

(A) $\frac{1}{2}$ (B) $\frac{3}{7}$ (C) $\frac{1}{4}$ (D) $\frac{3}{14}$ (E) None of these

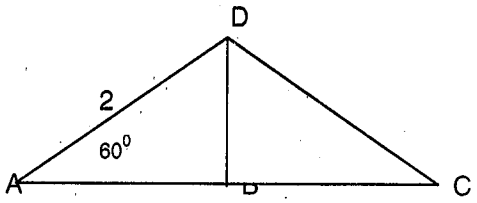
24. The closest approximation to $\sqrt{\frac{7.91\times506.88}{17.79}}$ is:

(A) 5 (B) 10 (C) 15 (D) 20 (E) None of these

25. A can work three times faster than B. A takes 60 days less than B to do a work. Find the number of days it would take to complete the work if both work together.

(A) $22\frac{1}{2}$ days (B) 32 days (C) $24\frac{1}{3}$ days (D) 26 days (E) None of these

26. In the figure below, if a line segment connecting points B and D is perpendicular to AC and the area of triangle ADC is $\frac{3\sqrt{3}}{2}$, then BC =?




A) $\sqrt{2}$ (B) $\sqrt{3}$ (C) 2 (D) $3\sqrt{3}$ (E) None of these

27. A cow is tied to the corner of a square of side 15m with a rope of length 14m. Find the area the cow can graze and the area which it cannot.
(A) 144 $m^2$, 77 $m^2$ (B) 135$m^2$, 73 $m^2$ (C) 164 $m^2$, 77 $m^2$
(D) 154 $m^2$ 71 $m^2$ (E) None of these

28. An economist estimates that the cost of living will increase by 8.50 percent over the next three years. How much should a piece of candy cost in three years if it cost Tk. 1.50 today?
(A)Tk 12.75 (B)Tk 0.1275 (C) Tk 1.37 (D) Tk 1.63 (E) None of these

29. After working for a total of 4 hours at a temporary job, you were told that you had just completed $\frac{1}{4}$ of the job. How long should it take you to finish the remaining part of the job?
(A) 1 hour (B) 16 hour (C) 8 hour (D) 12 hour (E) None of these

30. Ehsan was preparing to make a tape from some of his favourite songs. He noticed that Hadi's song was 1 minute longer than Bonna's song. Duration of Niaj's song was 1 minute shorter than twice the duration of Bonna's song. If the total time for these songs is 12 minutes, how long is Niaj's song?
(A) 3 minutes (B) 4 minutes (C) 5 minutes (D) 7 minutes: (E) None of these

## Section II: *Analytical Ability* [1 x 30 = 30 marks]

31. X and Y agreed to do a particular job. X alone completed $\frac{1}{3}$ of the job and then asked Y to complete the rest.. Y did half of the rest and then hired Z. Afterwards, Y and Z, equally shared the remaining part of the job. Which one of the following statements is true?
(A) Y did more than X (B) Y did as much as X and Z did it individually.-
(C) Y did more than Z. (D) Y did as much as X and Z did it together. (E) None of these

32. In an examination, there were 80 multiple-choice questions. For every right answer 1 point is added and for every wrong answer 0.25 point is deducted from total. No point is added or deducted for any unanswered question. An applicant answered 75% of the total number of questions and got a total point, of 45. How many answers of the applicant were wrong?
(A) 35 (B)20 (C) 15 (D) 12 (E) None of these

33. Anis is shorter than Babu, but taller than Camelia. Doli is shorter than Anis but taller than Camelia. Emon is shorter than Babu but taller than Anis. Who is in the middle position in terms of height?
(A) Anis (B) Babu (C) Camelia (D) Doli (E) None of these

34. Which one does not logically belong to the following list?
(A) IMF (B) ILO (C) UNO (D) ADB (E) None of these

35. Which is the next logical letter in this sequence of letters A, C, F, J, O?
(A) Q (B) S (C) T (D) U (E) None of these

36. If x+y> 4 x <3, then y > 1 is true
(A) always (B) only if x<0 (C) only if x>0
(D) only if x = 0 (E) None of these

37. Exactly 7 persons - Pintu. Robin, Azad, Titu, Sajib, Utpol and Babul- participate in a race competition. There is no tie for any position at the end of the race. The following statements about the race are true;
Babul finishes ahead of Pintu.
Pintu finishes ahead of Robin.
Either Azad finishes first and Sajib finishes last, or Titu finishes first and Utpol or Robin finishes last.
If Titu finishes sixth and Robin finishes fifth, which of the following can be true?
(A) Babul finishes first or fourth. (B) Azad finishes second or third.
(C) Pintu finishes second or fifth. (D) Utpol finishes third or fourth.
(E) None of these.

38. A department has offered 8 courses in the first semester-Accounting, Computer, Finance, Management. Mathematics, Physics, Sociology, and Statistics. Conditions for taking courses are as follows:
Finance can be taken only if Accounting is completed.
Computer and Mathematics can't be taken in the same semester.
Mathematics must be taken at least one semester before taking Statistics.
What is the maximum number of courses that a student can take in his/her first semester?
(A) 2 (B) 3 (C) 4 (D) 5 (E) None of these

39. How many rectangles arc there in the following figure?
(A) 9 (B) 8 (C) 6 (D) 4 (E) None of these

40. If A attends a patty, B will not attend. C will attend only if both A and D attend. E will attend only if both B and D attend. F will attend if any other three attend. What is the maximum number of persons that can attend the party?
(A) 6 (B) 5 (C)4 (D)3 (E) None of these

41. Jitu starts from point X and walks 1 km north, then 2 km east, then 2 km south, then 4 km west and then 1 km north lo reach at point Y, What is the shortest distance between X and Y?
(A) 1 km (B) 2 km (C) 4 km (D) 8 km (E) None of these

42. Think of a number and then double the number. Then add 8 and multiply the result by 6. Now divide, the result by 12, then subtract the number you first thought out. What is the final result?

(A) 4 (B) 6 (C) 10 (D) 14 (K) None of these

43. A basket contains four balls of four different colors: white, red, black and green. These balls will be distributed among four persons: Rajib, Lilu, Simu and Rida. Rida must not be given the black ball. Rajib must be given the white ball. Lilu must be given either red or black ball. Simu must not be given either black or green ball. If the above conditions are followed, which of the following must be true?

(A) Simu will be given the red ball. (B) Lilu will be given the black ball.

(C) Rida will be given the green ball.

(D) Simu will be given the green ball (E) None of these.

44. How many flowers are there if all of them are roses except two, all of them arc tulips except two, and all of them are daisies except two?

(A) 2 1 (B) 3 (C) 4 (D) 5 (E) None of these

45. How many times does the digit 7 come in writing all the integers between 699 and 800?

(A) 20 (B) 118 (C) 119 *(D)* 120 (E) None of these

46. Which is the next logical number in this sequence of numbers 23, 5, 48, 12, 27, 9, 37, 10,61,7,88?

(A) 10 (B)6 (C) 12 (D) 16 (E) None of these

47. Rehana is one year senior to Jamila, and two years junior to Faria. Amina is one year senior to Jamila. Which of the following statements is correct?

(A) Faria is the most senior. (B) Rehana and Jamila are of same age.

(C) Jamila is not the most junior. (D) Rehana and Amina are of different age.

(E) None of these

**Question 48 to 51**

An amusement park roller coaster includes five cars sequentially numbered 1 through 5. Each car accommodates at most two riders, seated side by side. Six people, Tareq, Galib. Luna, Mark, Pavel and Jamil, are riding the coaster at the same time

Luna is sharing a car.

Mark is not sharing a car and is seated immediately behind an empty car.

Tareq is not sharing a car with either Galib or Pavel.

Galib is riding in either the third or fourth car.

48. If Galib is riding immediately behind Luna's car and immediately ahead of Tareq's car, all of the following must be true EXCEPT:

(A) Galib is riding in the fourth car, (B) Pavel is riding in the third car.

(C) Tareq is riding in the fifth car. (D) Luna is riding in the third car. (E) None of these.

49. Which one of the following statements CANNOT be true?

(A) Neither Tareq nor Galib is sharing a car with another rider.

(B) Neither Mark nor Jamil is sharing a car with another rider.

(C) Tareq is sharing a car, and Jamil is sharing a car.

(D) Galib is sharing a car, and Pavel is sharing a car.

(E) Tareq is sharing a car, and Galib is sharing a car.

50. If Pavel is riding in the second car, which of the following statements (s) must be correct?
(A) Galib is riding in the third car. (B) Tareq is riding in the first car.
(C) Mark is riding in the fourth car. (D) Both A& B (E) None of these

51. Which of the following groups of riders could occupy the second car?
(A) Luna only (B) Tareq and Galib (C) Lima and Mark
(D) Jamil and Tareq (E) None of these

**Questions, 52 to 55**

After months of talent searching for an administrative assistant to the president of a college, the number of applicants has been narrowed down to 5: A, B, C, D and E It was announced that the finalist would be chosen after a series of interviews. The search committee agreed upon the following procedures:
The interviews will be held once a week.
Three candidates will appear at any interview session.
Each candidate will appear at least once.
If it becomes necessary to call applicants for additional interviews, no more than 1 such applicant should be asked to appear in the next week.
It was agreed that whenever candidate B appears, A will also appear.
Because of travel difficulties,, it was agreed that C will appear for only 1 Interview

52. Which of the following is a possible sequence of combinations for interviews in 2 successive weeks?
(A) ABC: BDE (B) ABD; ABE (C) ADE; ABC
(D) BDE;ACD (E) None of these

53. If A, B and D appear for the interview and D is called for an additional interview the following week, which 2 candidates may be asked to appear with D?
(A) A and B (B) A and C (C) B and C (D) C and E (E) None of these

54. Which of the following correctly state(s) the procedure followed by the search committee?
I. All applicants have appeared at least once before the beginning of the 3rd interview.
II. The committee sees each applicant, a second time.
III. If there is a third session, it is possible for all applicants to appear at least twice.
(A) I only (B) II only (C) III only (D) Both I and II (E) None of these

55. At the first interview, candidates A; B and D appear. Which of the following combinations can be called for the interview to be held next week?
(A) BCD (B) CDE (C) ABE (D) ABC (E) None of these

56. If Salman is elected, he will work towards effecting those changes for which he has been fighting all these years. He will work to do away with the bureaucratic bogs that exist since his opponent took office.
Choose the best option to complete the statement given below:
He invites his opponent to .....
(A) hand in his resignation graciously. (B) make his stance clear. (C) stop lying to the public.
(D) get our city more federal aid. (E) extend support to him.

57. Three men (Tareq, Polash and Javed) and three women (Eliza, Aleya and Kanon) are spending a few months at a hillside. They are to stay in a row of nine cottages, each one living in his or her own cottage. There are no others staying in the same row of houses, a. Aleya, Tareq and Javed do not want to stay in any cottage, which is at the end of the row.
b. Eliza and Aleya are unwilling to stay beside any unoccupied cottage.
c. Kanon is next to Polash and Javed.
d. Between Aleya and Javed's cottage, there is just one vacant cottage.
e. None of the girls occupy adjacent cottages.
f. The house occupied by Tareq is next to an end cottage.
How many of them occupy cottages next to a vacant cottage?
(A) 2 (B) 3 (C) 4 (D) 5 (E) None of these.

**Questions 58 to 60**

M. N. O and P are four individuals. M is the daughter of N, N is the son of O, and O is the father of P.

58. Which among the following statements is contradictory to the above premises?
(A) P is the father of M. (B) O has three children
(C) M has one brother (D) M is the granddaughter of O.
(E) Another person C could be the mother of M.

59. If B is the son of N and B has one brother D, then
I. M is the sister of D. II. D and N are brothers. III. O is the grandfather of D.
(A) I only (B) III only (C) I and III only (D) I and II only (E) None of these.

60. Which of the following statements is true?
(A) O is the uncle of M (B) P and N are brothers (C) M is the daughter of P
(D) If B is the daughter of N then M and B are sisters. (E) none of these

## Section III: *Language & Communication* [1 x 30 = 30 marks]

**Questions 61 to 65**

*Instruction: Select the word(s) that expresses the same meaning as the underlined word(s).*

61. The mysterious writings on the walls of the pyramid had baffled Egyptologist for a long time.
(A) confused (B) puzzled (C) worried *(D)* vexed (E) bothered

62. Purchasing a house in this location will offer various amenities,,
(A) benefits (B) products (C) advantages (D) sources (E) facilities

63. Some people consider accumulating overdue amount a crime,
(A) Arrears (B) payments (C) credit (D) bills (E) None of these

64. The death of his friend had left him without any enthusiasm for sports.
(A) lacking (B) deficient of (C) devoid of (D) free of (E) feeling

65. Astute investors are now making the best use of rising interest rates,
(A) Knowledgeable (B) opportunist (C) informed
(D) Shrewd (E) pioneer

**Questions 66 to 71**

*Instruction: find the odd word from each list.*

66. (A) Placid (B) Docile (C) Subservient
(D) Serene (E) Defiant

67. (A) Lackadaisical (B) **Apathy** (C) Zeal
(D) Disinterest (E) Nonchalance

68. (A) Macabre (B) Gruesome (C) Morose
(D) Horrid (E) Sinister

69. (A) Atypical (B) Prosaic (C) Dull
(D) Ordinary (E) Commonplace

70. (A) Voracious (B) Avid (C) Fervent
(D) Industrious (E) Ardent

71 (A) Avarice (B) Judicious (C) Capricious
(D) Fickle (E) Unpredictable

**Questions 72 to 76**

*Instruction: Select the wrong word(s) if any, from each sentence. Otherwise, choose No Error.*

72. The Theme Parks are so crowded on weekends that the queues are a mile long. "No Error"
(A) (B) (C) (D) (E)

73. The traditional glass ceiling for women in the corporate world are gradually being nullified. "No Error"
(A) (B) (C) (D) (E)

74. You never get a second chance giving a first impression of yourself. "No Error"
(A) (B) (C) (D) (E)

75. True friendship always last despite numerous difficulties of life. "No Error"
(A) (B) (C) (D) (E)

76. It is only in case of extreme situations that heroes are born. "No Error"
(A) (B) (C) (D) (E)

**Question 77 to 80**

*Instruction: select the option that is most appropriate for the blank in each sentence.*

77. ———— of Acer Laptops was its low battery life .
(A) Cause of mass recall (B) The reason because mass recall
(C) The reason for mass recall (D) Result of mass recall (E) None of these

78. ———— has elated the whole nation.
(A) Birth of the Japan's royal male heir (B) Birth of Japan's royal heir male
(C) Birth of male heir of Japan's royalty (D) Birth of Japan's male heir to royalty (E) None of these

79. Some countries are increasing their land space ————
(A) taking soil from ocean (B) by taking soil from the ocean
(C) taking soil from the ocean (D) by taking soil of ocean (E) None of these

80. ———————— in competition.
(A) Quality, now is a key factor (B) Quality now, is a key factor
(C) Now is quality a key factor (D) Quality is now a key factor (E) None of these

81. People who ———————— tend to be achievement oriented.
(A) are aggressive in Nature (B) have aggression in nature
(C) have been aggressive in nature (D) have aggressive in nature (E) None of those

**Question 82 to 85**

*Instruction: select the words that expresses the opposite meaning to the underlined word(s)*

82. A lazy mind is the devil's playground.
(A) An idle (B) An indolent (C) A slothful (D) An inactive (E) A diligent

83. You only deceive yourself when you try con others.
(A) assist (B) outwit (C) cheat (D) defraud (E) dupe

84. Assertiveness is not always perceived as a virtue.
(A) Boldness (B) Commitment (C) Fearlessness (D) Timidity (E) Confidence

85. Kalam was elated when he heard the news of his team's victory.
(A) thrilled (B) excited (C) disappointed (D) ecstatic (E) delighted

**Question 86 to 89**

*Instruction: Find the pair of words that BEST matches the given pair.*

86. ACRIMONIOUS : UNFRIENDLY
(A) enmity : amity (B) ability : deficiency (C) ambitious : apathetic
(D) enthused : inspired (E) sympathetic : callous

87. CLAIM : SETTLEMENT
(A) assertion ; reimbursement (B) accusation: Trial (C) receipt : purchase
(D) application: denial (E) collection : assortment

88. EPHEMERAL : TRANSIENT
(A.) emotional : stolid (B) acrid: fresh (C) eradicate : destroy (D) astute: dense
(E) rush : delay

89. BACTERIA : DECOMPOSITION
(A.) lava: eruption (B) penicillin : injection (C) yeast : fermentation
(D) oxygen: respiration (E) plants : deforestation

90. RELEVANT : CRUCIAL
(A) marginal : unique (B) perceptible: obvious (C) apparent : real (D) possible : desirable
(E) None of these

## Part II: Written Part

A. Your mother wants to see you as a government official. . But you dream to be an entrepreneur. Write a dialogue with your mother trying to convince her of your dream. (10 Marks)

B. Translate the following paragraph into Bengali: (5 Marks)
Knowledge of any kind is of little value unless it can be used. Men and women who succeed in business are knowledgeable people. But it is not knowledge alone that makes them successful; it is the intelligent use of what they know. Your success thus depends on your understanding and use of knowledge. You also need training in using knowledge to reach desired ends.

C. Write an essay, identifying two major factors, on the threat to the environment due to human intervention. (10 Marks)

# Answer Key

### Section I: Mathematics

| | | | | | |
|---|---|---|---|---|---|
| 1.E | 6.B | 11.B | 16.D | 21.B | 26.C |
| 2.D | 7.D | 12.D | 17.B | 22.D | 27.D |
| 3.B | 8.E | 13.A | 18.E | 23.D | 28.E |
| 4.E | 9.B | 14.B | 19.C | 24.C | 29.D |
| 5.C | 10.E | 15.B | 20.C | 25.A | 30C |

### Section II: Analytical

| | | | | | |
|---|---|---|---|---|---|
| 31D | 36.A | 41.B | 46.D | 51.D | 56.A |
| 32.D | 37.D | 42.A | 47.A | 52.C | 57.B |
| 33.A | 38.D | 43.E | 48.B | 53.D | 58.A |
| 34.D | 39.A | 44.B | 49.A | 54.A | 59.C |
| 35.D | 40.C | 45.D | 50.D | 55.B | 60.D |

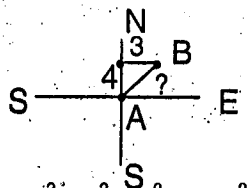
### Section III: Language & Communication

| | | | | | |
|---|---|---|---|---|---|
| 61.B | 66.E | 71.B | 76.B | 81.A | 86.D |
| 62.E | 67.C | 72.D | 77.C | 82.E | 87.B |
| 63.A | 68.C | **73.C** | 78.E | 83.A | 88.C |
| 64.C | 69.A | 74.C | 79.B | 84.D | 89.C |
| 65.B | 70.D | 75.B | 80.D | 85.C | 90.B |

# BBA (IBA) Admission Test (2006-07) Solution

## Section I (Math)

1. (E) Balance ছিল = 1,80,000 টাকা
   মোট চেক লেখা হলো = 20,000 + 13,000 + 40,000 + 18,000 = 91,000
   মোট জমা হলো = 60,000 + 1,03,000 = 1,63,000 টাকা
   সুদ যোগ হলো = 50,000 এবং Service charge কাটা গেল = 15,000 টাকা
   ∴ Final balance = 1,80,000 – 91,000 + 1,63,000 + 50,000 – 15,000 = 2,87,000 টাকা
   অর্থাৎ, answer E
2. (D) মোট কাগজের area = 35 × 4 = 140 বর্গফুট
   একটি ব্যানারের area = 2.5 × 2 = 5 বর্গফুট
   ∴ Maximum ব্যানারের সংখ্যা = $\frac{140}{5}$ = 28 টি
   অর্থাৎ, answer D
3. (B) Triangular solid cylinder এর volume = area of the triangle × height of the cylinder
   = $(\frac{1}{2} \times 4 \times 3) \times 10 = 60$ cft
   অর্থাৎ, answer B
4. (E) 200 কে ভাগ করতে হবে এভাবে; 10 + 50 + 140
   তাহলে খরচ হবে = 10x + 50(x – 2) + 140 × 1 = 10x + 50x – 100 + 140
   = 60x + 40
   অর্থাৎ, answer E
5. (C) 5 + 120 = 125 জনের মধ্যে Job আছে 120 জনের
   2125 জনের মধ্যে Job আছে = $\frac{120}{125} \times 2125 = 2040$ জনের
   অর্থাৎ, answer C
6. (B) $x^2 - 7x + 18 = 6 \Rightarrow x^2 - 7x + 12 = 0 \Rightarrow x^2 - 3x - 4x + 12 = 0 \Rightarrow (x - 3)(x - 4) = 0$
   অর্থাৎ, x = 3 অথবা 4; -4 হওয়া সম্ভব নয়।
   অর্থাৎ, answer B
7. (D)
8. (E) প্রথম 5 number এর total = 5 × 40 = 200
   বাকী 2 number এর total = 2 × 21 = 42
   ∴ মোট 7 number এর average = $\frac{200+42}{7}$ = 34.57 (approx)
   কিন্তু এখানে approximate answer বের করতে বলা হয়নি। তাই answer হবে E
9. (B) Square টির একটি বাহু = $\sqrt{2}$ ; অর্থাৎ, $(\text{diagonal})^2 = (\sqrt{2})^2 + (\sqrt{2})^2$
   $\Rightarrow d^2 = 2 + 2 = 4 \Rightarrow d = 2$
   Answer B
10. (E) Damage এর amount অবশ্যই 150,000 এর বেশি হবে,
    অর্থাৎ, answer E
11. (B)




$AB^2 = 4^2 + 3^2 \Rightarrow AB^2 = 25 \Rightarrow AB = 5$

12. (D) Working mother আছে 25 family তে
Retired individual আছে 10 family তে
WM+RI আছে 8 family তে
অর্থাৎ, Working mother আছে, কিন্তু retired individual নেই এমন family র সংখ্যা = 25 – 8 = 17 টি

13. (A) $\frac{25}{4+5} \times 100 = \frac{500}{9} = 55.55 = 56$ (approx)
Answer A

14. (B) PQ এর mid-point = $\left(\frac{0+3}{2}, \frac{-1+2}{2}\right) = (1.5, 0.5)$
Answer B

15. (E) PQ এর length = $\sqrt{(3-0)^2+(2-1)^2} = \sqrt{9+1} = \sqrt{10}$
Answer E

16. (D) মোট degree = 360° অর্থাৎ, $\frac{60}{360} = \frac{1}{6}$ th shaded
Answer D

17. (E) Shaded region এর area $\pi$ হলো circle এর area = $6\pi$
অর্থাৎ, $\pi r^2 = 6\pi \Rightarrow r^2 = 6 \Rightarrow r = \sqrt{6} \Rightarrow d = 2\sqrt{6}$

18. (E) reciprocal of $\frac{2}{\sqrt{18}} = \frac{\sqrt{18}}{2} = \frac{\sqrt{2\times9}}{2} = \frac{3\sqrt{2}}{2} = \frac{3}{\sqrt{2}}$
Answer E

19. (C) CP = BP হলে $\angle CBP = \angle BCP = 180° - x = 180 - 120 = 60°$
$\angle y = 180 - (60 + 60) = 180 - 120 = 60°$
Answer C

20. (C) শুরুতে মূল্য 100 হলে 20% mark down এর পরে 80
আরও 20% mark down এর পরে $(80 - 80 \times \frac{20}{100}) = 64$
∴ Answer C

21. (D) মোট graduates 60 হলে business school এ accepted = 30
law school এ accepted = 20
দুটিতেই accepted = 12
অর্থাৎ শুধু law school এ accepted = 20 – 12 = 8
∴ fraction = $\frac{8}{60} = \frac{2}{15}$ Answer

22. (D) ধরি, এখন Jim এর বয়স J, Fred এর F এবং Sam এর S
অর্থাৎ, $F = \frac{J}{2}$ এবং $F = S + 2$
$\Rightarrow \frac{J}{2} = S + 2 \Rightarrow S = \frac{J}{2} - 2$
4 years আগে, $J - 4 = 4(S - 4) \Rightarrow J - 4 = 4S - 16$
$\Rightarrow J - 4 = 4(\frac{J}{2} - 2) - 16$
$\Rightarrow J - 4 = 2J - 24 \Rightarrow J = 20$ Answer D

23. (D) ১ম জন woman হওয়ার probability = $\frac{4}{8} = \frac{1}{2}$

২য় জন woman হওয়ার probability = $\frac{3}{7}$

অর্থাৎ, 2 জনই woman হওয়ার probability = $\frac{1}{2} \times \frac{3}{7} = \frac{3}{14}$

Answer D

24. (C) Closest approximation বলাতে $\sqrt{\frac{8\times500}{18}} = \sqrt{220}$

15 এর square = 225

অর্থাৎ answer C

25. (A) A x দিনে করলে B করবে x + 60 দিনে

আবার, $x = \frac{x+60}{3} \Rightarrow x = 30$ অর্থাৎ A 30 দিনে এবং B 40 দিনে কাজটি করতে পারে

একসাথে করলে ১ দিনে করবে $\frac{1}{30} + \frac{1}{90} = \frac{4}{40} = \frac{2}{45}$ অংশ

$\therefore$ পুরো কাজ শেষ করবে $\frac{45}{2} = 22\frac{1}{2}$ দিনে

26. (C) $30^\circ, 60^\circ, 40^\circ$ ত্রিভুজের বাহুর ratio = $1 : \sqrt{3} : 2$

অর্থাৎ, AD = 2 হলে AB = 1 ও BD = $\sqrt{3}$

এখন, $\frac{3\sqrt{3}}{2} = \frac{1}{2} \times \sqrt{3} \times AC \Rightarrow AC = \frac{3\sqrt{3}}{2} \times \frac{2}{\sqrt{3}} = ৩$

$\therefore$ BC = 3 – 1 = 2

Answer C

27. (D) মোট area = $15m^2 = 225m^2$

অর্থাৎ যতটুকু চরে বেড়াতে পারবেনা এবং যতটুকু চরে বেড়াতে পারবে এই দুটির যোগফল হবে $225m^2$.

Answer D

28. (E) Current price = Tk. 1.50

Price after 3 years = $1.50 + (1.50 \times \frac{8.50}{100})$

$= 1.50 + 0.1275 = 1.6275$

এটির খুব কাছাকাছি answer 1.63 হলেও question এ approximate value চাওয়া হয়নি।

Answer E

29. (D) $\frac{1}{4}$ শেষ করতে 4 ঘন্টা লাগলে পুরো কাজের সময় = $4 \times 4 = 16$ ঘন্টা

অর্থাৎ, remaining hours = 16 – 4 = 12 hours

Answer D

30. (C) N = 2B – 1 and H = B + 1

$\therefore$ 2B – 1 + B + 1 + B = 12 minutes $\Rightarrow$ B = 3 minutes

অর্থাৎ, N = 2B – 1 = 5 minutes Answer C

**Section II : Analytical Ability**

Question এ ভুল আছে। NOT TRUE হবে

31. (B) X $\frac{1}{3}$ শেষ করে ফেললে বাকী আছে $\frac{2}{3}$

Y $\frac{2}{3}$ এর অর্ধেক করলে করল = $\frac{1}{3}$, বাকী রইল $\frac{1}{3}$

বাকী $\frac{1}{3}$ এর $\frac{1}{6}$ Y এবং $\frac{1}{6}$ Z শেষ করল।

অর্থাৎ, x করেছে $\frac{1}{3}$, y করেছে $\frac{1}{3} + \frac{1}{6} = \frac{1}{2}$, z করেছে $\frac{1}{6}$

Answer B

32. (D) 80 এর 75% = 60 টি answer করে 45 পেয়েছে

x টি correct করলে পেয়েছে = x এবং (60 – x) ভুল করে কাটা গেল = $\frac{60-x}{4}$

$\therefore x - \frac{60-x}{4} = 45 \Rightarrow \frac{4x-60+x}{4} = 45 \Rightarrow 5x = 240 \Rightarrow x = 48$

অর্থাৎ, ভুল করেছে = 60 – 48 = 12 টি

Answer D

33. (A) A < B, A > C, D < A, D > C, E < B, E > A

অর্থাৎ B > E > A > D > C

Answer A

34. (D) ADB (Asian Development Bank) শুধু Asia তে সীমাবদ্ধ এবং জাতিসংঘের সাথে related নয়।

Answer D

35. (D) A B C D E F G H I J K L M N O P Q R S T U

Difference ১ করে বাড়ার ফলে next letter is U

Answer D

36. (A) If x + y > 4 and x < 3, then y > 1

Answer A

37. (D) Titu 6th হলে অবশ্যই Azad 1st এবং Shajib last. এরকম হতে পারে sequence টি

$\frac{A}{1}$ $\frac{B/U}{2}$ $\frac{P/B/U}{3}$ $\frac{R/P/U}{4}$ $\frac{U/R}{5}$ $\frac{T}{6}$ $\frac{5}{7}$

Answer D

38. (D) 1st semester এ Finance নেয়া যাবেনা। Comp/Math যেকোন ১টি নেয়া যাবে। Stat নেয়া যাবেনা।

∴ নেয়া যাবে Acc, Comp/Math, Mgt, Phy, Soc. (মোট ৫টি)

Answer D

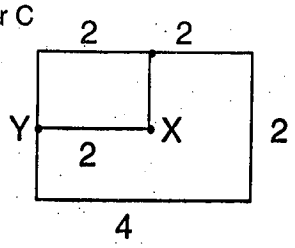
39. (A) 7 টি rectangle আছে, Answer A

40. (C) A ≠ B ; C = A + D ; E = B + D; F = any three of A, B, C, D, E

অর্থাৎ, সর্বোচ্চ 4 জন attend করতে পারবে (A, C, D, F) অথবা (B, D, E, F)

Answer C

41. (B)




x ও y এর shortest distance হবে 2 km. Answer B

42. (A) ধরি, number টি x

$\therefore \frac{(2x+8)6}{12} - x = \frac{12x+48-12x}{12} = \frac{48}{12} = 4$

Answer A

43. Rida ≠ B; Rajib = W; Litu = R/B; Sima ≠ B/G

(A) true কারণ Sima নিতে পারে Red or White কিন্তু Rajib কে White নিতেই হবে। তাই Sima Red পাবে।

আবার (C) ও true কারণ প্রদত্ত শর্তমতে Rida র জন্য area ছাড়া অন্য option নেই। প্রশ্নটি ত্রুটিপূর্ণ

44. (B) ৩ টি flower হলেই এটা সম্ভব। প্রত্যেকটি ১টি করে আছে।

Answer B

45. (D) 700 → 799 এ 100 বার minimum। টি 7 থাকবে।

707, 717, 727, 737, 747, 757, 767, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 787, 797 সংখ্যাগুলো আসবে extra ২০ বার।

∴ 100 + 20 = 120 বার 7 আসবে।

46. (D) 2, 3, 5, 48, 12, 27, 9, 37, 10, 61, 7, 88 ---- 2+3 =5, 4+8 =12, 2+7 =9, 3+7 =10, 6+1 =7

∴ 8 + 8 = 16

Answer D

47. (A) R = J + 1 R = F – 2 A = J + 1

F > R = A > J

Answer A

**48 – 51** পাঁচটি car(1, 2, 3, 4, 5) পরপর সাজানো আছে। প্রতিটি car এ maximum ২জন বসতে পারবে পাশাপাশি। T, G, L, M, P, J – এই ৬ জন একসাথে car গুলিতে উঠেছে।

- ❖ L এর সাথে ১ জন আছে
- ❖ M এর সাথে কেউ নেই এবং তার ঠিক সামনের car টি খালি
- ❖ T, G অথবা P এর সাথে বসেনি
- ❖ G 3 or 4 no. car এ বসেছে।

48. (B) শর্ত হচ্ছে: G ঠিক L এর পেছনের car এ এবং ঠিক T এর সামনের car এ বসেছে।

শর্তানুযায়ী G কে 3 or 4 নং এ বসতে হবে। G যদি 3 এ বসে তাহলে L 2 নং এ আর T ৪ নং এ বসে, অর্থাৎ M এর সামনের car খালি থাকা সম্ভব নয়। অতএব, G 4 নং car এ বসবে (A true); G 4 নং এ বসলে T 5 নং এ বসবে (C true) এবং L 3 নং এ বসবে (D true)। শুধু B must be true নয়, may be true

Answer B

49. (A) M একা একটিতে, সামনেরটি খালি (মোট ২টি) এবং L এর সাথে একজন (১টি car)। বাকী রইল ২টি car। এই ২টি তে আর L এর সাথে একজন এভাবে T, G, P, J কে বসতে হবে।

A) তে বলা আছে T ও G কারো সাথে চড়বেনা, এটা সম্ভব না কারণ তাহলে P ও J এর জন্য মাত্র ১টি seat-ই বাকী আছে (L এর পাশে)।

Answer A

50. (D) P যদি 2 তে বসে তাহলে M- কে S এ পাঠিয়ে 4 খালি রাখতে হবে। অর্থাৎ G বসবে 3 তে। T সেক্ষেত্রে 1 ছাড়া বসতে পারবেনা।

Answer D (both A & B must be correct)

51. (D) L একা চড়েনা, তাই A বাদ

T G/P এর সাথে share করেনা, তাই B বাদ

M একা বসে, তাই C বাদ

J এবং T একসাথে বসতে পারে।

Answer D

**52-55**

৫ জন applicant (A, B, C, D, E) নিচের শর্তানুযায়ী interview দেবে।

- ❖ সপ্তাহে ১দিন interview হবে।
- ❖ ১টি interview session এ ৩জনের interview হবে
- ❖ প্রতি applicant কে কমপক্ষে ১ বার interview দিতে হবে
- ❖ additional interview এর প্রয়োজন হতে পারে; সেক্ষেত্রে সর্বোচ্চ ১জনকে পরের সপ্তাহে আবার আসতে বলা হতে পারে।
- ❖ B যখন আসবে A ও আসবে
- ❖ C শুধু ১ বার interview দিবে।

52. (C) A) হবেনা কারণ 2nd week এ B এর সাথে A নেই।
B) হবেনা কারণ ২জনকে পরপর ২ সপ্তাহে ডাকা যাবেনা।
C) সম্ভব ; D) সম্ভব নয় কারণ B আসলে A আসবেই।
Answer C

53. (D) A, B, D 1st week এ interview দিল এবং D কে পরের week এ আবার ডাকা হলো। অর্থাৎ পরের week A ও B কে ডাকা যাবেনা। C ও D আসতে পারে।
Answer D

54. (A) A) অবশ্যই সত্যি কারণ ৩জন করে প্রথম ২ week এ নিলে সবার ১বার interview হতেই হবে।
B) ও C) প্রদত্ত শর্ত অনুযায়ী ঠিক নয়
Answer A

55. (B) A, B, D 1st week এ আসলে পরের week এদের মধ্যে যেকোন ১জন (A or D; B নয় কারণ B গেলে A কে যেতেই হবে) আসতে পারবে। অর্থাৎ পরবর্তী week এর combination হতে পারে;
ACE অথবা DCE
Answer B

56. (A) Opponent পদত্যাগ করলেই Salman যা করতে চায় তা করতে পারবে।
Answer A

57. (B)

**58-60**

M হচ্ছে N এর মেয়ে। N হচ্ছে O এর ছেলে। O হচ্ছে P এর বাবা।
অর্থাৎ, O হচ্ছে N এবং P এর বাবা।
N হচ্ছে M এর বাবা।
O এবং N পুরুষ এটা বোঝা যাচ্ছে। M মেয়ে সেটা বোঝা যাচ্ছে, কিন্তু P পুরুষ নাকি মহিলা সেটা দেয়া নেই।

58. A) contradictory কারণ N, M এর বাবা এটা বলা আছে।
Answer A

59. (C) যদি N এর ছেলে হয় এবং D যদি B এর ভাই হয়
I) M অবশ্যই D এর বোন; II) ঠিক নয় কারণ D, N এর ছেলে।
III) O, N এর বাবা এবং N, D এর বাবা; তাই O, D এর grandfather.
Answer C

60. (D) একমাত্র D সম্ভব।
Answer D

**Section III : Language & Communication**

61. (B) baffle এর synonym হচ্ছে puzzle
62. (E) Amenities এর synonym হচ্ছে facilities
63. (A) Arrears মানে হচ্ছে overdue amount
64. (C) এখানে without এর পরিবর্তে ব্যবহারযোগ্য option "devoid of"
65. (B) Astute মানে হচ্ছে opportunist. অর্থাৎ সুযোগের যথাযথ ব্যবহার করা।
66. (E) এখানে শব্দগুলোর মধ্যে Defiant হচ্ছে অন্যগুলো থেকে আলাদা। এর অর্থ oppose করা।
67. (C) এখানে zeal শব্দটি অন্যগুলো থেকে আলাদা। এর অর্থ enthusiasm বা আগ্রহ।
68. (C) এখানে Morose শব্দটি অন্যগুলো থেকে আলাদা। এর অর্থ sad বা disappointed.
69. (A) এখানে Atypical শব্দটি অন্যগুলো থেকে ভিন্ন। এর অর্থ "not typical" অর্থাৎ যা typical বা সাধারণ নয়।
70. (D) এখানে Industrious শব্দটি অন্যগুলো থেকে ভিন্ন। এর অর্থ hardworking.
71. **(B)** এখানে Judicious শব্দটি অন্যগুলো থেকে আলাদা। এর অর্থ "to have good sense".
72. (D) Miles হবে।
73. (C) এখানে subject singular তাই is হবে।
74. **(C)** Giving এর পরিবর্তে to give হবে।
75. (B) এখানে last এর পরিবর্তে lasts হবে।
76. (B) এখানে in cases of হবে।
77. (C) The season for mass recall ব্যবহার করলে sentence টি grammatically correct এবং meaningful হবে।
78. (E) এখানে কোন উত্তরই সঠিক নয়। তাই None of these.
79. (B) by taking soil from the ocean. এখানে preposition এবং article এর সঠিক ব্যবহার হয়েছে।
80. (D) Quality is now a key factor. একমাত্র এই Ans. টি ব্যবহার করলেই sentence টি complete হয়।
81. (A) are aggressive in nature. এই উত্তরটি এখানে ব্যবহারযোগ্য adjective clause form করে।
82. (E) এখানে lazy এর opposite হচ্ছে diligent (hardworking).
83. (A) এখানে con এর opposite হচ্ছে assist con মানে কারও advantage নেওয়া। অন্যদিকে assist মানে কাউকে সাহায্য করা।
84. (D) Assertiveness এর opposite হচ্ছে Timidity
85. (C) Elated (উৎফুল্ল) এর opposite হচ্ছে disappointed
86. (D) এখানে synonymous relation বিদ্যমান। Acrimonious এর synonym unfriendly Enthused এর synonym inspired.
87. (B) Claim এর পর settlement হয়। Accusation এর পর trial হয়। অর্থাৎ one is followed by another.
88. (C) Ephemeral এর synonym Transient. Eradicate এর synonym destroy. এখানে synonymous relation
89. (C) Decomposition এ সাহায্য করে. bacteria. Fermentation এ সাহায্য করে Yeast.
90. (B) এখানে Degree এর কথা বলা হচ্ছে। crucial অর্থ extermely important (relevant). Similarly যেটা অবশ্যই perceptible সেটা obvious.

# BBA (IBA)

## Admission Test Question (2007-2008) with Solution

## Section I: Mathematics [ 30 questions, 30 marks]

1. If 1/x+5/y = 4/3 and x = 3y, then y = ?
(A) 2 (B) 3 (C) 3.33 (D) 4 (E) none of these

2. A colony of 15,000 ants increased by 50% after being fed. Then after 4 weeks without food, the number of ants dropped by 60%. What percentage decline did the original population undergo?
(A) 72.5 (B) 75 (C) 90 (D) 95.5 (E) none of these

3. If b<2 and 2x-3b=0, which of the following must be true?
(A) x>-3 (B) x<2 (C) x = 3 (D) x < 3 (E) none of these

4. If m>0 and x is m percent of y, y is what percent of x?
(A) 100m (B) 1/100m (C) 1/m (D) 10/m (E) none of these

5. What is 0.04 x 0.032 in terms of percent?
(A) 0.0036 (B) 0.036 (C) 0.36 (D) 0.00036 (E) 0.000036

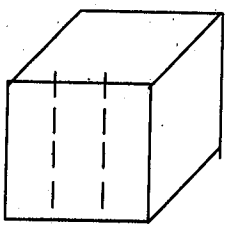
6. If $(x^2 - 4x + 10) < 7$, which of the following must be true?
(A) x>3 (B ) 1>x>3 (C) 1<x<3 (D) x>1 (E) none of these

7. A bus is traveling with 60 passengers. When it arrives at a stop, x number of passengers get off and 8 get on. At the next stop, one third of the passengers on board get off and 5 get on. There are now 37 passengers on the bus. Find x.
(A) 15 (B)20 (C)25 (D)30 (E) none of these

8. In a class of 82 students 46 are taking French 25, are taking German and 11 students are taking both French and German. How many students are not enrolled in either course?
(A) 11 (B) 18 (C) 22 (D)24 (E) none of these

9. Twice one number added to three times another number (which is greater of the two) gives 47. Find the smaller number, if the difference between the numbers is 4.
(A) 5 (B)6 (C) 7 (D)8 (E) none of these

10. A cube measuring 6 cm x 6 cm x 6 cm is cut into three unequal pieces along the dotted lines as shown in the figure. If the distance between the doted lines is 2 cm, what is the increase in total surface of the three pieces compared to that of the original cube?



(A) 12.5% (B) 33.33% (C) 50% (D) 66.66% (E) none of these

11. Two similar triangles have areas of 18 $cm^2$ and 32 $cm^2$. If the base of the smaller triangle is 6 cm, find the base of the larger triangle.
(A) 8 (B) 9.33 (C) 10.66 (D) 11.33 (E) none of these

12. If $x \geq 10$ and $y \leq 7$, which of the following must be true?
(A) $x+y \geq 3$ (B) $x-y \geq 3$ (C) $x+y \leq 7$ (D) x+y>0 (E) none of these

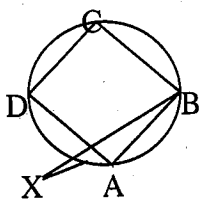
13. How many integers in the set of all integers from 10 to 150 (all inclusive) are **not** the square of an integer?
(A) 101 (B) 111 (C) 12 (D) 132 (E) none of these

14. If x/y =2, then (x-y)/x=?
(A) -1 (B) -½ (C) ½ (D) 1 (E) 2

15. If an integer is selected randomly and is divided by 7, what is the probability that the remainder is greater than 0 and NOT an even number?
(A) ½ (B) 3/7 (C) 4/7 (D) 6/7 (E) none of these

16. If a,b and c are 3 consecutive integers and a>b>c, which of the following has the maximum value?
(A) a+b/c (B) b+c/a (C) c+b/a (D) c+a/b (E) a+c/b

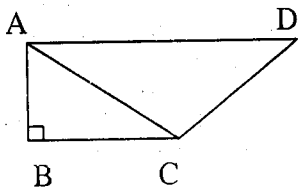
17. $\angle ABC = 102^0$, $\angle DAX = \angle ADC$ and $\angle DCB = 2\angle DAB$. Find $\angle BAX$.




(A) $102^0$ (B) 120° (C)138° (D) $140^0$ (E) none of these

18. Harun is three times as old as Tamim. In eight years, he will be twice as old as Tamim. How old was Harun 3 years ago?
(A) 27 (B)25 (C)24 D) 21 (E) none of these

19. In the figure, AC = 4√2, AB = BC, and AD = 2BC, What is the area of ABCD in $cm^2$?




(A) 12 (B) 18 (C) 24 (D)36 (E) cannot be determined

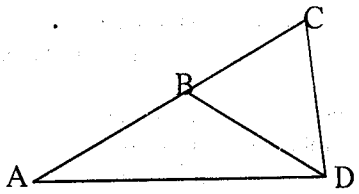
20. Which one of the following is greater than 2/3?
(A) 33/50 (B)8/11 ( C)3/5 (D) 16/27 (E) none of these

21. If $\frac{m^2+m-3}{3}=1$, then m could equal

(A)-1 (B) 0 (C) 1 (D) 2 (E) 3

22. If m>p, m>r, n<r and p<s, which of the following must be true?
(A)p>r (B) s>m (C) n>m (D) m>n E) none of these

23. In the figure, AC = AD, and CD = BD = AB. What is the value of <CAD?



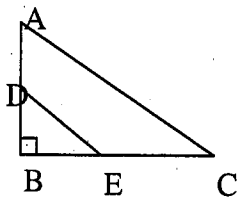

(A) $28^0$ (B) 33.33° (C) $36^0$ (D)$42^0$ (E)cannot be determined

24. If $2^n = n^2$, then which of the following must be true?
(A) n>1 (B) n=2 (C) n can be any even number
(D) n should be a multiple of 2 (E) none of these

25. At College X, the faculty-to-student ratio is 1:9. If two-third of the students are female and one-quarter of the faculty is female, what fraction of the combined students and faculty is female?
(A) ½ (B) 5/8 (C) 4/9 (D) 7/10 (E) none of these

26. If a<0 and b>0, then which of the following is true?
I. ab -(a+b)>0 II. ab-(a+b)<0 III. ab-(a+b)= 0
(A) only I (B) only II (C) both I & II (D) both I & III (E) all of them

27. The triangles ABC and EBD are similar (AC and DE are not parallel).
If AB = 8cm, BE = 4 cm and the area of DBE = 6 $cm^2$, find the area of ABC in $cm^2$.




(A) 18 (B) 24 (C) 36 (D) 48 (E) none of these

28. A number is divided by 3/7and then multiplied by 5/8. The net effect (approx) is
(A) the number decreases by 22% (C) the number decreases by 33%
(B) the number increases by 46% (D) the number increases by 33%
(E) none of these

29. When the per unit production cost of an item is Tk 80 and other costs per unit is Tk 20, the producer makes a profit of 15% on his total cost. If the production cost decreases by 20% and the selling price remains the same, calculate the profit in Tk.
(A) 31 (B) 34 (C) 35 (D)43 (E) none of these

30. Working independently, Salam can perform a certain task in 6 hours and Tonny can perform it in 7 hours. If Salam and Tonny work together for 3 hours, and then Salam leaves, how many hours will it take Tonny to complete the task alone?
(A) 1/14 (B) 2/5 (C) ½ (D) 29/42 (E) 1

## Section II: Analytical Ability [15 questions, 20 marks]

**Q1 - Q4.**
All combination locks manufactured by the Gulzar Combination Lock Company have a combination that consists of four elements — a one-digit number, a two-digit number, and two letters of the alphabet. Each combination conforms to the following rules.

i. The one-digit number is the first element in the combination.
ii. The two letters of the alphabet are not adjacent elements in the combination.
iii. The two-digit number consists of two different numerals..
iv. The two-digit number has no numerals in common with the one-digit number.

1. Which of the following CANNOT be the first element of a combination that has K-53-J as its second, third, and fourth elements?
(A) 5 (B)6 (C) 7 (D)8 (E) 9

2. Which of the following is a sequence of elements that conforms to the rules?
(A) 6-73-D-M (B) 2-X-37-G (C) 39-H-Y-6
(D) H-24-K-4 (E) 9-B-89-B

3. Which of the following must always be true of a combination?
(A) The second element is a two-digit number.
(B) The third element is a letter of the alphabet.
(C) The third element is a one-digit number.
(D) The fourth clement is a two-digit number.
(E) The fourth element is a letter of the alphabet.

4. The sequence of elements 9-K-M-29 violates which of the given rules?
(A) Rule 2 only
(B) Rule 3 only
(C) Rule 2 and rule 4 only
(D) Rule 3 and rule 4 only
(E) Rule 2, rule 3, and rule 4

**Q5 - Q8.**

Seven students — Ferdous, Juthi, Keya, Masum, Rabeya, Salim, and Tamara — are eligible to enter a debating competition. From these seven, IBA Debating Club must form two teams, a red team and a green team, each team consisting of exactly three of the students. No student can be selected for more than one team. Team selection is subject to the following restrictions:

If Masum is on the red team, Keya must be selected for the green team.

If Ferdous is on the red team, Rabeya, if selected, must be on the green team. Rabeya cannot be on the same team as Salim.

Juthi cannot be on the same team as Keya.

5. If Masum is on the red team, which of the following, if selected, must also be on the red team?
(A) Ferdous (B) Juthi (C) Rabeya (D) Salim (E) Tamara

6. Which of the following can be the three members of the red team?
(A) Ferdous, Juthi, and Keya
(B) Ferdous, Rabeya, and Tamara
(C) Juthi, Keya, and Tamara
(D) Masum, Keya, and Rabeya
(E) Masurn, Tamara, and Rabeya

7. If Masum and Ferdous are both on the red team, the green team can consist of which of the following?
(A) Rabeya, Juthi, and Keya
(B) Juthi, Salim, and Tamara
(C) Rabeya, Keya, and Salim
(D) Rabeya, Keya, and Tamara
(E) Salim, Tamara, and Rabeya

8. If Ferdous is selected for the red team and Tamara is not selected for either team, then who among the following CANNOT be a member of the green team?
(A) Juthi (B)Keya (C) Masum (D) Rabeya (E) Salim

9. The cost of living in a given area is directly proportional to the wages paid by the dominant industry in that area. In Bangladesh, the dominant industry is farming. However, in Japan, the dominant industry is auto manufacturing. Thus, it is fair to conclude that the cost of living must be higher in Japan than in Bangladesh. The argument above assumes that
(A) The quality of life in Japan is higher than the quality of life in Bangladesh.
(B) The number of people manufacturing autos in Bangladesh is higher than the number of people manufacturing autos in Japan.
(C) Automobile workers in Japan are likely to leave Japan and move to areas with a lower cost of living.
(D) The cost of living in Japan is higher than the cost of living in any other area.
(E) Wages paid by the auto manufacturing industry are higher than those of the farming industry.

10. The employers and the bureaucrats have been asking to design the business school curricula. Allowing this would be as disastrous as allowing the graduates to design their job description or for a patient to choose their own diets. This group of people has neither the maturity nor the experience to equal that of the professional educators now doing the job.
Which of the following statements, if true, would most strengthen the above argument?
(A) The employers and the bureaucrats have less formal education than those who currently design the curricula.
(B) The ability to design good curricula develops only after years of familiarity with educational life.
(C) Patients do not, if left to their own devices, choose healthful diets.
(D) The employers and the bureaucrats are less intelligent than the professional educators.
(E) Individual curricula are more beneficial to high school students than are the standard curricula, which are rigid and unresponsive to their particular strengths and weaknesses.

11. Chhaya is shorter than Jui, but she is taller than Emdad. Shipra is shorter than Jui, and she is shorter than Emdad. Wahab is taller than Shipra, but shorter than Jui.
If the statement above are true, one can validly conclude that Bilal is shorter than Chhaya if it is true that
(A) Chhaya is equal in height to Wahab
(B) Wahab is equal in height to Bilal
(C) Bilal is taller than Shipra, but shorter than Wahab
(D) Bilal is shorter than Jui, but taller than Emdad
(E) Wahab is taller than Bilal, but shorter than Emdad.

12. If your TV was made after 1992, it has a stereo feature.
The statement above can be deduced logically from which of the following statements?
(A) Only if a TV was made after 1992 could it have a stereo feature.
(B) All TVs made after 1992 have a stereo feature.
(C) Some TVs made before 1992 had a stereo feature.
(D) Some stereo features are found in TVs made after 1992.
(E) Stereo features for TVs were fully developed only after 1992.

13. Exactly 7 persons - P, Q, R, S, T, U & V - participate in and finish all of a series of races. There are no ties for any position at the finish of the races. The following statements about the races are always true : V finishes somewhere ahead of P. P finishes somewhere ahead of Q.
Either R finishes first and T finishes last, or S finishes first and U or Q finishes last. If in a race S finishes sixth and Q finishes fifth, which of the following can be true?
(A) V finishes first or fourth
(B) R finishes second or third
(C) P finishes second or fifth
(D) U finishes third or fourth
(E) T finishes fourth or fifth

14. A recent study on private universities in Bangladesh indicates that students who receive full scholarships tend to maintain higher grade point averages than students who must work or take loan to finance study. The survey concluded that scholarships enable students to achieve high grade point averages by alleviating the stress related to financial concerns and freeing up students' time to study more.
The conclusion drawn in the argument above follows logically if which one of the following is assumed?
(A) Students who take out loans maintain higher grade point averages than those who work to finance schooling.
(B) Finance-related stress affects student performance in a manner similar to that of restricted study time.
(C) Students who must work to pay for their studies cannot maintain high grade point averages.
(D) High grade point averages were not the primary criterion upon which the scholarship awards were based.
(E) Controlling stress level is less important to student performance than is intensive studying.

15. Plant Y thrives in environments of great sunlight and very little moisture. Desert X is an environment with constant, powerful sunlight, and next to no moisture. Although Plant Y thrives in the areas surrounding Desert X, it does not exist naturally in the desert, nor does it survive long when introduced there. Which of the following would be most useful in explaining the apparent discrepancy above?
(A) Desert X's climate is far too harsh for the animals that normally feed on Plant Y.
(B) For one week in the fall, Desert X gets consistent rainfall.
(C) The environment around Desert X is ideally suited to the needs of Plant Y.
(D) Due to the lack of sufficient moisture, Desert X can support almost no plant life.
(E) Plant Y cannot survive in temperatures as high as those normally found in Desert X.

## Section III: Language [30 questions, 30 marks]

**Q1 -Q3.**

Instruction: Identify the sentence that is **incorrect**.

1. (A) I am smarter than any other person in my class.
(B) I am smarter than everyone else in my class.
(C) I am smarter than anyone else in my class.
(D) I am the smartest person in my class.
(E) I am smarter than any person in my class.

2. (A) It is recommended that our chairperson be given a vote of thanks.
(B) The children wish they had visited the zoo last week.
(C) We have made many friends, enough to keep us from being lonely here.
(D) I always enjoy this beautiful scene.
(E) When children watch too much violence on TV, it may affect their behavior.

3. (A) I am anxious to see my friend tomorrow.
(B) Please apprise me of your decision.
(C) The attorney was angry at the judge's ruling.
(D) The company comprises six different divisions.
(E) Newspapers recycle a large amount of newsprint everyday.

**Q4 - Q7.**
Instruction: For each of the sentences below choose the verb that makes the sentence most colorful and accurate.

4. Please don't ——— the picnic area with discarded paper.
(A) cover (B) litter (C) spread (D) paint (E) coat

5. The train ——— into the station.
(A) roared (B) swept (C) glided (D) rumbled (E) crept

6. The light in the lonely house ——— in the distance.
(A) gleamed (B) glittered (C) dazzled (D) burnt (E) shone

7. The glass window——— into a thousand tiny pieces.
(A) broke (B) fractured (C) fell (D) dropped (E) shattered

**Q8-Q10.**
Instruction: Pick one sentence among each group of five sentences that has subject - verb agreement.

8. (A) The answer to our problems are well-trained soldiers.
(B) Anybody knows it is to their advantage to have a BBA degree.
(C) The captain and most of his crew was standing on the deck.
(D) When everybody has given his/her opinion, the committee can decide. (E) Each of the umpires have to have their eyes examined.

9. (A) Husain, as well as his brothers, plans to enter the university.
(B) The IBA faculty have voted to hold monthly meetings.
(C) Half the supplies has been used.
(D) The public has widely divergent views on many political issues.
(E) Three-fourths of our building are not heated adequately.

10. (A) Measles are sometimes a serious illness.
(B) Most of the bread are baked.
(C) The basketball team holds its practice sessions in the gym.
(D) A number of ballots was illegible.
(E) Blowing in the air was great clouds of dust.

**Q11 -Q14.**
Instruction: In each of the following questions, indicate one choice that is inconsistent because it has not been classified on the same basis as other choices.

11. SHOES
(A) leather shoes (B) canvas shoes (C) horse shoes (D) suede shoes (E) none of these

12. BOOKS
(A) novels (B) leather-bound books (C) collections of plays (D) histories (E) Textbooks

13. CRIMINALS
(A) burglars (B) murderers (C) incorrigibles (D) arsonists (E) embezzlers

14. DRESSES
(A) evening dresses (B) afternoon dresses (C) sports dresses (D)Cotton dresses (E) dinner dresses

**Q15-Q18.**
Instruction: For each sentence below, pick the choice that correctly completes the sentence.

15. The shed,——— is for sale.
(A) the roof of which leaks (B) whose roof leaks
(C) the roof which leaks (D) which roof leaks (E) Whose roof leaking

16. If the store ——— open, I will go shopping.
(A) is (B) was (C) were (D) has been (E) had been

17. Manzur with ——— I work, helped me.
(A) that (B) which (C) who (D) he (E) whom

18. He would have gone if he———— asked.
(A) had been (B) was (C) were (D) is (E) has been

**Q19-Q22.**
Instruction: Four of the five words in each question arc synonymous. The other is an antonym. Spot the antonym in each group.

| | | | | | |
|---|---|---|---|---|---|
| 19. | (A) oppose | (B) succumb | (C) resist | (D) contest | (E) counter |
| 20. | (A) disprove | (B) sanction | (C) refute | (D) rebut | (E) invalidate |
| 21. | (A) succeed | (B) flourish | (C) default | (D) thrive | (E) prosper |
| 22. | (A) stout | (B) fragile | (C) brittle | (D) crisp | (E) frail |

**Q23-Q26.**
Instruction: Read the following passage and select the best answer for each question
Had it not been for Matthew Henson, Robert E. Peary might not have reached the North Pole. Henson, a black man, was the only person to accompany Peary on all of the explorer's Polar expeditions. At first Peary doubted that Henson could endure the arctic climate. During the eighteen years these two attempted to reach the Pole, Henson's unfailing good humor, courage, and skill proved invaluable. On the first expedition the Innuit Eskimos of Smith Sound greeted Henson as a brother, welcomed him into their stone igloos, and taught him their difficult language. Soon Henson became the most proficient of Peary's men, not only in speaking Innuit but also in handling a dog team. On later expeditions it was he who taught greenhorns how to drive a dog team and how to survive in the sub-zero climate. Beloved by the Eskimos, who called him " Miy Paluk", he persuaded them to accompany Peary into the uncharted regions where they believed evil spirits dwelled. On a nearly disastrous excursion across the ice cap in 1895, Henson twice saved Peary's life. Again and again Henson proved that he was capable of endurance and achievement, the final test coming in 1909 when he accompanied Peary and four Eskimos on the last lap of the successful dash to the pole.

23. Greenhouse were
(A) musk-oxen (B) inexperienced explorers (C) native guides (D) untrained dog teams (E) none
24. The best title for this selection is
(A) Mathew Henson Proves Himself (B) A Polar Explorer (C) Robert E. Peary
(D) Discovery of North Pole (E) Hospitality of the Eskimos
25. From this selection we may conclude that Peary's first Polar expedition was in
(A) 1909 (B) 1895 (C) 1891 (D) 1893 (E) 1905
26. In describing Henson's achievements the author did not mention
(A) speaking Innuit (B) handling sled dogs (C) rescuing Peary
(D) converting the Eskimos (E) none of these

**Q27 - Q30.**
Instruction: All except one of the five choices is nonstandard. Find out the standard one.
27. (A) On a whole, they were satisfied with the deal.
(B) Over the whole, they are satisfied with the deal.
(C) On the whole, they were satisfied with the deal.
(D) On the whole, they were satisfied about the deal.
(E) Over the whole, they are satisfied about the deal.
28. (A) He was strickened by remorse.
(B) He is being struck by remorse.
(C) He was struck by remorse.
(D) He was stricken by remorse.
(E) He is strucked by remorse,
29. (A) Business administration is the subject in which I am mainly interested in.
(B) Business administration is the subject which I am mainly interested.
(C) Business administration is the subject which I am mainly interested at.
(D) Business administration is the subject which I find interest.
(E) Business administration is the subject in which I am mainly interested.

30. (A) You should not suppose that just because he has lost a few games that he is not a good coach.
(B) You should not suppose that just because he has lost a few games he is not a good coach.
(C) You should not suppose just because he has lost a few games that he is not a good coach.
(D) You should not suppose because he has lost a few games that he is not a good coach.
(E) You should not suppose that because he has lost a few games that he is not a good coach.

**Written Communication: [20 marks ]**

Instruction: Write your answer for each question in the designated space.

A. Put the following sentences into parallel structure. [5 marks]

Example:
NOT PARALLEL: Afia likes to dance, to swim, and riding a cycle.
PARALLEL : Afia likes to dance, to swim and to ride a cycle, or
Afia likes dancing, swimming, and cycling.

1. Reaz liked to spend his time studying in the library, working in the biology laboratory, and at football games.
2. Use your dictionary for the following purposes: to find word meanings, pronunciation, spelling, and looking up irregular verb forms.
3. Rchana has decided neither to go to Rajshahi nor to Chittagong.
4. Not only was the program enjoyed by the parents, but the children enjoyed it too.
5. Our law firm is noted for its excellent staff and because it has many famous clients.

B. Write a paragraph on "Rickshaw-Pullers of Dhaka City" [10 Marks]

C. Write a paragraph in **Bangla** on "Discipline"using the following words translated into Bangla. [5 marks]

Childhood Habit (s) Physical well-being Regular Longevity

## Answer Key

### Section I: Mathematics

| | | | | | |
|---|---|---|---|---|---|
| 1.D | 6.C | 11.A | 16.A | 21.D | 26.B |
| 2.E | 7.B | 12.B | 17.C | 22.D | 27.B |
| 3.D | 8.C | 13.D | 18.D | 23.E | 28.B |
| 4.E | 9.C | 14.C | 19.C | 24.B | 29.A |
| 5.A | 10.D | 15.E | 20.C | 25.B | 30.C |

### Section II: Analytical Ability

| | | | | | |
|---|---|---|---|---|---|
| 1.A | 4.C | 7.D | 10.B | 12.B | 14.B |
| 2.B | 5.B | 8.E | 11.E | 13.D | 15.E |
| 3.E | 6.E | 9.E | | | |

### Section II: Language & Communication

| | | | | | |
|---|---|---|---|---|---|
| 1.E | 6.A | 11.C | 16.A | 21.C | 26.E |
| 2.E | 7.E | 12.B | 17.E | 22.A | 27.C |
| 3.D | 8.D | 13.C | 18.B | 23.B | 28.C |
| 4.B | 9.A | 14.D | 19.B | 24.B | 29.E |
| 5.D | 10.C | 15.B | 20.B | 25.C | 30.B |

## Solution of 2007-08 Questions

### Section I: Mathematics

[30 questions, 30 marks]

1. (D) $\frac{1}{3y}+\frac{5}{y}=\frac{y}{3}$

   $\Rightarrow y = 4$ (Ans.)

2. (E) $50 - 60 - \frac{50\times60}{100}$

   $= -13\%$ decreased by 13%

3. (D) $2x = 3b$

   if $b < 2$, x must be less than 3

4. (E) $x = 4 \times \frac{m}{100}$

   $y = x \times \frac{100}{m}$

   $y = \frac{x\times\frac{100}{m}}{100}$

   $\therefore$ y is $\frac{1}{m}$ % of x

5. (A) Question wrong

6. (C) $x^2 - 4x + 3 < 0$

   $\Rightarrow (x - 3)(x - 1) < 0$

   $\therefore 1 < x < 3$ (Ans.)

7. (B) $60 - x + 8 - \left(\frac{60-x+8}{3}\right) + 5 = 37$

   Solve the equation.

   Ans.

8. (C) $82 - (46 + 25 - 11)$

   $= 22$ (Ans.)

9. (C) $2x + 3y = 47$ $(y > x)$

   $y - x = 4$

   solving equation $y = 1$

   $x = 7$

10. (D) because of lack of information.

11. (A) $\frac{13}{32}=\frac{6^2}{x^2}$

    $x = 8$

12. (B) since min difference is 3

13. (D) (Ans.)

14. (C) $\frac{(x-y)}{x}$

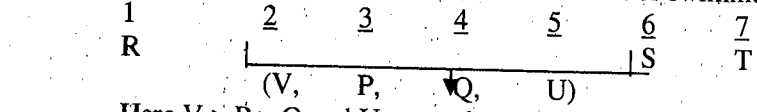
    $= 1 - \frac{y}{x}$ $= 1 - \frac{1}{2}$

    $= \frac{1}{2}$ (Ans.) 67

15. (E)
16. (A)
17. (C) $\angle ABC + \angle ADC = 180^\circ$
    $\therefore \angle ADC = 78$
    $\therefore \angle DAX = 78 = \angle ADC$
    $\angle DCB + \angle DAB = 180^\circ$
    $120 + 60 = 180^\circ$
    $(60 \times 2)$
    $BAX = \angle DAX + \angle DAB$
    $= 78 + 60$
    $= 138^\circ$
18. (D) $H = 3T$
    $H + 8 = 2(T + 8)$
    So, $H - 3 = ?$
    solve the equation $(H = 21)$ (Ans.)
19. (C) $AC = \sqrt{2} \times BC \quad \Rightarrow BC = 4$
    $4\sqrt{2} = \sqrt{2} \times BC$
    $\therefore \frac{1}{2}(4 + 8) \times 4$
20. (C).
21. (D) middle – Term rule; solve the equation.
    2 (Ans.)
22. (D) $m > r > n$
    $s > p$
    $\therefore m > n$
23. (E) (not enough information)
24. (B)
25. (B) $S = 36 \rightarrow 24$ (Female)
    $F = 4 \rightarrow 2$ (Female)
    $\therefore \frac{24+1}{40} = \frac{5}{8}$
26. (B) (since, $a + b > ab$)
27. (B) (The ration of areas of similar triangles is equal to the ratio of square of similar sides)
28. (B) $x \times \frac{7}{3} \times \frac{5}{8}$
    $= \frac{35x}{2y}$
    $= x \times 1.46$
    $\approx 46\%$ increase
    (Ans. B)
29. (A) $15 + 80 \times 20\%$
    $= 31$ (Ans.) A
30. (C) They worked together for 3 hours. So Salam did hats the job and rost is done by Tomy. It required him 3.5 hours. So, he alone works $\frac{1}{2}$ hour.

## Section II: Analytical Ability [15 questions, 20 marks]

1. (A) Because it is common with the 2-digit number.
2. (B) Because it follows all the rules. (A) and (C) violates rule 2. (E) violates rule 4. (D) violates the basic assumptions.
3. (E) Because according to the rule, if first element is a number, 2nd and fourth must be alphabet so that they can be non-adjacent.
4. (C) If has adjacent alphabets as well as common numerals.
5. (B) Because if Masum is on the red team all possible formations of red team would contain Ferdous.
6. (E) (A) and (C) violates condition 3, (B) violates condition 2, (D) violates condition. 1.
7. (D) Rabeya and Keya must be selected as Masum and Ferdous have been selected. (A) violates condition 3, (C) violates condition 2.
8. (E) If Ferdous is in red team, Rabeya is in green team. So Salim cannot be in green team.
9. (E) Here the only factor associated with cost of living is wages. So if cost of living is high wages must be high as well.
10. (B) The given situation argues the need of experience. (B) supports that strongly. Other options are not to the point.
11. (E) If an inequality is formed, it will be like the following.
    J > C > E > S
    J > W > S
    From this we can get (B)
12. (B) The argument says that if TV is made after 1992 it has a stereo feature, so it must be true that all TV's made after 1992 has a stereo feature.
13. (D) Following the conditions, the formation of swimmers would be the following.




    Here V > P > Q and U may take any of these four spots. So its (D)
14. (B) The argument directly states that financial problems do not allow students to study and alleviating it would allow the students more time to study. (B) supports that most strongly.
15. (E) E is the appropriate one as the main reason for plant Y not to survive in desert X is depicted here

## Section III: Language [30 questions, 30 marks]

1. E. Any other হবে।
2. E.
3. D. Comprise of হবে।
4. B. litter মানে নোংরা করা।
5. D. Train- এর আওয়াজ কে Rumble বলে।
6. A. দূর থেকে বলা আছে তাই gleamed, মানে অল্প আলো দেখা যাচ্ছিলো।
7. E. Shattered মানে অনেকগুলো টুকরো হয়ে ভেঙ্গে যাওয়া।
8. D. Everybody- র সাথে his/her (singular pronoun) agree করে।
9. A. Hussai- র সাথে agree করে plans. মাঝখানের phrase টি subject বা verb কে Affect করবে না।
10. C. "basket ball team" এখানে collective noun.
11. C. অন্য সব জুতা মানুষের ফ্যাশনের জন্য। horse shoe পরানো হয় ঘোড়ার ক্ষুর রক্ষা করার জন্য।

12. B. অন্য সব গুলো বিভিন্ন ধরনের বই, মানে content আলাদা। leather-Bound মানে চামড়া দিয়ে মোড়ানো, content-র কোন সম্পর্ক নাই।
13. C. All the rest are type of criminals. An incorrigible cannot be corrected
14. D. অন্যসব গুলো বিভিন্ন সময়ের বা কাজের জন্য। Cotton dress মানে material টা cotton. অন্য কোন Dress-র material riyes বলা হয় নাই।
15. B. tool এর পর relative pronoun 'whose' হবে।
16. A. পরের clause টা future tense, তাই If clause-র verb টা present tense হবে। এটা একটা condition show করছে।
17. E. who-র বদলে whom হবে কারণ Manzur এখানে subject না, তাই subject relative pronoun 'who' হবে না।
18. B. 'Would have' থাকলে 'had been' থাকতে হবে
19. B. Succumb মানে Give in করা।
20. B. Sanction মানে এইখানে Approve/ Support করা।
21. C. Default মানে failure.
22. A. Stout মানে শক্ত/ মজবুত / শক্তিশালী।
23. B. Line 8 এ বলা আছে। Inexperienced দেখেই train করতে হয়েছে।
24. B. অন্যগুলো পুরো মানে টা ফুটিয়ে তুলতে পারেনি।
25. C. 1909 – 18 yrs = 1841
26. E. He mentioned all of them.
27. C. Correct expression → on the whole,
    Correct preposition → 'with' the deal.
28. C. Correct word → struck, Past tense হবে।
    Present continuous না।
29. E. Subject- র পর in হবে। A তে in দুবার তাই A হবে না। B তে কোন 'in' নাই।
30. B. Correct structure. A is close, but দুবার that বলা হয়েছে।

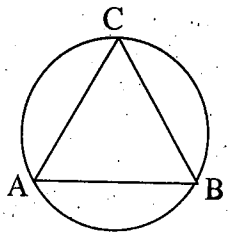
# BBA (IBA)

## Admission Test Question (2008-2009) with Solution

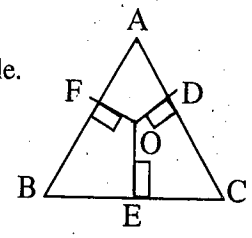
## Section I: Mathematics [30 questions, 30 marks]

**Instruction:** Solve the following problems and mark the correct answers on your Answer Sheet. Geometric figures are not drawn to scale.

1. If x # 0, then (x + 7)/7x - 1/x = ?
   (A) (x+6)/6x (B) (x+6)/7x (C) (-6x+7)/7x (D) 1/7 (E) none of these
2. If x is a non-zero integer which of the following must be a negative integer?
   I. $-(3x^2 + 4)$ II. -(-x) III. $(-x)^3$
   (A) None (B) I only (C) III only (D) I and III only (E) I, II and III
3. It x/(y-I 1) = 2/5, then y = ?
   (A) 2x/5 (B) 2x/5 + 2/5 (C) 2x/5 + 1 (D) 2x/5 - 1 (E) none of these
4. If 9 is 3/4 th of x, what number is 5/6 th of x?
   (A) 10 (B) 12 (C) 14.4 (D) 15 (E) 27
5. ABC is an equilateral triangle, inscribed in a circle. If AB = 6 cm, find the area of the circle in $Cm^2$.
   (A) $36\pi$ (B) $12\pi$ (C) $12\pi/\sqrt{3}$
   (D) $12\sqrt{3}\pi$ (E) none of these




6. If (a+b)>0 and √(a+b)>b, which of the following must be true?
   (A) a>0 (B) b>0 (C) a<0 (D) b<0 (E) none of these
7. There were n books in a store. After 1/6th of the books were sold and 5 more books were procured, the total number of books in the shop stood at 65. What was the original number of books in the shop?
   (A) 72 (B) 75 (C) 85 (D) 96 (E) none of these
8. Lima is 6 years older than her sister Sharmin, and Jamal is 5 years older than Lima. If the total of their ages is 41, how old is Jamal?
   (A) 8 (B) 10 (C) 14 (D) 19 (E) none of these
9. In a certain shipment 2% of the boxes shipped were damaged. If the loss per damaged box was Tk. 35 and the total loss due to damage was Tk. 700, how many boxes were shipped?
   (A) 20 (B) 100 (C) 200 (D) 1000 (E) 2000
10. If x is an odd integer, in which of the following equations must y be an even integer?
    I. xy = 5 II. x+2y=11 III. 2x+y=12
    (A) Only I (B) Only II (C) Only III (D) both II and III (E) all of these
11. ABC is an equilateral triangle. 0 is any point inside the triangle.
    If OD = 3 cm, OE = 7 cm and OF = 5 cm., calculate the area of the triangle.
    (A) $75\sqrt{3}$ (B) 225/2 (C) $30\sqrt{3}$
    (D) $225\sqrt{3}$ (E) none of these

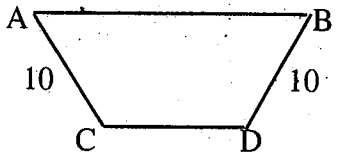



12. If n is a positive integer and $k+2 = 3^M$, which of the following cannot be a value of k?
    (A) 1 (B) 4 (C) 7 (D) 25 (E) 79

13. The sides of a rectangular floor are 16 feet by 24 feet. When a rectangular carpet is placed on the floor, a 4 feet wide strip of floor is exposed on all sides. What is the area of the carpet in sq. ft.?
(A) 320 (B)288 (C) 352 (D) 240 (E) none of these

14. Of 48 applicants, 28 had at least 5 years experience, 30 had MBA degree, and 10 had less than 5 years experience and no MBA degree. How many of the applicants had at least 5 years' experience and an MBA degree?
(A) 8 (B) 10 (C) 20 (D) 24 (E) none of these

15. In the trapezoid, $\angle CAB = \angle DBA = 60^\circ$ and AC = DB = 10 cm.
Find the area of the trapezoid.
(A) $250\sqrt{3}$ (B) 150 (C) 250
(D) $125\sqrt{3}$ (E) none of these



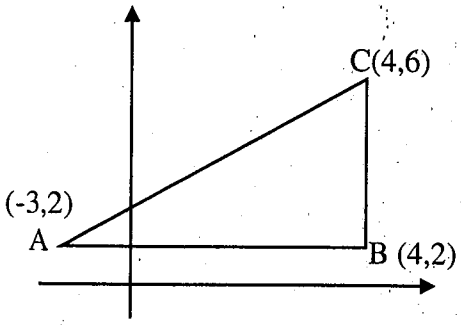

16. 2/100 + 7/10000 + 4/50000 = ?
(A) 0.0278 (B) 0.02078 (C) 0.00278 (D) 0.020078 (E) none of these

17. If x and y are integers and (xy + x) is odd, which of the following must be even?
(A) x + y (B) xy - x (C) x (D) y (E) any of these

18. A box contains 24 red socks and 43 green socks. How many green socks must be removed from the box so that 60% of the socks in the box will be green?
(A) 6 (B) 7 (C) 8 (D) 9 (E) none of these

19. Three friends - Anwar, Bobby and Dipu divided Tk. 1105 amongst them in such a way that if Tk. 10, Tk. 20 and Tk. 15 were removed from the amount that Anwar, Bobby and Dipu received respectively, then the share of the amount they got would be in the ratio of 11 : 18 : 24. How much did Dipu receive?
(A) 495 (B) 510 (C) 480 (D) 375 (E) none of these

20. In the figure, what is the area of the triangle ABC?
(A) 14 (B) 16 (C) 24
(D) 28 (E) none of these




21. A can complete a project in 20 days and B can complete the same project in 30 days. If A and B start working on the project together and A quits 10 days before the project is completed, in how many days will the project be completed?
(A) 15 (B) 16 (C) 18 (D) 21 (E) none of these

22. A number when divided by a divisor leaves a remainder of 24. When twice the original number is divided by the same divisor the remainder is 11. What is the value of the divisor?
(A) 13 (B) 59 (C) 35 (D) 37 (E) 12

23. Mixture X is 40 percent peanut and 60 percent hazel nut by weight-, mixture Y is 25 percent peanut and 75 percent cashew nut. If a mixture of X and Y contains 30 percent peanut, what percent of the weight of this mixture is X ?
(A) 10% (B) 33.33% (C) 40% (D) 50% (E) 66.66%

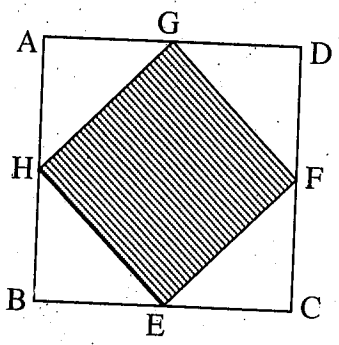
24. Anwar can fill a pool with buckets of water in 30 minutes, Bobby can do the same job in 45 minutes, and Dipu can do the same job in 1½ hours. How quickly can all three fill the pool together (in minutes)?
(A) 9 (B) 12 (C) 15 (D) 21 (E) none of these

25. In Jiimiary, 55 percent of a hospital's 300 patients were women. In February, 30 percent of its 440 patients were women. What was the percent change in the number of women patients from January to February?
(A) decrease of 20% (B) increase of 20% (C) decrease of 25%
(D) increase of 25% (E) increase of 46.67%

26. When positive integer x is divided by positive integer y, the remainder is 9. If x/y = 96.12, what is the value of y?
(A) 96 (B) 75 (C) 48 (D) 25 (E) 12

27. If $2^x + 2^x + 2^x + 2^x = 2^n$, what is x in terms of n?
(A) n/4 (B) 4n (C) 2n (D) n - 2 (E) none of these

28. ABCD is a square with AB = 23 cm. If BE = CF = GD = AH = 9 cm, find the area of the shaded region
(A) 169 (B) 256 (C) 277
(D) 312 (E) none of these




29. After 2 females leave a party there are twice as many males as females. Then 9 males leave the party and there are twice as many females as male. How many females attended the party?
(A) 6 (B) 8 (C) 16 (D) 24 (E) none of these

30. Which of the following fractions has the greatest value?
(A) $1/(3^2\times5^2)$ (B) $2/((3^2\times5^2)$ (C) $7/(3^3\times5^2)$ (D) $45/(3^3\times5^3)$ (E) $75/(3^4\times5^4)$

## Section II: Analytical Ability [15 questions, 20 marks]

**Question 1-5**

Seven pieces of table lamps with different shades A, B, C, D, X, Y & Z - are to be arranged along one wall of a show room for display. Each lamp must be placed along the wall at one of seven electrical outlets, numbered one through seven consecutively, according to the following conditions.

- A must be package an outlet adjacent to the outlet at which X is placed.
- B must be placed at an outlet that is adjacent to an outlet at which either D or Y is placed.
- Z cannot be placed at an outlet adjacent to the outlet at which C is placed.
- C must be placed at outlet number two.

1. Which of the following is an acceptable arrangement of lamps at outlets one through seven?
   (A) A, X, B, Y, Z, D, C
   (B) B, D, A, X, C, Y, Z
   (C) X, C, A, Z, D, B, Y
   (D) Y, C, B, D, Z, A, X
   (E) Y, C, Z, D, B, A, X
2. If A is placed at outlet seven, which of the following must be true?
   (A) X is placed at outlet five
   (B) B is placed at outlet three
   (C) Z is placed at outlet five
   (D) D is placed at outlet four
   (E) Y is placed at outlet one
3. If Y is placed at outlet five, D must be placed at outlet
   (A) One (B) Three (C) Four (D) Six (E) Seven
4. If B is placed at outlet seven, which of the following must be true?
   (A) Y is placed at outlet six
   (B) Z is placed at outlet five
   (C) X is placed at outlet four
   (D) A is placed at outlet three
   (E) D is placed at outlet one
5. Z can be placed at which of the following outlets?
   (A) One (B) Three (C) Four (D) Six (E) Seven

**Question 6 -9**

A company sells packages of decorative papers, each containing three sheets of paper. The available colors are: red, orange, green, blue, and purple. Each package must conform to the following rules:

- Each Imckage must contain sheets of either two or three different colors.
- A package containing any orange sheet must also contain at least one red sheet.
- A package containing any red sheet must also contain at least one orange sheet.
- Blue and purple sheets cannot be packed in the same package.
- A package containing any green sheet must also contain at least one purple sheet, but a package containing purple sheet need not contain green sheet.

6. Which of the following is an acceptable package?
   (A) One blue, one green, and one orange sheet
   (B) One orange, one green, and one red sheet
   (C) Two green sheets and one purple sheet
   (D) Two blue sheets and one red sheet
   (E) Three orange sheets
7. An acceptable package CANNOT contain which of the following combination of sheets?
   (A) Red and blue
   (B) Orange and blue
   (C) Green and purple.
   (D) Orange and green
   (E) None of these
8. An acceptable package CANNOT contain two sheets of
   (A) Orange (B) Red (C) Purple (D) Green (E) Blue

9. Which of the following could be packed with a green sheet to make an acceptable package?
   (A) One blue and one orange sheet
   (B) One red and one orange sheet
   (C) Two purple sheets
   (D) Two orange sheets
   (E) Two red sheets

**Q10 - 12**

A landscape plan of a holiday resort to be built by the river Padma is to be drawn. The drawing will represent areas: Accommodation, Convention Facilities, Games and Sports, Food and Catering, Business Center, and Picnic Spot. Adjacent areas cannot be the same color on the drawing.

The only areas adjacent to each other are as follows:

- Accommodation, Convention Facilities, Food and Catering, and Business Center are each adjacent to Games and Sports.
- Food and Catering is adjacent to Business Center.
- Accommodation and Convention Facilities are each adjacent to Picnic Spot.

10. Which of the following is a pair of areas that must be different in color from each other?
    (A) Accommodation and Food and Catering
    (B) Convention Facilities and Food and Catering
    (C) Convention Facilities and Picnic Spot
    (D) Food and Catering and Picnic Spot
    (E) Business Center and Picnic Spot
11. Which of the following is a pair of areas that can be the same color as each other?
    (A) Accommodation and Convention Facilities
    (B) Convention Facilities and Games and Sports
    (C) Games and Sports and Food and Catering
    (D) Games and Sports and Business Center
    (E) Food and Catering and Business Center
12. If the fewest possible colors are used and one of the areas is the only one of a certain color, that area could be
    (A) Games and Sports, but not any of the other areas
    (B) Picnic Spot, but not any of the other areas
    (C) Accommodation or Convention Facilities, but not any of the other areas
    (D) Games and Sports or Food and Catering or Business Center, but not any of the other areas
    (E) Games and Sports or Business Center or Picnic Spot, but not any of the other areas
13. Dormitories range from two to six stories in height. If a dormitory room is above the second floor, it has a fire escape.

    If the statements above are true, which of the following must also be true?

    (A) Second-floor dormitory rooms do not have fire escapes.
    (B) Third-floor dormitory rooms do not have fire escapes.
    (C) Only dormitory rooms above the second floor have fire escapes.
    (D) Fourth-floor dormitory rooms have fire escapes.
    (E) Some two-story dormitories do not have fire escapes.

14. Today Jamal is twice as old as Sanwar and Sanwar is 4 years younger than Faruk. If all of them are alive four years from today, which of the following must be true?

I. Jamal is twice as old as Sanwar

II. Sanwar is 4 years younger than Faruk

III. Jamal is older than Faruk

(A) I only (B) II only (C) III only (D) I and 11 (E) 11 and III

15. Abbas is heavier than Bobby, but is lighter than Reza. Shabbir is heavier than both Bobby and Reza. Omar is heavier than both Bobby and Reza.

If the statements are true, one can conclude with certainty that Dipu is heavier than Abbas if one knows in addition that

(A) Shabbir weighs the same as Omar weighs

(B) Shabbir is heavier than Dipu

(C) Dipu is heavier than Bobby

(D) Dipu is heavier than Omar

(E) None of these

## Section III: Language [30 questions, 30 marks]

**Q1 – 4**

**Instruction:** Identify from the following list the **set of incorrect words / sequence or use of word(s).**

1 (A) Bold, boulder, boldest (B) Hard, harder, hardest (C) Full, fuller, fullest
(D) Able, abler, ablest (E) Merry, merrier, merriest

2. (A) Sully, sullied (B) Scurry, scurried (C) Fathom, fathomed
(D) Veto, vetoed (E) none of these

3. (A) the concluding remark (B) the opening sentence (C) the creative mind
(D) the principle theme (E) the unreliable figure

4. (A) possible, possibly (B) quite, quitely (C) earnest, earnestly
(D) double, doubly (E) none of these

**Q4-8**

**Instruction:** Identify the **wrong word/s** if any, from the sentences. Otherwise, indicate "No Error':

5. One would think that the job is simple, since all you have to do is to make sure that everyone
(A) (B) (C)
is seated before the performance begins. No Error
(D) (E)

6. It is human nature to want to leave behind a progeny to carry forth the cycle of life. No Error
(A) (B) (C) (D) (E)

7. Harassment in office is a manly issue. No Error
(A) (B) (C) (D) (E)

8. It is far rewarding to strive and fail than to success without trying. No Error
(A) (B) (C) (D) (E)

**Q9 -14**

**Instruction:** Choose the word or set of words for **each gap** that best fits the meaning of the sentence as a whole-

9. It was a war the Chief Advisor and his more prudent counselors wished to _____ if they could and were determined in any event to_____ as long as possible.
(A) provoke, delay (B) denounce, deny (C) instigate, conceal
(D) curtail, promote (E) avoid, postpone

10. To list Begum Rokeya's achievements in a fragmentary way is _____ , for it distracts our attention from the _____ themes of her work.
(A) unproductive, disparate (B) misleading, integrating
(C) pragmatic, comprehensive (D) logical, important (E) inevitable, unsettling

11. A recent survey shows that, while ninety-four percent of companies conducting management training programs open them to women, women are ____ only seventy-four percent of those programs.
(A) protesting against (B) participating in (C) displeased by
(D) allowed in (E) refused by

12. Although economists have traditionally considered the district to be solely an agricultural one, the _____ of the inhabitants' occupations makes such a classification obsolete.
(A) productivity (B) profitability (C) predictability (D) diversity (E) stability

13. Given the existence of so many factions in the field, it was unrealistic of Moin to expect any _____ of opinion.
(A) freedom (B) assessment (C) uniformity (D) expression
(E) formation

14. Because no comprehensive _____ exist regarding personal reading practices, we do not know, for example, the greatest number of books read in an individual lifetime.
(A) records (B) instincts (C) remedies (D) proposals
(E) commercials

**Q15 - 18**

**Instruction:** Select the word that expresses the opposite meaning to the underlined word.

15. All eyes were on the scene ahead awaiting the impending outburst.
(A) exciting (B) forthcoming (C) delayed (D) imminent
(E) emphatic

16. It is foolish to believe a man reaching the pinnacle of success has done so in a day.
(A) height (B) peak (C) summit (D) apex (E) base

17. Despite your best laid plan, the program turned out to be a fiasco in the end.
(A) debacle (B) sensation (C) mess (D) disaster (E) episode

18. I would advise you to assert yourself when dealing with that arrogant man!
(A) submit (B) uphold (C) establish (D) stand up for E) ready

**Q19 — 25:**

**Instruction:** Read the following passage and select the best answer for each question.

Rahim was on the verge of a breakdown. It was 2nd October 2008, his first week at work and his supervisor, Ms. Rehana, the Marketing Manager at Sparkle Cleaners Ltd., was mad at him.

Incidentally, the day had started off rather well for Rahim. He had managed to successfully beat the frenzied Dhaka traffic and was actually at work fifteen minutes before 9:00 a.m. He made the best of the fifteen minutes to compose & send out 2 (two) emails to the managers of two big supermarkets that carried Sparkle's products.

Over the next two hours he helped Mr. Ajit (also under Ms. Rehana's supervision) design circular stickers for CD (compact disk) catalogs of Sparkle's products for distribution to stores that were potential customers, both in Bangladesh as well as abroad, a new market Sparkle was planning to get into.

Trouble started brewing after the lunch break. Rahim was asked by Ms. Rehana to calculate this month's Advertisement Spending budget based on last two months' product Profit. The method of calculation was as follows:
Ad Spending = 40,000 + (0.3 x $P_N$) + (0.2 x Po) Where, $P_N$ is the Profit last month, and,
Po is the Profit the month before

Note: Ad Spending cannot be negative.

Based on Profits of Tk.1,000,000 last month and Tk.1,200,000 the month before, Rahim calculated this month's Advertisement Spending budget to be Tk.940,000, although he did not feel very confident with his calculations. He handed the calculations over to Ms. Rehana and said, "Maybe you should go over the calculations before you send them to Finance".

While she looked over the numbers, Ms. Rehana asked Rahim to send a sample of their furniture (cleaning product to Mr. Kalam, the Purchase Manager of the largest supermarket chain in Dhaka. Rahim picked up a sample from the office store and sent it out to Mr. Kalam's office which was close by.

Rahim returned to his desk to find that both his early morning emails have been answered to and the customers were willing to conduct business with Sparkle Cleaners Ltd., impressed with what had been conveyed to them about Sparkle's offerings. Rahim felt a glow of satisfaction.

Right before the end of the work-day at 5:00 p.m., Ms. Rehana stormed out of her room and headed straight for Rahim's desk. She fumed, "Your budget calculation was wrong, which, fortunately, I had the opportunity to correct. But the sample you sent to Mr. Kalam has already expired and he called me to complain about our lack of professionalism. If this is the damage you cause in the first week here, I dread to think of what will happen once you spend a few months in this office". With that she walked off, leaving Rahim floundering in a sea of remorse.

19. At the end of the work-day, Ms. Rehana's sentiment towards Rahim can best be described as:
(A) Gleeful (B) Amused (C) Appreciative (D) Vexed (E) Apologetic
20. At the end of the work-day, Rahim's emotion can best be described as:
(A) Apprehension (B) Regret (C) Appreciation (D) Vexation (E) Curiosity
21. Instead of feeling confident about his budget calculation, Rahim felt.
(A) Doubtful (B) Jubilant (C) Certain (D) Exact (E) None of these
22. Unlike with the budget calculation, with respect to the expiration date calculation, Rahim did not exhibit any:
(A) Preservation (B) Conservation (C) Reservation
(D) Observation (E) None of these

23. Based on the narrative, what can you infer about Rahim's skills?
    (A) Strong in both Quantitative & Communication
    (B) Weak in both Quantitative & Communication
    (C) Weak in Quantitative but Strong in Communication
    (D) Strong in Quantitative but Weak in Communication
    (E) Stronger in Quantitative while Strong in Communication
24. Which of the following may be inferred about Sparkle Cleaners Ltd.?
    (A) The company is methodical in their approach to budgeting and marketing
    (B) The company utilizes technological tools in their operations
    (C) The company is not interested in expanding into new markets and customers as much as they are in retaining their current customers
    (D) Both A & B
    (E) All of A, B & C
25. Which of the following cannot be inferred about Ms.Rehana's feelings?
    (A) She is distressed by Mr. Kalam's impression of Sparkle Cleaners Ltd.
    (B) She considers it opportune that the budget numbers were corrected before being sent to Finance
    (C) She is annoyed with Rahim's mistakes
    (D) She believes in giving job responsibilities to others
    (E) She was happy with the emailed customers' responses

**Q26- 30**

**Instruction:** Identify the sentence that is correct.

26. (A) Please repeat the sentence again.
    (B) Repeat the sentence again.
    (C) Please repeat the sentence.
    (D) Again please repeat the sentence.
    (E) Repeat again the sentence please.
27. (A) Running along the street, I felt as if my nose were frozen.
    (B) As I ran along the street, I felt as if my nose was frozen.
    (C) Running in the street, I felt my nose frozen.
    (D) My nose had felt frozen when I was running in the street.
    (E) Running along the street, I felt as if my nose was frozen.
28. (A) bachelor leads a lonely life, but they also have more freedom to do precisely as you wish.
    (B) A bachelor leads a lonely life, but he also has more freedom to do precisely as he wishes.
    (C) A bachelor leads a lonely life and he has most freedom to do precisely as he wish.
    (D) A bachelor leads a lonely life but they have more freedom to do precisely as you wish.
    (E) A bachelor leads a lonely life and he has more freedom to do as lie wish.
29. (A) Spring brings with it signs of renewal that make themselves known in a thousand ways.
    (B) Spring brings with it signs of renewal that makes themselves known in a thousand ways.
    (C) Spring brings with it signs of renewal that makes itself known in a thousand ways.
    (D) Spring brings with it sign of renewal that make itself known in a thousand ways.
    (E) Spring brings with it sign of renewal that makes itself known in a thousand ways.

30. (A) The good speaker must possess sincerity, a good platform manner, and have the ability to express his thoughts.
(B) Good speakers must possess sincerity, good platform manners, and the ability to express their thoughts.
(C) The good speaker must possess sincerity, a good platform manners, and has the ability to express his thoughts.
(D) Good speakers must possess sincerity, a good platform manner, and the ability to express thoughts.
(E) The good speaker must possess sincerity, good platform manner, and ability to express his thought.

**Written Communication:** **[20 marks]**

**Instruction:** Write your answer for each question in the designated space.

**A. Bridging the Gaps:** **[5 marks]**

Read paragraph 1 and complete paragraphs 2 through 4 in order to develop a cohesive write-up on the topic. For each of the paragraphs follow the lead provided at the beginning of the concerned paragraph.

(1) Accepting anything that could be considered bribe is a clear conflict of interest. It does not matter whether the bribe is in the form of money or anything else of substantial value. The point here is that I have to remain unbiased while making a decision about a person or any issue.
(2) Some people may not to be aware of bribes that do not come in the form of money. But whatever the form may be, bribing is an evil practice that creates a lot of problems. Some of the problems that may arise include the following:
(3) There are different ways of stopping this practice. In my opinion, the two most significant ways are:
4. If bribery can be reduced in all spheres of life, there will be a lot of benefits in every sector. Some of these benefits will include:

**B. Translation** **[5 marks]**

**Instruction:** Translate the following sentences into Bangla:

| **English** | **Bangla** |
|---|---|
| The guidelines have been formulated. | নির্দেশিকা প্রণয়ন করা হয়েছে। |
| Twenty lac jobs will be created in two phases in all sixty four districts. | ৬৪ জেলায় দুই পর্যায়ে ২০ লাখ কর্মসংস্থান সৃষ্টি হবে। |
| The first phase of the program would start in September for sixty days. | প্রোগ্রামের প্রথম পর্যায় সেপ্টেম্বরে শুরু হবে ৬০ দিনের জন্য। |
| Each will get Tk.100 for a day's work and just one person from a family will be eligible. | প্রতিদিনের কাজের জন্য প্রত্যেকে ১০০ টাকা পাবে এবং একটি পরিবার থেকে মাত্র একজন ব্যক্তিকে যোগ্য বিবেচনা করা হবে। |
| Those who will register will get a minimum Tk.40 for the first thirty days even if there is no work for them. | যারা নিবন্ধন করবেন তারা কোন কাজ না থাকলেও ৩০ দিনের জন্য ন্যূনতম ৪০ টাকা পাবেন। |

**C. Essay Writing** **[10 marks]**

"What would you do for the betterment of your community if you were elected as a member of the Parliament?" (Use the space in the next page to answer this question)

## Answer Key

**Section I: Mathematics**

| | | | | |
|---|---|---|---|---|
| 1. E | 7. A | 13. E | 19. A | 25. A |
| 2. B | 8. D | 14. C | 20. A | 26. B |
| 3. E | 9. D | 15. E | 21. C | 27. D |
| 4. A | 10. C | 16. B | 22. C | 28. C |
| 5. B | 11. A | 17. D | 23. B | 29. B |
| 6. E | 12. B | 18. B | 24. C | 30. D |

**Section II: Analytical Ability**

| | | | | |
|---|---|---|---|---|
| 1. D | 4. B | 7. D | 10. C | 13. D |
| 2. C | 5. E | 8. E | 11. A | 14. E |
| 3. A | 6. C | 9. C | 12. A | 15. D |

**Section III: Language**

| | | | | |
|---|---|---|---|---|
| 1. A | 7. C | 13. C | 19. D | 25. E |
| 2. E | 8. D | 14. D | 20. B | 26. C |
| 3. D | 9. E | 15. C | 21. A | 27. A |
| 4. E | 10. B | 16. E | 22. D | 28. B |
| 5. A | 11. B | 17. B | 23. C | 29. A |
| 6. E | 12. D | 18. A | 24. D | 30. D |

## BBA (IBA) Admission Test (2008-09) Solution

**Section I: Mathematics** **[30 questions, 30 marks]**

1. (E) $\dfrac{x+7}{7x-\dfrac{1}{x}}$

   $= \dfrac{x^2+7x}{7x^2-1}$ (Ans. E)

2. (B)

3. (E) $\dfrac{x}{y+1} = \dfrac{2}{5}$

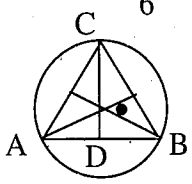
   $\Rightarrow y = \dfrac{5x}{2} - 1$ (Ans. E)

4. (A) $x \times \dfrac{3}{4} = 9$

   $\therefore x = 12$

   the no. is $12 \times \dfrac{5}{6} = 10$ (Ans. A)

5. (B)




   O is the center of the circle

   $\dfrac{1}{2} \times 6 \times CD = \dfrac{\sqrt{3}}{4} \times 6^2$

   $\therefore CD = 3\sqrt{3}$

   $\therefore OD = \sqrt{3}$

   Now, $OD^2 + AD^2 = OA^2$

   $(\sqrt{3})^2 + (3)^2 = OA^2$

   $\therefore OA = \sqrt{12}$

   Area = $12\pi$ (Ans. B)

6. (E)

7. (A) $n - \dfrac{n}{6} + 5 = 65$

   $\Rightarrow 6n - n = 60 \times 6$

   $\therefore n = 72$ (Ans. A)

8. (D) $J + L + S = 41$

   $J + J - 5 + J - 11 = 41$

   $\Rightarrow 3J = 57$

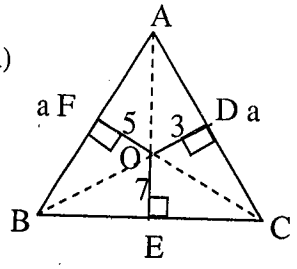
   $\therefore J = 19$ (Ans. D)

9. (D) $x \times \dfrac{2}{100} \times 35 = 700$

   $\Rightarrow x = 1000$ (Ans. D)

10. (C)

11. (A)




$$\frac{1}{2}\times a\times 7+\frac{1}{2}\times a\times 3+\frac{1}{2}\times a\times 5=\frac{\sqrt{3}}{4}a^2$$

$$\Rightarrow 15a=\frac{\sqrt{3}}{2}a^2$$

$$\Rightarrow a=\frac{3\times 10}{\sqrt{3}}$$

$$\therefore a=10\sqrt{3}$$

$$\text{area}=\frac{\sqrt{3}}{4}\times(10\sqrt{3})^2$$

$=75\sqrt{3}$ (Ans. A)

12. (B) $3^n \neq 6$ (Ans. B)

13. (E) $(16-4\times2)(24-4\times2)$

$=8\times16$

$=128$ (Ans. E)

14. (C)

| | MBA | MBA′ | |
|---|---|---|---|
| 5y π | 20 | 8 | 28 |
| 5y π′ | 10 | 10 | |
| | 30 | | |

Ans. C

15. (E)

16. (B) $\frac{2}{100}+\frac{7}{10000}+\frac{4}{50000}$

$=\frac{1039}{50000}$

$=0.02078$ (Ans. B)

17. (D)

18. (B) Now, total = 67

After removing total $=\cancel{24}^{6}\times\frac{10\phi}{\cancel{40}\phi}$

$=60$

7 green should be removed (Ans. B)

19. (A) $11x + 10 + 18x + 20 + 24x + 15 = 1105$

$\therefore x = 20$

So, Dipu $= 20 \times 24 + 15$

$= 495$ (Ans. A)

20. (A) $\begin{matrix} -3 & 4 & 4 & -3 \\ 2 & 2 & 6 & 2 \end{matrix}$

$$= \frac{1}{2}\{(-6+24+8)-(8+8-18)\}$$

$$= \frac{1}{2} \times 28$$

$= 14$ (Ans. A)

21. (C) B work alone for 10 days to finish $\frac{1}{3}$ of the total sork.

For A & B together.

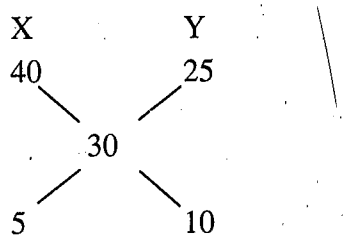
1 work takes 12 days

$\frac{2}{3}$ work takes 8 days

So to tac time required $(8 + 10) = 18$ (Ans. C)

22. (C)

23. (B)




the ratio of the weights of X & Y is 1 : 2 (Ans. B)

24. (C) In 90 minutes,

Anwar fills 3 pools

Bobby fills 2 pools

Dipu fills 1 pools

So, 6 takes 90 min

6 takes 90 min

1 takes 15 min (Ans. C)

25. (A) In january

No of female were $300 \times \frac{55}{100} = 165$

In february

No of female were $44^{\circ} \times \frac{30}{100} = 132$

So, % decrease $= \frac{33}{165} \times 100$

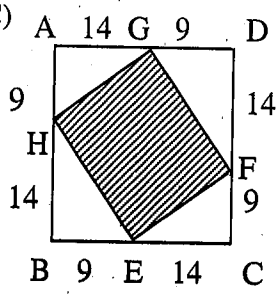
$= 20$ (Ans. A)

26. (B) $\frac{9}{y} = 0.12$

$y = 75$ (Ans. B)

27. (D) $4 \times 2^x = 2^n$
$\Rightarrow 2^{(2+x)} = 2^n$
$\Rightarrow x + 2 = n$
$\therefore x = n - 2$ (Ans. D)

28. (C)




rea of the shaded region $= (23)^2 - 4\left(\frac{1}{2} \times 14 \times 9\right)$
$= 529 - 252$
$= 277$ (Ans. C)

29. (B) $M = 2(F - 2)$ ---------- (i)
$M - 9 = \frac{1}{2}(F - 2)$
$\Rightarrow 2M = F + 16$ ------- (ii)
(ii) – (i) $\times 2 \Rightarrow$
$O = -3F + 24$
$\therefore F = 8$ (Ans. B)

30. (D)

## Section II: Analytical Ability [15 questions, 20 marks]

1. (D) (A) and (B) violates condition 4, C violates condition 1, (E) violates condition 3.
2. (C) If A is at 7, X will be at 6. Z cannot be in 1 or 3. (B, Y) or (D, Y) will be adjacent. So they will take 3 and 4. So Z must be on 5.
3. (A) If Y is at 5 then the following formation would occur.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| D | C | (A/X) | | Y | B | Z |

A, X will take position 3, 4. Because B must be adjacent to D or Y. D and B can not be placed together because Z cannot be in 1 or 3. So D will be in one.

4. (B) The formation would be the following

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| (D/Y) | C | (A/X) | | Z | (D/Y) | B |

5. (E) Z can not be in 1 or 3 because of C. Being at 4 or 6 won't allow other elements to get position. Z must be on 5 or 7.
6. (C) (A) and (B) violates condition 5. (D) violates condition 3, (E) violates condition 2.
7. (D) Because orange must be with red and green must be with purple. So there can't two more sheets in the box.
8. (E) If there are two blue sheets, no other color can be put in without violating the conditions. Orange will violate condition 2, red condition 3, Purple condition 4 and green condition 5.
9. (C) Green must be packed with purple. So it must be C.
10. (C) Because convention center and picnic spot are adjacent.

11. (A) Because Accommodation and convention facilities are not adjacent.
12. (A) Games and sports, because it is adjacent with the most number of areas. It must have a different color.
13. (D) All the dormitories that are above second floor has a fire escape. So Fourth floor dormitory must have a fire escape.
14. (E) Faruk = x; Sanwar = x - 4; Jamal = 2x - 8
    4 years later
    Faruk = x + 4; Sanwar = x; Jamal = 2x - 4
    so, only II and III correct
15. (D) If we form an inequality, it will be like the following.
    (O, S) > R > A > B

**Section III: Language** **[30 questions, 30 marks]**

1. (A) Boulder মানে পাহাড়।
2. (E) সবগুলোই Correct. use.
3. (D) Principle মানেই main theme/ concept.
4. (E) সবগুলোই correct.
5. (A) One is incorrect কারণ পুরো sentence টায় 'you' ব্যবহার করা হয়েছে।
6. (E) কোন ভুল নাই।
7. (C) Mainly ভুল ভাবে use করা হয়েছে।
8. (D) Succeed হবে।
9. (E) War টা Avoid (এড়ানো) করার জন্য যে কোন Postpone (পিছিয়ে) করবে।
10. (B) Fragmentary-র opposite integrating।
11. (B) Program-এ Participate করে। অন্য Option গুলো inappropriate.
12. (D) Solely agricultural opposite দেখাবে diversity of occupations.
13. (C) "So many faction' অনেকগুলো ভাগ বুঝাচ্ছে তাই "Uniformity" থাকবে না মতামতে (opinion).
14. (D) বাকী শব্দগুলো evidence দেখায় না।
15. (C)
16. (E) Pinnacle মানে চূঁড়া. Base মানে নীচ.
17. (B) Fiasco মানে disaster. Sensation positive meaning- এ use করা হয়।
18. (A) Assert মানে জোর দিয়ে বলা। Submit মানে মেনে নেয়া।
19. (D) রেগে গিয়েছিল।
20. B. Remorse-র Synonym.
21. (A) Confident-র opposite.
22. (D) observe করেনি ঠিকভাবে।
23. (C) Communication-এ ভাল দেখে mail গুলো ঠিক হয়েছে।
24. (D) A, B দুটোই আছে. C নাই।
25. (E) এই ব্যাপারে কিছু বলা নাই।
26. (C) Repeat-র সাথে Again হয় না।
27. (A) 'as if' unreal condition, তাই 'were' হবে।
28. (B) তাই singular pronoun he.
29. (A) In this option, both subject-verb agreement is ensured by the verb "make" and pronoun-antecedent agreement is also ensured with the word "themselves".
30. (D) Parallel structure follow করে।

# BBA (IBA)

## Admission Test Question (2009-2010) with Solution

## PART I: MCQ — 75 Questions: 75 Marks

## SECTION I: MATHEMATICS (Questions 1 to 30)

**Instruction:** *For each of the questions below choose the best answer from the given alternatives.*

1. Polash started a business on the first day of 2008. Qader joined the business of Polash on partnership contract with double investment of Polash on July 1 of 2008. Sohel, on the first day of September 2008, joined the partnership business of Polash and Qader with thrice the investment of Polash. The firm earned a profit of Tk. 72,000 on 31st December, 2008. What will be the share of profit of Sohel?
   A) Tk. 36,000 B) Tk. 24,000 C) Tk. 12,000 D) Tk. 18,000 E) none of these
2. The cube on the right hand side below has a volume of 64 cubic inches. What is the length of the line segment AB? (figure not drawn to scale)

   A) 4 B) 5 C) $3\sqrt{3}$ D) $4\sqrt{2}$ E) $4\sqrt{3}$
3. Mary is reviewing her algebra quiz. She has determined that one of her solutions is incorrect. Which one is it?
   A) $2x + 5(x-1) = 9, x = 2$ B) $p-3(p-5) = 10, p = 2.5$ C) $4y + 3y = 28, y = 4$
   D) $5w + 6w - 3w = 64, w = 8$ E) $t - 2t - 3t = 32, t = 8$
4. Jim has 5 pieces of string. He needs to choose the piece that will be able to go around his 36-inch waist as his belt broke. The piece needs to be at least 4 inches longer than his waist so he can tie a knot in it, but it cannot be more that 6 inches longer so that the ends will not show from under his shirt. Which of the following pieces of string will work the best?
   A) 3 feet B) $\frac{3}{4}$ feet C) $3\frac{1}{2}$ feet D) $3\frac{1}{4}$ feet E) none of these
5. Sabina needs to make a cake and some cookies. The cake requires 3/8 cup of sugar and the cookies require 3/5 cup of sugar. Sabina has 15/16 cup of sugar. Does she have enough sugar, or how much more does she need?
   A) She has enough sugar B) She needs $\frac{1}{8}$ of a cup of sugar
   C) She needs $\frac{3}{80}$ of a cup of sugar 80 D) She needs $\frac{4}{19}$ of a cup of sugar E) none of these
6. Mr. Zaman is planning to buy a television after two years time from now. He expects that after two years he will need Tk. 12,100 to buy the television. How much money does Mr. Zaman need to invest now at 10% interest rate compounded annually?
   A) Tk. 10,000 B) Tk. 13,350 C) Tk. 13,310 D) Tk. 14,250 E) Tk. 11,000
7. Which of the following statements is false?
   A) In the fraction 1/2, one is the numerator
   B) When 4.89 is rounded to the ones place; the answer is 5
   C) Ten thousandths place is located 5 places to the right of the decimal
   D) $\frac{100}{3}\%$ is equivalent to $\frac{1}{3}$ E) all are correct
8. The average of 5 positive integers is 60. If the average of 3 of these integers is 67, what is the greatest possible value that one of the other two integers can have?
   A) 98.5 B) 63.5 C) 99 D) 98 E) cannot be determined
9. Rakib, Raja, and Rajib paid a total of 369 taka for their dinner at a restaurant. If Rakib paid $\frac{2}{3}$ of the total amount, Raja paid 82 taka, and Rajib paid the rest, what fraction of the total amount did Rajib pay?
   A) 1/9 B)1/3 C) 39/82 D) 82/369 E)2/11

10. A shopkeeper marks an article at such a price that after allowing a discount of 30% on the tag price (including tax) he makes a profit of 40%. If the tag price of the article including tax is Tk. 460, then the cost price of that article is -
A) 232 B) 260 C) 230 D) 330 E) 322

11. A man purchased equal number of bananas at two different rates-one at the rate of 8 taka per dozen and the other at the rate of 10 taka per dozen. After that, he sold those bananas at an average rate of 11 taka per dozen and thus made a profit of 100 taka. How many dozens of banana did he purchase altogether?
A) 60 B) 50 C) 55 D) 45 E) 40

12. If one man or two women or three boys can finish a job in 66 days, then find out the number of days in which that work can be done by one man, two women, and three boys.
A) 22 B) 34 C) 24 D) 11 E) 121

13. If $-4 \le x < 12$ and $-2 < y \le 13$ which of the following numbers represent the maximum value of (y-x)?
A) 25 B)1 C)14 D)17 E) -1

14. Shabbir has a brother one-fourth of his age and a sister two times of his age. If the combined age of all the three siblings is twenty more than thrice the age of the youngest, how old is Shabbir's sister?
A) 2 B) 16 C) 2.5 D) 8 E) none of these

15. Farhana earns Tk 5 00 for every hour she works in a book store. Last week she worked for .v hours. She purchased y kg of rice. Price of per kg rice is Tk.12.00. She saved the remaining amount. Which expression below shows her savings?
A) Tk.(5.00 .v + 1 2.00 v ) B) Tk.(5.00 v - 1 2.00 y )
C) Tk.5.00 ( A - v ) D)Tk.7.00 (xy) E) none of these

16. A picnic was arranged by $m$ students. Total cost of the picnic was estimated to be $y$ taka. Unfortunately, $z$ students withdrew their names from the picnic. How many more taka would each of the remaining students have to pay?
A) $\frac{y}{m}$ B) $\frac{y}{m-z}$ C) $\frac{y}{m-z}-\frac{y}{m}$ D) $\frac{y}{m}-\frac{y}{z}$ E) cannot be determined

17. If CAC multiplied by DD equals to DDDD. and if D=7. then what is the value of A?
A) 7 B) 6 C) 0 D) 2 E) none of these

18. The longest side of an isosceles right triangle measures 16 m. What is the perimeter of the triangle?
A) $32\,2\sqrt{2}$ m B) $32+16\sqrt{2}$ m C) $16+16\sqrt{2}$ m D) $32+\sqrt{2}$ m E) $48\sqrt{2}$

19. Sonia travels to IBA from Uttara by car at a speed of 40 km per hour and returns to Uttara at a speed of 30 km per hour by an auto rickshaw. What is her average speed in the entire journey in km/hour?
A) 35 B) 34.3 C) 37.5 D) 35.3 E) 36

20. $(4^{41}+4^{42}+4^{43})$ is divisible by -
A) 7 B) 13 C) 15 D) 17 E) none of these

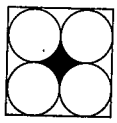
21. If $xy < 0$ and $y > 0$ which of the following must be positive?
A) x-y B) 2x,3y C) $\frac{x+10}{y+2}$ D) $\frac{(-y-2)}{x}$ E) $2y^2{}_+x$

22. If $y$ is between 0 and 1 , which of the following increases as $y$ increases?
i. $(1-y^2)$ ii. $(y-1)$ iii. $1/y^2$
A) I and II B) II and III C) II only D) I, II, and III E) none of these

23. If y is an integer divisible by 3 but not by 2 then which of the following will never be an integer?
A) $\frac{y-1}{2}$ B) $\frac{y}{7}$ C) $\frac{y}{24}$ D) $\frac{y^3}{3}$ E) none of these

24. Find out the perimeter of an equilateral triangle if its area is 64 V3 $m^2$.
A) $32\sqrt{3}$ m B) 48 m C) 36 m D) 32 m E) none of these

25. The length of one side of the square in the picture below is 8. All the four circles are inscribed within the square and of equal radius. What is the area of the shaded region? (figure not drawn to scale)

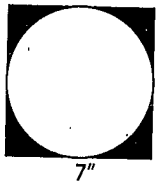


A) 1 6 $\pi$ B) 64-16 TT C) 16-4 TT D) 64-32 TT E) 6426.

26. Mr. Noman is in charge of a special snake farm in Gaibandha. The farm has two types of snakes; Cobras and Pythons. After a recent stock taking he was surprised to find that $\frac{1}{4}$ of the number of cobras in the farm was exactly equal to $\frac{1}{6}$ of the total number of snakes in the farm. What is the ratio of the number of Pythons to the number of Cobras in the farm?

A) 1:4 B)1:3 C) 1:2 D)2:3 E) cannot be determined

27. In the figure below there is a circle inscribed inside a square. The length of one side of the square is 7 inches; determine the approximate area of the shaded region inside the square, (figure not drawn to scale)




A) 9.3 sq inches
B) 10.5 sq inches
C) 16.4 sq inches
D) 49 sq inches
E) 104.8 sq inches

28 Arman wanted to have Tk. 39,200 as interest after 5 years. He has invested an amount in an account for 1 year at 8% interest rate. From the 2nd year, he invested the principal amount in another account offering 10% interest for 3 years. At the beginning of the fifth year he invested the principal amount in another account at the rate of 11%. What was the principal amount? (assume simple interest rate)

A) Tk. 50,000 B) Tk. 80,000 C) Tk. 90,000 D) Tk. 70,000 E) none of these

29 The potato traders have increased the original price of potatoes by 20% by creating a false shortage of supply. Govt. intervened into the scene and forced the traders to reduce their price by 20% of new price and stick to that. Currently the traders are selling potatoes with a loss/gain of what percentage over the original price?

A) 4% loss B) 4% gain C) 5.5% gain D) 6% loss E) neither gain nor loss

30. While travelling on a train Mr. Saif noticed three different numbers were written on the roof of the train. He calculated that the average of the three numbers was *V*. If one of the numbers was Zand another was *Y*, what was the remaining number?

A) ZY-V B) Z/V-3-Y C) Z/3 - V - Y D) 3V-Z - Y E) V-Z-Y

## SECTION II: LANGUAGE & COMMUNICATION (Questions 31 to 60)

### Questions 31 to 36: Meaning in Context

**Instruction:** *In each of the following sentences, a word or a phrase is underlined. From among the five alternatives that follow each of the sentences, identify the one that best expresses the meaning of the underlined word/phrase, keeping in mind the context in which it is used.*

31. An economic embargo is widely exercised by the influential countries to punish others on different socio-politico-strategic reasons.
    A) expansion of armed forces B) alliance with superpowers C) joining in regional forums
    D) free trade E) restriction on foreign trade and investment
32. A dream about Utopia is nothing but a dream.
    A) ideally perfect state B) world with a free economy D) socialism
    E) 'poverty in the museum' C) war free world
33. When having a problem, it is best to dissect the situation then act.
    A) control B) discuss C) ignore D) analyze E) deal with
34. It was deplorable to see how you lied in front of all who were present.
    A) unbelievable B) shocking C) ridiculous D) interesting E) revealing
35. Everybody wondered how one could misconstrue the intention of the initiator when the proposal was so detailed.
    A) judge B) doubt C) misinterpret D) evaluate E) none of these
36. The government has decided to give the salary increment with a retrospective effect.
    A) which considers inflation
    B) which is considered to be initiated from *a* past date
    C) which will be implemented in a step by step manner
    D) which is subject to the availability of fund E) none of these

### Questions 37 to 41: Fill in the Gaps

**Instruction:** *Select the word/pair of words that appropriately fill-in the gaps in each sentence*

37. Critics of the novelist found his prose style as _____ as his ideas, and insisted that his work was____ originality and substance.
    A) fraudulent.. .dependent on B) suspect.. .filled with C) fulsome ..charged with
    D) commonplace...devoid of E) exaggerated...riddled with
38. _____the *Ready Made Garment* industry back from the drastic fall shortly after the global economic downturn were innovative product design and very low cost of production.
    A) Bringing B) What brought C) The thing that brought
    D) What was brought E) none of these
39. Once the audience began to applaud and laugh at his jokes, Ashfaq felt more-------- and his delivery became less _____.
    A) professional ... engaging B) excited ... interesting C) relaxed ... inhibited
    D) uncomfortable ... reserved E) anxious ... wavering
40. Out of a myriad of TV shows, this one seems to be different as it narrates the stories of the ____ news-makers from all walks of life by _____ celebrities from the sports, entertainment, or business arenas.
    A) affluent...displaying B) influential...profiling
    C) effective...parading D) dominating...narrating E) none of these
41. Social workers from the West visit some countries of Africa and Asia with _____(added underline) notions of the country as ____ country where many parents fail to provide their children with a meal even once a day.
    A) inconsistent...an affluent B) incompatible...an sumptuous
    C) preconceived.. .an impoverished D) gratuitous.. .an incapable E) none of these

## Questions 42 to 46: Appropriate Use of Words

**Instruction:** *Identify the sentence(s) that is/are showing the correct use of the underlined word.*

42. (i) The auctioneer was describing the antique in his hand to induce the audience to bid for it. (ii) Some of the things he inherited can actually be called antiques! (iii) It was absurd how they antiquated the chosen items to increase their value.
A) both i and ii B) both i and iii C) both ii and iii D) i only E) all three sentences

43. (i) There is a manifest difference between the students of this institution and those studying elsewhere, (ii) She manifested truthfully that she lacked any Interest in her studies (iii) After the accident, the police asked for the passenger manifest of the ship.
A) i only B) ii only C) both i and iii D) both i and n E) all three sentences

44. (i) It is not right to leave it to fate, the well-being of the destitute, (ii) We are all awaiting the fated decision, (iii) Many choices in life must be left upon fate or chance.
A) all three sentences B) both i and iii C) both ii and iii D) ii only E) both i and ii

45. (i) The strong and the noble are always averse to deception of any form.
(ii) The principal expressed that he averted people who cheat in exams.
(iii) She has a strong aversion to sea-food.
A) i only B) ii only C) both I and ii D) both i and iji E) both ii and iii

46. (i) In your conversation with my supervisor, I felt you were deluded to what I mentioned in confidence to you last night.
(ii) It was our delusive belief that all individuals show self-control in the actual hour of crisis.
(iii) Had she tried, she could have easily deluded her captor.
A) i only B) both i and ii C) both i and iii D) both ii and iii E) all three sentences

## Questions 47 to 53: Sentence Correction

**Instruction**: *For each of the following questions, the underlined part of the sentence may contain problems In grammar, construction, word choice, and/or punctuation. Part or whole of each sentence is underlined-Given are five alternatives of phrasing the underlined section. Alternative (A) always repeats the underlined section exactly. Choose the best answer choice.*

47. The word *boycott* derives from the name of Charles C. Boycott, an English land agent in Ireland, that was ostracized for refusing to reduce rent.
A) that was ostracized for refusing B) who was ostracized for refusing
C) which was ostracized for refusing D) ostracized for refusing E) none of these

48. As a result of his method for early music education, Shinichi Suzuki has been known as one of the world's great violin teachers.
A) has been known as one B) had been known as one C) is known as one
D) is being seen as one E) has been one

49. The origins of most sports is unknown.
A) sports is unknown B) sports have been unknown C) sports are unknown
D) sports has been unknown E) sports are now unknown

50. There are now many kinds of dictionaries, such as a dictionary of synonyms and antonyms, a biographical dictionary, and a geographical dictionary with pronunciations given (added underline)
A) with pronunciations given B) that has pronunciations given
C) with pronunciations' given D) that have pronunciations given
E) that do have pronunciations given

51 According to the study, as the body ages, the chance that medications will cause harmful side effects are on the increase.
A) are on the increase B) increases C) has increased D) increase E) none of these

52. Six stories high, with portholes for eyes and a spiral staircase in each hind leg, is the elephant-shaped building known as "Lucy", which towered over Margate City, New Jersey since 1881.
A) is the elephant-shaped building known as "Lucy," which towered over Margate City, New Jersey since 1881
B) since 1881 it has towered over Margate City, New Jersey, the elephant-shaped building known as "Lucy"

C) the elephant-shaped building known as "Lucy" has towered over Margate City. New Jersey since 1881

D) towering over Margate City, New Jersey, since 1881 has been the elephant-shaped building known as "Lucy" E) none of these

53. Today's technology allows manufacturers to make small cars more fuel-efficient now than at any time in their production history.
A) small cars more fuel-efficient now than at any time in their
B) small cars that are more fuel-efficient than they were at any time in their
C) small cars that are more fuel-efficient than those at any other time in their
D) more fuel-efficient small cars than those at any other time in their
E) more fuel-efficient small cars now than at any time in

## Questions 54 to 57: Reading comprehension

**Instruction:** *Read the following passage and select the best answer for each of the questions that follow.*

Had it not been for Matthew Henson, Robert E. Peary might not have reached the North Pole. Henson, a black man, was the only person to accompany Peary on all of the explorer's Polar expeditions. At first Peary doubted that Henson could endure the arctic climate. During the eighteen years these two attempted to reach the Pole, Henson's unfailing good humor and courage helped Peary to move on. Eskimos of Smith Sound greeted Henson as a brother, welcomed him into their stone igloos, and taught him their difficult language. Soon Henson became the most proficient of Peary's men, not only in speaking Innuit but also in handling a dog team. On later expeditions it was he who taught greenhorns how to drive a dog team and how to survive in the sub-zero climate. Beloved by the Eskimos, who called him "Miy Paluk", he persuaded them to accompany Peary into the uncharted regions where they believed evil spirits dwelled. On a nearly disastrous excursion across the ice cap in 1895, Henson twice saved Peary's life. Again and again Henson proved that he was capable of endurance and achievement, the final test coming in 1909 when he accompanied Peary and four Eskimos on the last lap of the successful dash to the pole.

54. d From this passage we may conclude that Peary's first Polar expedition was in -
A) 1909 B) 1895 C) 1891 D) 1893 E)1905

55. Greenhorns were -
A) musk-oxen B) inexperienced explorers C) native guides
D) untrained dog teams E) none of these

56. The best title for this passage is -
A) Mathew Henson Proves Himself B) A Polar Explorer C) Robert E. Peary
D) Discovery of North Pole E) Hospitality of the Eskimos

57. In describing Henson's achievements the author did not mention -
A) speaking Innuit . B) handling sled dogs C) rescuing Peary
D) converting the Eskimos E) none of these

## Questions 58 to 60: Reading comprehension

**Instruction:** *Read the following excerpt from a graduation address and select the best answer for each of the questions that follow.*

"As this phase of your journey ends today, another phase is on. Marking the ends of many other phases of your journey, you joined this School few years back. Over this period of time, you encountered many small ends. Yet, for many of you, it's the end of 'classroom' - a sweet 'bunch of memories! Well, all what these sweet ends offer you is only a new beginning - more demanding, more challenging. Remember, the journey that you are undertaking will only take you to the *'world of no End'* - the ultimate, eternal destination that each and every human being is bound to aboard.

Thus, it is best to prepare yourself for *'the world of no End'as* you walk along the process of countless ends. Each and everything that you do - would define the backpack that you would carry to eternity. Your backpack would be meaningful if you respect the right of your employers, customers, suppliers, competitors, and society. Your backpack will illuminate if you do not forget your responsibilities towards your parents, family members, and relatives. Your backpack will only be enriched if you give back to your alma matter, to your community, and to whom you belong."

58. According to the speaker, each and every end leads to what?
A) sweet memory B) the final End C) professional excellence
D) happy life E) *a* fresh beginning

59. In the context of this address, what does *backpack* refer to?
A) right pack B) big fat bag C) the bag carried in the back
D) collection of deeds E) coffin

60. According to the speaker, earning a desired backpack requires which of the following?
A) respecting the rights of the consumers, suppliers, and competitors.
B) fulfilling the responsibilities towards your parents, family members and relatives.
C) giving back to your alma matter, to your community and to whom you belong.
D) preparing yourself for 'the world of no End' E) all of these

**SECTION III: ANALYTICAL ABILITY (Questions 61 to 75)**

61. One day, a poet was requested to interpret an especially peculiar and obscure passage from one of his own poems. His response was *"at the time that I was writing that particular verse, only God and myself knew its meaning. Now, it is only God who knows."* What did the poet mean by his answer?
A) God is much wiser than people are B) Most people can't understand poetry
C) Poets don't often know where their creative inspiration comes from
D) The poet has forgotten the meaning of his own verse E) none of these

62. A newspaper advertisement reads as follows: *"Never again will you have to pay high prices for imported spring water. It is now bottled locally and inexpensively. You'll never taste the difference, however, if you're likely to be embarrassed to serve domestic spring water, simply serve it in a leaded crystal bottle."* What is the assumption made by this advertisement?
A) It's not hard to tell domestic water from imported water based on its flavor
B) The majority of spring water is bottled at its source
C) Restrictions on importing and customs duties make the price of imported water higher
D) Spring water tastes best when it's served from a decanter
E) Some people purchase imported spring water instead of domestic, as a status symbol

63. Titan, a moon which orbits the planet Saturn, is the second largest moon in the solar system, smaller only than Ganymede, one of Jupiter's moons.
Given that the statement above is true, we may logically conclude all of the following EXCEPT
A) No moon larger than Ganymede orbits planet Saturn
B) Saturn has at least one moon other than Titan
C) Exactly one moon larger than Titan orbits planet Jupiter
D) Jupiter has at least one moon other than Ganymede E) none of these

## Questions 64 to 66

**Instruction:** *Read the situation below and select the best answer for each of the questions that follow.*
A student planning his curriculum for the coming semester must enroll in three courses. The available courses fall into one of five general areas: Math, English, Social Studies, Science, & Fine Arts. The student must take courses from at least two different areas. If he takes an English course, he cannot take a Fine Arts course;& *If* he takes Fine-Arts course, he cannot take an English course. If he takes Science course, he must take a Math course; & if he takes a Math course, he must take a Science course. He cannot take a Social Studies course if he takes a Fine Arts course & if he takes a Social Studies course, he cannot take a Fine Arts course.

64. Which of the following is NOT an acceptable schedule?
A) 2 math courses & one science course B) 2 science courses & one math course
C) 2 fine arts courses & one math course D) 2 social studies courses & one fine arts course
E) One social studies course & 2 fine arts courses

65. Which of the following is an acceptable schedule of courses?
A) One science, one English, & one fine arts course
B) One math, one science, & one social studies course -
C) One math, one social studies, & one fine arts course
D) One English, one social studies, & one fine arts course E) none of these

66. If the student wishes to take a course in science, then which of the following pairs of course would complete an acceptable schedule?
A) One math course & one social studies course B) Two science courses
C) Two English courses D) One science & one English course E) none of these

## Questions 67 to 69

**Instruction:** *Read the situation below and select the best answer for each of the questions that follow.*

Three men (Tom, Peter and Jack) and three women (Eliza, Anne and Karen) are spending a few months at a hillside. They are to stay in a row of nine cottages, each one living in his or her own cottage. No other guest is staying in the row where they are going to stay. Following are six conditions that must be followed while assigning cottages -

I. Anne, Tom and Jack do not want to stay in any cottage, which is at the end of the row.
II. Eliza and Anne are unwilling to stay besides any occupied cottage.
III. Only Karen is in between Peter and Jack.
IV. Between Anne and Jack's cottage there is just one vacant house.
V. None of the girls occupies adjacent cottages.
VI. The house occupied by Tom is next to an end cottage.

67. Which of the following statements is/are true?
I. Anne is between Eliza and Jack.
II. At the most four persons can have occupied cottages on either side of them.
III. Tom stays besides Peter.
A) I only B) II only C) I and III only D) II and III only E) I. Hand

68. Who is occupying the cottage in the middle?
A) Anne B) Peter C) Eliza D)Jack E) Karen

69. How many of them occupy cottages next to a vacant cottage?
A) 2 B) 3 C) 4 D) 5 E) 6

## Questions 70 to 72

**Instruction:** *Read the situation below and select the best answer for each of the questions that follow.*

Dr. Mannan has to treat six patients named Muhit. Nannu, Partha, Qazi, Ratul and Shimul in a week from Saturday to Thursday. In a day he can treat only one patient. Dr. Mannan must schedule them following the conditions below -

I. Muhit must be treated earlier in the week before Ratul.
II. Partha can come to the Dr. Mannan on Monday only.
III. Qazi must be treated immediately before or immediately after the day on which Nannu is treated.

70. If Qazi is to be treated on Wednesday, the latest day on which Muhit can be treated is -
A) Sunday B) Monday C) Tuesday D) Thursday E) none of these

71. If Nannu is to be treated on Wednesday, which is the earliest day on which Ratul can be treated?
A) Sunday B) Tuesday C) Monday D) Thursday E) Friday

72. If Shimul is to be treated on Wednesday then which of the following is true?
A) Ratul must be treated on Tuesday B) Muhit must be treated fronted on Tuesday
C) Hntui must be treated later in the week than Shimul
D) Nannu must be treated on Friday E) none of these

## Questions 73 to 75

**Instruction:** *Read the situation below and select the best answer for each of the questions that follow.*

In the Bangla Academy ground there are exactly seven Police supervisors for the security of the Ekushey Book Fair — Mokter, Faruk, Sanwar, Bashir, Anis, Kalam, and Jahangir. These supervisors communicate with each other in two ways: through a wired circuit and by two-way radio.

I. Messages can be sent in only one direction along the wired circuit from Mokter to Faruk, from Faruk to Bashir, from Bashir to Kalam, from Kalam to Jahangir, and from Jahangir to Mokter.
II. Messages can be sent in either direction by two-way radio between Faruk and Sanwar, Between Sanwar and Jahangir, and between Bashir and Anis.

No other routes of communication are available for sending messages among the seven supervisors. Messages that cannot be sent directly to the intended supervisor are sent through one or more intermediaries, who pass the messages along a possible route. Any supervisor, but only one supervisor, can be an intermediary.

73. A message from Faruk to Mokter must be sent through -
A) Sanwar B) Bashir C) Anis D) Kalam E) Jahangir

74. In which of the following pairs, a message can be sent using exactly one intermediary?
A) Mokter to Kalam B) Sanwar to Mokter C) Bashir to Faruk
D) Anis to Sanwar E) Jahangir to Anis

75. In which of the following pairs, sending a message requires a minimum of two intermediaries?
A) Mokter to Anis B) Faruk to Jahangir C) Sanwar to Bashir
D) Bashir to Anis E) Kalam to Sanwar

## PART II: WRITTEN SECTION — 25 Marks

### SECTION I : বাংলা লিখন

নম্বর:১০

"দ্রুত নগরায়নের ফলে বাংলাদেশের শহরগুলোতে খেলার মাঠের স্বল্পতা ক্রমান্বয়ে বেড়েই চলেছে। ফলে শিশু-কিশোরদের শারীরিক ও মানসিক বিকাশ ব্যাহত হচ্ছে।" এই বিষয়ে আপনার মতামত দিন এবং আমাদের করণীয় সম্পর্কে আলোকপাত করুন।

### SECTION II : Essay Writing:

Write an essay on *"Mankind"*.

**Mark : 15**

## Answer Key

**Section I: Mathematics**

| | | | | |
|---|---|---|---|---|
| 1.B | 2.E | 3.E | 4.C | 5.C |
| 6.A | 7.C | 8.D | 9.A | 10.C |
| 11.B | 12.A | 13.D | 14.B | 15.B |
| 16.C | 17.C | 18.C | 19.B | 20.A |
| 21.D | 22.D | 23.C | 24.B | 25.C |
| 26.C | 27.B | 28.B | 29.A | 30.D |

**Section II: Language**

| | | | | |
|---|---|---|---|---|
| 31.E | 32.A | 33.D | 34.B | 35.C |
| 36.B | 37.D | 38.B | 39.C | 40.B |
| 41.C | 42.A | 43.E | 44.C | 45.D |
| 46.D | 47.B | 48.C | 49.C | 50.A |
| 51.B | 52.C | 53.B | 54.C | 55.B |
| 56.A | 67.D | 58.E | 59.D | 60.E |

**Section III: Analytical Ability**

| | | | | |
|---|---|---|---|---|
| 61.D | 62.E | 63.B | 64.D&E | 65.B |
| 66.A | 67.C | 68.D | 69.C | 70.D |
| 71.A | 72.E | 73.E | 74.B | 75.A |

# BBA (IBA) Admission Test (2009-2010) Solution

## Section I: Mathematics

1. (B) ধরি,
Polash এর investment x for 12 months
So, Qader এর investment 2x for 6 months
And, Sohel এর investment 3x for 4 months
So, তাদের investments আসলে সমান, অতএব Profit সমানভাবে ভাগ হবে।
So, Sohel এর Profit = $\frac{72,000}{3} = 24,000$

2. (E) Volume, $a^3 = 64$
$a = 4$
Length of line segment AB = $\sqrt{a^2 + a^2 + a^2} = a\sqrt{3} = 4\sqrt{3}$ Ans: (E) $4\sqrt{3}$

3. (E) If $t = 8$
$t - 2t - 3t = -4t = -4 \times 8 = -32$ Ans: (E)

4. (C) Length of the waist = 36 inch.
The string should be 4 to 6 inches longer. Therefore, possible length of the string should be between 40 to 42 inch or, 3k3 feet to $3\frac{1}{2}$ feet.
Ans: C) $3\frac{1}{2}$ feet

5. (C) প্রয়োজনীয় চিনির amount = $\left(\frac{3}{8} + \frac{3}{5}\right)$ cup $= \frac{39}{40}$ cup
যেহেতু $\frac{15}{16}$ cup, $\frac{39}{40}$ cup অপেক্ষা ছোট,
অতিরিক্ত চিনি প্রয়োজন = $\left(\frac{39}{40} - \frac{15}{16}\right)$ cup
$= \frac{78-75}{80} = \frac{3}{60}$ cup
Ans: (C) She needs $\frac{3}{80}$ of a cup of sugar

6. (A) Compounded Amount = $P(i+r)^n$
N = 2 years P = 22 P = 10% or 0.10
Compounded amount = 12.100
অতএব, $12,100 = p(1+0.10)^2$ $P = \frac{12,100}{1.21} = 10,000$ Ans: (A) Tk. 10,000

7. (C)

8. (D) 5টি সংখ্যার Average = 60
Total = 60×5 =300
3টি সংখ্যার Average = 67
Total = 67×3 = 201
বাকি 2টি সংখ্যার Total = 300- 201=99
একটির smallest ধরলেই অপরটির greatest value পাওয়া যাই।
Smallest value = 1
Greatest value = 99 – 1 = 78 Ans: (D) 91

9. (A) Rakib = $369\times\frac{2}{3}=246$

Raja = 82

$\therefore$ Rajib = 369 – 246 – 82 = 41

$\therefore$ Fraction = $\frac{41}{369}=\frac{1}{9}$

10. (C) মনেকরি, cost = 100

actual selling price = 140

এখন actual selling price পাওয়া যাই Tag Price থেকে 30% discount দেবার পরে।

Togged price 100 হলে selling price হবে 70

অতএব, Tagged price = 100×2 = 200

যখন, Tag price 200 → cost 100

$\therefore$ Tag price 460 → cost $\frac{100}{200}\times 460=230$ Ans: (C) 230

11. (B) ধরি, 8 taka per dozen এ কেনা হয় x টা কলা

$\therefore$ 10 taka per dozen এ কেনা হয় x টা কলা

Total cost = 8x + 10x = 18x

Total no of bananas = 2x

$\therefore$ Total selling price = 11×2x = 22x

Profit = 22x – 18x = 4x

এখন, 4x = 100 $\therefore$ 2x = 50 Ans: (B) 50

12. (A) 1 man = 2 women = 3 boys

$\therefore$ 1 man, 2 women, 3 boys = 1 man + 1man + 1 man = 3 men

1 man করতে পারে 66 boys এ

$\therefore$ 3 men করতে পারে $\frac{66}{3}$ or 22 days-এ Ans: (A) 22 days.

13. (D) Minimum value of (y-x) = Minimum value of y- minimum value of x

= 13 – (- 4) = 17 Ans: (D) 17

Note: In reality, the answer should be less than 17.

14. (B) মনেকরি, Sabbir –এর বয়স = x বছর

Sabbir –এর ভাইয়ের বয়স = $\frac{x}{4}$ বছর

Sabbir –এর বোনের বয়স = 2x বছর

Now,

$X+\frac{x}{4}+2x=3\times\frac{x}{4}+20 \Rightarrow X=8$

Sabbir –এর বোনের বয়স = 8×2=16 years Ans: (B) 16 years

15. (B) Total income = 5x

Total cost = 12y

Savings = Tk (5x – 12y) Ans: (B) Tk. (5x – 12y)

16. (C) প্রথমে, per student cost = $\frac{y}{m}$

পরে, per student cost = $\frac{y}{m-z}$

$\therefore$ Excess payment = $\frac{y}{m-y}-\frac{y}{m}$ Ans: (C) $\frac{y}{m-z}-\frac{y}{m}$

17. (C) DD = 77
DDDD = 7777

$\therefore$ CAC = $\frac{DDDD}{DD} = \frac{7777}{77} = 101$ =A = O Ans: (C) O

18. (C) We Renow

সমান সমান বাহু a হলে, সমকোণী সমদ্বিবাহু ত্রিভুজের অতিভুজ = $a\sqrt{2}$

Now, $a\sqrt{2} = 16m$

$a = \frac{16}{\sqrt{2}} m \; or, 8\sqrt{2}\; m$

$\therefore$ Perimeter = $a\sqrt{2} + a + a$

$= 16 + 8\sqrt{2} + 8\sqrt{2}$ = 16+16$\sqrt{2}$ m Ans: (C) 16 +16$\sqrt{2}$ m

19. (B) Average speed = $\frac{2uv}{u+v}$ u = 40 kmph

$= \frac{2\times40\times30}{40\times30}$ v = 30 kmph

= 34.3 kmph Ans: (B) 34.3

20. (A) $4^{41} + 4^{42} + 4^{43} = 4^{41}(1 + 4 + 4^2)$

$= 21.4^{43} = 7.3.4^{43}$ Ans: (A) 7

21. (D) If xy < o, y>o

অর্থাৎ X এব value negative. $\therefore$ Answer D

22. (D) o<y <1

অতএব যদি y বাড়ে, $y^2$ কমে

(i) যদি y বাড়ে $y^2$ কমে

যদি $y^2$ কমে $(1-y^2)$ বাড়ে।

(ii) যদি y বাড়ে (y -1) বাড়ে।

(iii) যদি $y^2$ কমে $\frac{1}{y^2}$ বাড়ে। Ans: (D) I, II and III

23. (C)

24. (B) আমরা জানি,

সমবাহু ত্রিভুজের প্রত্যেক বাহু a হলে ক্ষেত্রফল হয় $\frac{\sqrt{3}}{4a^2}$

$Now, \frac{\sqrt{3}}{4a^2} = 64\sqrt{3}$ = a2 = 256 a = 16

$\therefore$ Perimeter = 3a = 3×16 = 48 Ans: (B) 48m

25. (C) square – এর প্রত্যেক বাহু = 8

$\therefore$ circle –এর radius = $\frac{8}{4} = 2$

Area of square = $8^2 = 64$

Area of 4 circles = $r(2)^2 \times 4 = 16r$

$\therefore$ Shaded region এর area = $\frac{64 - 16r}{4} = 16 - 4r$ Ans: (C) 16 – 4r

26. (C) মনেকরি, cobra -র সংখ্যা = C

Python –এর সংখ্যা = P

$\therefore \frac{1}{4}C = \frac{1}{6}(C + P)$ => 3C = 2C + 2P => C = 2P => $\frac{P}{C} = \frac{1}{2}$ Ans: (C) 1:2

27. (B) Area of square = $7^2 = 49$

Raduis of circle = $\frac{7}{2}$ =3.5

Area of circle = $\pi r^2 = \frac{22}{7} \times 35 \times 3.5 = 38.5$

∴ Shaded –এর area = 49-38.5 = 10.5 sq inches Ans: (B) 10.5 sq inches

28. (B) মনেকরি, Principle = P

Now, 8% -এ interest = P ×1×.08 = 0.08P

10% -এ interest = P ×3×0.10 = 0.30P

11%-এ interest = P ×1×0.11 = 0.11P

এখন, 0.08P + 0.3P + 0.11P = 39,200

$\Rightarrow P = \frac{39,200}{0.49} = 80,000$ Ans: (B) 80,000

29. (A) Total increase /decrease = $A + B + \frac{AB}{100}$

$= 20 - 20 + \frac{20 \times (-20)}{100} = -4$

∴ Price 4% কমে যাবে। Ans: (A) 4% loss

30. (D) মনেকরি, অপর সংখ্যাটি = x

এখন $\frac{X+Y+Z}{3} = V \Rightarrow X = 3V - Y - Z$ Ans: (D) 3V – Z – Y

## Section II: Language & Communication

31. (E) Embargo refers to the restrictions on foreign trade and investment.
অর্থাৎ Answer E.

32. (A) Utopia means ideally perfect state. অর্থাৎ Answer A.

33. (D) Dissect অর্থ analyze. অর্থাৎ Answer D.

34. (B) এখানে, deplorable শব্দটি shocking বোঝাতে ব্যবহৃত হয়েছে। অর্থাৎ Answer B.

35. (C) Misconstrue এর synonym হচ্ছে misinterpret. অর্থাৎ Answer C.

36. (B) এখানে retrospective effect এর সাথে suitable option হচ্ছে "Which is considered to be initiated from a past date." অর্থাৎ Answer B.

37. (D) এখানে, commonplace .....devoid of option টি meaningful তাহলে বাক্যটির meaning দাড়াঁয় সমালোচকের মতে novelist এর prose style খুবই সাধারণ মানের এবং originality ও substance বিবর্জিত। অর্থাৎ Answer D.

38. (B) এখানে 'What bought' option টি grammatically correct. অর্থাৎ Answer B.

39. (C) এখানে, relaxed .....inhibited option টি meaningful তাহলে meaning দাড়াঁয়, যখন দর্শকরা Razia র Joke শুনে applaud করে, তখন সে relaxed feel করে এবিং তার ভিতরে যে ইতস্ততবোধ ছিল তা কমে আসে। অর্থাৎ Answer C.

40. (B) এখানে, influential .....profiling option টি meaningful.অর্থাৎ Answer B.

41. (C) এখানে preconceived ....an impoverished option টি meaningful তাহলে অর্থ দাঁড়ায়, social worker রা Africa এবং Asia তে একটি পূর্ব ধারণা নিয়ে আসে যে, এখানকার অনেক দরিদ্র পিতামাতারা সন্তানদের দৈনিক একবার ও খাওয়াতে পারে না। অর্থাৎ Answer C.

42. (A) এখানে, (i) এবং (ii) sentence টি grammatically correct. (iii) এ antiquated শব্দটি verb হিসেবে use হয়েছে, কিন্তু শব্দটি adjective. তাই (iii) বাক্যটি ভুল। অর্থাৎ Answer A.

43. (E) এখানে (i), (ii) & (iii) সবগুলোই correct. অর্থাৎ Answer E.

44. (C) এখানে, (i) option টি ভুল। (ii) & (iii) correct. অর্থাৎ Answer C.

45. (D) এখানে, (i) & (ii) grammatically correct. (ii) এ avert এর ভুল use হয়েছে।
অর্থাৎ Answer D.

46. (D) এখানে, (ii) & (iii) grammatically correct. (i) এ deluded এর সাথে to এর ব্যবহার ভুল হয়েছে।

47. (B) এখানে, Boycott একজন person তার সাথে relate করার জন্য who হচ্ছে appropriate অন্য option গুলো ভুল। অর্থাৎ Answer B.

48. (C) এখানে, 'is known as one' option টি most appropriate. অর্থাৎ Answer C.

49. (C) এখানে, subject 'origins' plural. তাই verb ও সে অনুসারে হতে হবে, A & D তাই বাদ C হচ্ছে most appropriate option. অর্থাৎ Answer C.

50. (A) এখানে, কোন পরিবর্তনের প্রয়োজন নেই। Given sentence টি correct. অর্থাৎ Answer A.

51. (B) এখানে, 'The chance' singular subject তাই সে অনুসারে verb হতে হবে। তাছাড়া tense হবে present indefinite. অর্থাৎ Answer B.

52. (C) এখানে, C option টি ই grammatically correct and meaningful. অর্থাৎ Answer C.

53. (B) B option টি grammatically correct. Comparison এর সঠিক ব্যবহার হয়েছে এই option এ। অর্থাৎ Answer B.

54. (C) Third line এ বলা আছে তারা eighteen years ধরে expedition করেছে। Paragraph এ শেষের line এ তাদের last expedition এর ব্যাপারে 1909 এর উল্লেখ আছে, তাহলে eighteen years আগে 1891 সালে তাদের first polar expedition হয়েছিল বলে অনুমান করা সম্ভব। Answer: C

55. (B) Greenhorn refers to inexperienced explorers. অর্থাৎ Answer B.

56. (A) এখানে Passage এ Method Henson এর capability এর ব্যাপারে বলা হয়েছে। তাই best title হচ্ছে "Method Henson Proves Himself." অর্থাৎ Answer A.

57. (D) Henson এর achievement এর ক্ষেত্রে speaking Inuit, handling sled dogs এবং Pearly rescue করার কথা বলা আছে। কিন্তু converting Eskimos এর ব্যাপারে কিছু বলা নেই। অর্থাৎ Answer D.

58. (E) 1st Para র 4th line এ বলা আছে, every end leads to a fresh beginning.
অর্থাৎ Answer E.

59. (D) 2nd Para র 2nd line এ back pack এর definition এর ব্যাপারে বলা হয়েছে। অর্থাৎ back pack হচ্ছে collection of deeds. অর্থাৎ Answer D.

60. (E) 2nd Para তে desired back pack define করতে গিয়ে সবগুলো option এর ব্যাপারে বলা হয়েছে। অর্থাৎ all of these হচ্ছে proper answer.
অর্থাৎ Answer E.

# Section III: Analytical Ability

61. (D)
62. (E): Passage এর শেষ line এ বলা আছে।
63. (B): Argument এর কোথাও বলা নেই যে Saturn এর একাধিক moon আছে।

**64-66**

Passage –এ বলা আছে,
Fine Arts Course থাকলে, English or Social Studies Course থাকতে পারবে না।
Science Course থাকলে অবশ্যই Maths Course থাকতে হবে।

64. Both (D) & (E)
65. (B)
66. (A)

**67-69**

আমরা Condition (ii) – (iv) এক করলে পাই

| Peter | Karen | Jack | X | Anne | X |
|---|---|---|---|---|---|

অন্য Conditions গুলোর সাহায্যে এক মাত্র Solution পাওয়া যায়।

| X | Tom | Peter | Karen | Jack | X | Anne | X | Eliza |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

67. (C)
68. (D)
69. (C)

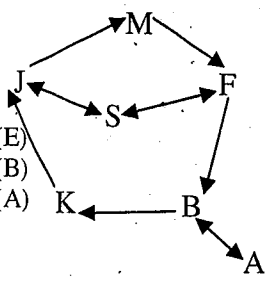
**70-72**

Conditions থেকে আমরা পাই,
Muhit Thursday এর পর চিকিৎসা নিতে পারবে না, কারণ Ratul কে Muhit এর পরে থাকতে হবে। একইভাবে, Ratul Sunday –এর আগে চিকিৎসা নিতে পারবে না, কারণ Muhit কে আগে থাকতে হবে।

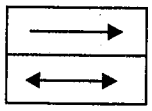
70. (D)
71. (A)
72. Process of Elimination Follow করতে হবে।
Ans: (E)

**73-75**

Conditions গুলো থেকে আমরা নিচের Figure টা আঁকতে পারি।




One way Communication
Two way Communication



73. (E)
74. (B)
75. (A)

# BBA (IBA)

## Admission Test Question (2010-2011) with Solution

## Question: IBA-BBA (DU) Admission Test 2010-11

### Part I: MCQ
### Section I: Mathematics (Questions 1 to 30)

01. Mr. Adittya, a renowned engineer, designed a ball so that when it was dropped, it rose with each bounce exactly one-half as high as it had fallen. The engineer dropped the ball from a 24-foot platform and caught it after it had traveled 23.25 yards. How many times did the ball bounce?
(a) 7 (b) 11 (c) 6 (d) 5 (e) none of these

02. In a nationwide poll, p people were asked 2 questions. If 2/5 of them answered "yes" to question 1, and of those $\frac{1}{3}$ also answered "yes" to question 2, which of the following represents the number of people polled who did not answer "yes" to both questions?
(a) $\frac{11}{13}$ (b) $\frac{3}{13}$ (c) $\frac{13}{15}$ (d) $\frac{2}{15}$ (e) none of these

03. Sami, one awesome money-monger, invested a certain sum of money in a simple interest bond whose value grew to Tk. 300 at the end of 3 years and to Tk. 400 at the end of another 5 years. What was the rate of interest in which he invested his sum?
(a) 12% (b) 12.5% (c) 6.6% (d) 8.33% (e) none of these

04. Nishat bought two old cars for Tk. 18,000 in total. By selling one at a profit of 25% and the other at a loss of 20%, she stays at break-even. What was the cost price of each car?
(a) Tk. 8,000 and Tk. 10,000 (b) Tk. 11,000 and Tk. 7,000
(c) Tk. 9,000 and Tk. 9,000 (d) Tk. 12,000 and Tk. 6,000
(e) None of these

05. Rahim and Sohail live in the same house and work in the same place. Rahim takes 20 minutes and Sohail takes 30 minutes to reach workplace. Sohail starts from the house 5 minutes earlier than Rahim starts. How many minutes would Rahim take to meet Sohail?
(d) 15 minutes (b) 12 minutes (c) 10 minutes (d) 5 minutes (e) None of these

06. The price of sugar increases by 32%. A family reduces its consumption so that expenditure of the sugar is up by 10% only. If the total consumption of sugar before the price rise was 10 kg per month, then the consumption of sugar per month is approximately?
(a) 8.33 kg (b) 8.5 kg (c) 8.35 kg (d) 8.75 kg (e) None of these

07. Hasheem's Taxi Service charges an initial fee of Tk. 55.50 at the beginning of a trip and an additional charge of Tk. 15.25 for each two-fifth of a mile traveled. What is the total charge for a trip of 3.6 miles?
(a) Tk. 81.72 (b) Tk. 110.40 (c) Tk. 137.25 (d) Tk. 192.75 (e) None of these

08. In an afternoon, some friends were enjoying chitchat among themselves in Dhaka University campus. One of them, after sometime, bought some biscuits so that each of them got exactly 3 biscuits as light refreshment. As they were about to take their refreshment, three other friends joined them. Now it was not possible for them to divide those biscuits among themselves evenly. To solve the problem, one more biscuit was bought by them so that each got exactly two biscuits and hence they enjoyed their refreshment. How many people enjoyed the refreshment?
(a) 5 (b) 16 (c) 8 (d) 15 (e) None of these

09. The surface of a certain planet reflects 80 percent of the light that strikes it. If the clouds around the planet absorb 40 percent of the reflected light, what percent of the light that strikes the planet is reflected from the surface that passes through the clouds without being absorbed?
(a) 32% (b) 40% (c) 48% (d) 60% (e) None of these

10. In a market survey, 20% opted for product A whereas 60% opted for product B. The remaining individuals were not certain. If the difference between those who opted for product B and those who were uncertain was 720, how many individuals were covered in the survey?
(a) 1,200 (b) 1,800 (c) 3,600 (d) 1,440 (e) None of these

11. The electric company charge: Tk. 0.30 per kilowatt hour (KWH). Rahim used 2800 KWH in April, 3200 KWH in May, and 3600 KWH in June. What was his average costs of electricity for the 3 months?
(a) Tk. 72 (b) Tk. 96 (c) Tk. 48 (d) Tk. 144 (e) None of these

12. The age of the father of two children is twice that of the elder one added to four times that of the youngest one. If the arithmetic mean and product of the ages of the two children is 8 years and 48 years respectively, then what is the age of the father?
(a) 48 years (b) 32 years (c) 40 years (d) 42 years (e) None of these

13. If x and y are integers and $-5 < x \leq 7$ and $-3 \leq y \leq 9$, then which of the following cannot be a value of xy?
(a) 18 (b) $-54$ (c) $-21$ (d) 63 (e) None of these

14. A maximum of 25 grams of salt dissolves in 100 grams of water and any more salt, if added, remains undisclosed and a sediment falls at the bottom. Now. Water is evaporated from 1 kilogram of a 4% solution at the rate of 28 grams per hour. After how long would the salt start regimenting?
(a) After 20 hours (b) After 25 hours (c) After 30 hours
(d) After 35 hours (e) None of these

15. If $x$, $y$ and $z$ are positive integers, and $4x = 5y = 6z$, then what is the least possible value of $x + y + z$?
(a) 15 (b) 37 (c) 42 (d) 28 (e) None of these

16. Two friends, Rajib and Rahat, entered into a partnership investing Tk. 700 and Tk. 600 respectively. After 3 months, Rajib withdrew $\frac{2}{7}$ his investment but after 3 months, he reinvested $\frac{3}{5}$ of what he had withdrawn. The profit at the end of the year was Tk. 726. If the profit was shared according to time weighted investment, then what was the difference between the profits of those two friends?
(a) Tk. 360 (b) Tk. 183 (c) Tk. 36 (d) Tk. 6 (e) None of these

17. If m is an integer, and $y = (m-1)(m+2) - (m-1)(m-2)$, then which of the following must be true?
(a) $y$ is odd only when $m$ is odd (b) $y$ is odd only when $m$ is even
(c) $y$ is even only when $m$ is even (d) y is even only when $m$ is odd
(e) None of these

18. In a sample of 900 university students, all students are either freshmen or sophomores or junior or seniors, 24 percent are juniors and 72 percent are not sophomores. If there are 144 seniors, how many more freshmen than sophomores are there among the sample of students?
(a) 252 (b) 36 (c) 48 (d) 288 (e) None of these

19. At what acute angle, in degrees, is the minute hand and the hour hand of a clock inclined at 22 minutes past 6?
(a) 418 (b) 59 (c) 60 (d) 42 (e) None of these

20. There are 9 novel books, 4 drama books, 12 poetry books and 7 grammar books in my bookshelf. The books are randomly arranged in the shelf and not at all in the order of their type. My reading room where that bookshelf is located lacks sufficient lighting during evening time and as a result of that, types of that bookshelf are not visible, what is the least number of books that must be drawn from the bookshelf in the evening in order to get 6 books of a particular type?
(a) 20 (b) 23 (c) 25 (d) 28 (e) None of these

21. The length of a rectangular field is four times its width. If the cost of cultivating the field at Tk. 20 per square meter is Tk. 1,280 then what is the perimeter, in meters, of the rectangular field?
(a) 32 (b) 64 (c) 20 (d) 40 (e) None of these

22. In a class, the average score of boys in an examination is 64 and that of girls is 61, If the average score of the whole class is 62.2, then what percent of the class are the boys?
(a) 40% (b) 50% (c) 60% (d) 45% (e) None of these

23. With both inlets open, a water tank will be filled with water in 48 minutes. The first inlet alone would fill the tank in 2 hours. What is the capacity of the tank, in cubic meters, if in every minute the second inlet admits 50 cubic meters of water more than the first?
(a) 10,500 (b) 12,00 (c) 9,00 (d) 11,750 (e) None of these

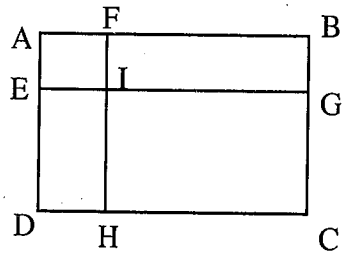
24. Which of the following represents the ratio of the volumes of two solids, namely cylinder and cone having equal base area and height?
(a) 2:1 (b) 1:2 (c) 2:3 (d) 3:1 (e) None of these

25. Sajib has n candies, Where n is an integer such that $20 < n < 50$. If he divides the candies equally among 5 children, he will have 2 candy remaining. How many candies will remain if he divides the candies among 7 children?
(a) 3 (b) 2 (c) 4 (d) 1 (e) None of these

26. At a beverage outlet, a certain drink of type "A" is prepared by mixing 4 parts milk with 3 parts fruit juice. Another drink of type "B" is prepared by mixing 4 parts fruit juice with 3 parts milk, How many liters of fruit juice must be added to 14 liters of drink "A" to convert it to drink "B"?
(a) 4 (b) $\frac{2}{3}$ (c) $3\frac{1}{2}$ (d) 3 (e) None of these

27. If square ABCD has an area of $x^2$ and line segment AE has length 4, and line segment AF has length 3, then what is the area of IGCH in terms of x? [Picture not drawn to scale]

(a) $4x + 12$
(b) $7x - 12$
(c) $x^2 - 7x + 12$
(d) $x^2 - 24$
(e) None of these




28. The basic one-way train fare for a child aged between 3 and 12 years costs half the regular one-way train fare for an adult plus a reservation charge that is the same on the child's ticket as on the adult's ticket. One reserved ticket for an adult costs Tk. 216 and the cost of a reserved ticket for an adult and a child (aged between 3 and 12) costs Tk. 327. What is the basic fare for the journey for an adult?
(a) Tk. 52.5 (b) Tk. 58.52 (c) Tk. 52.5 (d) Tk. 210 (e) None of these

29. For any 3 given numbers, which of the following always produces the same number as adding the 3 numbers together and then dividing the sum by 3?
i. Ordering the 3 numbers numerically, from highest to lowest, and then selecting the middle number.
ii. Dividing each of the numbers by 3 and then adding the result together.
iii. Multiplying each number by 6, adding the resulting products together, and then dividing the sum by?
(a) I only (b) II only (c) I and III only (d) II and III only (e) None of these

30. Nimmi has 25 pairs of shoes. If she loses 9 individual shoes, what is the greatest number of matching pairs she could have left?
(a) 20 (b) 21 (c) 19 (d) 16 (e) None of these

## SECTION II: LANGUAGE & COMMUNICATION (Questions 31 to 60)

**Questions 31 to 33: Reading Comprehension**
**Instruction:** Read the following passage and select the best answer for each of the questions that follow.

The Earth's magnetic field is generated as the molten iron of the Earth's outer core revolves around its solid inner core. When surges in the molten iron occur, magnetic tempests are created. At the Earth's surface, these tempests can be detected by changes in the strength of the Earth's magnetic field. For reasons not fully understood, the field itself reverses periodically every million years or so. During the past million years, for instance, the magnetic north pole has migrated between the Antarctic and the Arctic. Clearly, geophysicists who seek to explain and forecast changes in the field must understand what happens in the outer core. Unlike meteorologists, however, they cannot rely on observations made in their own lifetimes. Whereas atmospheric storms arise in a matter of hours and last for days, magnetic tempests develop over decades and persist for centuries. Fortunately scientists have been recording changes in the Earth's magnetic field for more than 300 years.

31. In the passage, the author is primarily concerned with -
    (a) analyzing a complicated scientific phenomenon and its impact on the Earth's surface features
    (b) describing a natural phenomenon and the challenges its study presents to researchers
    (c) discussing a scientific field of research the gaps in researchers' methodological approaches to it
    (d) comparing two distinct fields of physical science and the different research methods employed in each
    (e) proposing an explanation for a geophysical phenomenon and an experiment that could" help confirm that explanation

32. The passage suggests which of the following about surges in the Earth's
    (a) They occur cyclically every few decades.
    (b) They can be predicted by changes in the Earth's inner core.
    (c) They are detected through indirect means.
    (d) They are linked to disturbances in the Earth's atmosphere.
    (e) They last for periods of about 1 million years.

33. In the lines 5-10, the author is primarily concerned with –
    (a) stating a limitation that helps determine a research methodology
    (b) making a comparative analysis of two different research methodologies
    (c) assessing the amount of empirical data in the field of physical science
    (d) suggesting an optimistic way of viewing a widely feared phenomenon
    (e) describing a fundamental issue and discussing its future impact on society

**Questions 34 to 40: Identification of incorrect sentence**

**Instruction:** *For each question, select the option that represents the incorrect sentence. If no such option is found, mark (E) in the answer sheet.*

34. (a) The teacher put the idea into my head.
    (b) This is an efficacious medicine, not a panacea though.
    (c) Two fifth of the trees of the Sundarbans were destroyed in the hurricane.
    (d) The auctioneer mistook my nod for a bid, and I ended up buying a painting I didn't even like.
    (e) None of these are incorrect.
35. (a) An expert on this task can do it in a more perfect way.
    (b) Had I known it before, 1 would have taken corrective measures.
    (c) No one really wants to face such a series of unfortunate events in life.
    (d) The contest judges were asked to pick out the essays that showed the most originality.
    (e) None of these are incorrect.

36. (a) I have less energy than I used to have.
(b) The trustee agreed not only to fund the construction of the auditorium but also the new research center.
(c) Who but a dolt goes, out of the house wearing his or her shoes on the wrong feet?
(d) In her three months in the job she made herself thoroughly disliked.
(e) None of these are incorrect.

37. (a) The couple in the garden is having a healthy rendezvous.
(b) He hurriedly came downstairs with a knife, in his hand.
(c) The councilor is not disinterested in my eyes and for that I prevented his taking part in the meeting.
(d) Would it be all right if I came around about seven tomorrow?
(e) None of those are incorrectly.

38. (a) In spite of having a headache I enjoyed the film.
(b) We have to cut down on our driving because of the gas shortage.
(c) How much of a mathematician are you?
(d) The committee had a long discussion last night but could not reach a consensus of opinions.
(e) None of these are incorrect.

39. (a) Having put on 20 pounds since he bought his suit, Sayeem thought it advisable to have its size varied by a tailor.
(b) He decided that he would either take his daughter to the matinee show or go himself.
(c) Ever since the introduction of modern education in our country, English has been the most significant medium of instruction.
(d) It was rather presumptuous of the wedding guest to take a seat at the head table.
(e) None of these are incorrect.

40. (a) The kids broke the window just for the devil in it.
(b) We know where it's at, and we want to change it.
(c) Nobody cared to argue with the manager because he had a reputation for being a curmudgeon.
(d) I wish Bangladesh had won their first test match.
(e) None of these are incorrect.

## Questions 41 to 43: Reading comprehension

**Instruction:** *Read the following passage and select the best answer for each of the questions that follow.*

Analyzing the physics of dance can add fundamentally to a dancer's skill. Although dancers see themselves totally in physical terms - as body mass moving through space under the influence of well-known forces and obeying physical laws - neither can they afford to ignore the physics of movement. For example, no matter how much a dancer wishes to leap off the floor and then start turning the law of conservation of angular momentum absolutely prevents such a movement. Some movements involving primarily vertical or horizontal motions of the body as a whole, in which rotations can be ignored, can be studied using simple equations of linear motions in three dimensions. However, rotational motions require more complex approaches that involve analyses of the. way the body's mass is distributed, the axes of rotation involved in different types of movement, and the sources of the forces that produce the rotational movement.

41. The author mentions all of the following as contributing to an understanding of the physics of dance except-
(a) the law of conservation of angular momentum
(b) analyses of the way the body's mass is distributed
(c) equations of linear motion in three dimensions
(d) analyses of the sources that produce rotational motions
(e) the technical terms for movements such as leaps and turns

42. Analyses of which of the following would require the kind of complex approach described in the lines -10?
    (a) A long leap across space
    (b) A short jump upward with a return to the same place
    (c) A sustained and controlled turn in place
    (d) Short rapid steps forward and then backward without turning
    (e) Quick sidesteps in a diagonal line

43. The primary purpose of the passage is to -
    (a) Initiate a debate over two approaches to analyzing a field of study.
    (b) describe how one field of knowledge can be applied to another field
    (c) point out the contradictions between two distinct theories
    (d) define and elaborate on an accepted scientific principle
    (e) discuss the application of a new theory within a new setting

**Questions 44 to 48: Fill in the Gaps**

**Instruction:** Far each question, select the world (s) phrase (s) that appropriately fill (s) the gaps.

44. The authority ____ the admin officer for his ____ way of redacting.
    (a) Reprimanded, obstreperous.
    (b) rebuked arabesque
    (c) scolded, picaresque
    (d) admonished, phlegmatic.
    (e) None of those

45. "Kicking the bucket" is a humorous ____for "dying".
    (a) euphemism
    (b) stipulation
    (c) incantation
    (d) dictum
    (e) None of those

46. The lawyer's pleading did not _____the harsh sentence of the judge; indeed, the lawyer's _____ only____ the extent of the punishment as if throwing____.
    (a) Ameliorate, appeal mitigate, right away
    (b) Mitigate, pleading, exacerbated, fuel into fire
    (c) Compensate, comment, mitigated, stupidity
    (d) Stop, comment, mitigated, in the air
    (e) None of those

47. No one should go to that club as it is _____ bad people.
    (a) Purged in (b) Purged of (c) Purged for (d) Purged with (e) None of those

48. It was ___ rather than genius that led the archeologist to his discovery of the ancient civilization.
    (a) Tautological discovery of the ancient civilization.
    (b) sacrosanct
    (c) obfuscation
    (d) serendipity
    (e) None of those

**Questions 49 to 53: Finding incorrect usage of idioms**

**Instruction:** *Each question below consists of five options. You have to find out the incorrect usage of idioms from the first four options. If all the four options are correct, choose option (E).*

49. (a) It took me three hours to wade through this extremely long report.
    (b) He was on the carpet last week for being late for work three times.
    (c) I like that new procedure and I have decided to jump on the bandwagon
    (d) The habitual cheat finally saw the Light
    (e) All of these are correct

50. (a) We saw the boss at the bar but we gave him a wide berth.
    (b) It may appear that they're getting ahead by cheating, but they'll get their just deserts in the end.
    (c) Everyone should try to avoid poetic justice
    (d) At last the Secretary took the chair
    (e) All of these are correct

51. (a) The spokesman took an early bath after a series of embarrassing and incorrect statements.
    (b) All the football lovers around the globe want the world cup final to be a nail.
    (c) His questions covered a lot of territory.
    (d) After his failure, the chairman got his day in the sun.
    (e) All of these are correct.

52. (a) His ship sank but he escaped with the skin of his teeth
    (b) Income tax is a real cash cow for the government.
    (c) The bombing was a wake-up call to strengthen domestic security.
    (d) An eager beaver is hated by all the organisms of its class.

53. (a) It is our labor of love and a huge reward is anticipated hence.
    (b) The police urged zero tolerance for the eve teasers.
    (c) The New Year party is going in full swing.
    (d) I need your help but you just turned your back on me.
    (e) All of these are correct

**Questions 54 to 55: Reading comprehension**

**Instruction:** *Read the following passage and select the best answer for each of the questions of that follow.*

National character is not formally considered by social scientists in discussing economic and social development today. They believe that people differ, and that these difference should be taken into account somehow, but they have as yet discovered no way to include such variables in their formal models of economic and social development. The difficulty lies in the nature of the data that supposedly define different national characteristics. Anthropologists and others are on much firmer ground when they attempt to describe the cultural norms for a small homogeneous tribe or village than when they undertake the formidable task of discovering the norms that exist in a complex modern nation-state composed of many disparate groups. The situation is further complicated by the nature of judgments about characters since such judgments are overly dependent on impressions, and since, furthermore, impressions are usually stated in qualitative terms, it is impossible to make a reliable comparison between the national characters of two countries.

54. It can be inferred from the passage that the social scientists mentioned in lines 1-4 would agree with which of the following statements?
    I. It is extremely difficult to create models that account for both economic and social development.
    II. Models of economic and social development would be improved by the inclusion of adequate descriptions of national character.
    III. It is important to supplement formal models of economic and social development with qualitative impressions of national character.

    (a) I only (b) II only (c) II only (d) I and III only (e) II and III only

55. Which of the following best describes the organization of the passage?
(a) A problem is presented and reasons for its existence are supplied.
(b) A controversial view is presented and evidence for its validity is supplied.
(c) A hypothesis is presented and possible means of verifying it are suggested.
(d) Recent development is described and then analyzed.
(e) A dispute is summarized and one side defended.

**Questions 56 to 60: Identification of word inappropriate in a context**
**Instruction:** *For each question, select the word that cannot be replaced for the word underlined, If no such word is found mark (E) in the answer sheet.*

56. Abrar was so impetuous that he never took more than a few seconds to make up his mind.
(a) lugubrious b. extremely impatient c. impulsive d. edgy e. None of these

57. If people live in squalor for too long, the ruling elite can count on an insurgency.
(a) Sordidness b. filthiness c. griminess d. dinginess e. None of these

58. The secretary condoned the workers' smoking in the corridor.
(a) Disregarded b. overlooked c. condemned d. ignored e. None of these

59. The speaker's address about a career is a little nebulous (added underline)at this point.
(a) sententious b. jumbled c. vague d. tenuous e. None of these

60. It is ludicrous (added underline) to call a cottage a mansion.
(a) farcical b. generosity c. preposterous d. incongruous e. None of these

## SECTION III: ANALYTICAL ABILITY (Question 61 to 75)

61. Leaders of a garments' union in Bangladesh on a strike against their garments company "KIRTONKHOLA" are contemplating additional measures to pressure the company to accept the union's contract proposal. The union leaders are considering as their principal new tactic, a consumer boycott against "BHUBONESHSHOR", a customarized super shop outlet, which is owned by "RIVERINE BANGLADESH", the same group that owns "KIRTONKHOLA". Answer to which of the following questions is LEAST directly relevant to the union leaders' consideration of whether attempting a boycott of "BHUBONESHSHOR" will lead to acceptance of their contract proposal?
(a) Would revenue losses by "BHUBONESHSHOR" seriously affect "RIVERINE BANGLADESH"?
(b) Can current "BHUBONESHSHOR" customers easily shop elsewhere?
(c) Have other unions that have employed a similar tactic achieved their goals with it?
(d) Do other corporations that own garment companies also own customarized super shop outlets.
(e) Answer to all of the above questions are directly relevant to the above mentioned decision making.

62. The sense of delayed gratification of working now for later pleasure has helped shape the economic behavior of our society. However, that sense is no longer nurtured as consistently in our children as it once was. For example, it used to take a bit of patience to put together the toys that children got inside the cereal boxes; now the toys come in whole. Which of the following is an assumption made by the argument?
(a) The toys in cereal boxes have changed partly because the economic conditions of our society have improved.
(b) The influence of promotion gimmicks on the economic behavior of our society has increased over the years.
(c) The toys that used to come in cereal boxes were put together by the same children who played with them.
(d) Part of the pleasure of any toy lies in putting the toy together before playing with it.
(e) Today's children do not expect a single toy to provide pleasure for a long period of time.

**Questions 63 to 65**

In "RIGHT ON TIME" courier service, during an autumn day, a courier has to deliver six packages - Hurricane, Torpedo, Cyclone, Tornado, Typhoon, and Thunder. He delivers no other packages, and no two packages are delivered at the same time. The order in which the packages are delivered conforms to the following conditions:
Hurricane is neither delivered first nor delivered last.
Cyclone is delivered before Tornado is delivered.
Thunder is delivered after Tornado is delivered.
Typhoon and Cyclone are delivered in immediate succession, regardless of whether Typhoon or Cyclone is delivered first.

63. Which of the following is a full and accurate list of all packages which could be delivered last?
(a) Thunder, Tornado (b) Hurricane, Thunder (c) Torpedo, Thunder
(d) Torpedo, Tornado, Thunder (e) Torpedo, Cyclone, Tornado, Typhoon, Thunder

64. Torpedo could be delivered in all of the following positions except
(a) First (b) Second (c) Third (d) Fourth (e) Fifth

65. If Thunder is delivered before Hurricane, which of the following must be true?
(a) Cyclone is the first package delivered
(b) Typhoon is the first package delivered
(c) Tornado is delivered after Hurricane is delivered
(d) Hurricane is delivered after Torpedo is delivered
(e) Tornado is the third package delivered

66. The number of people diagnosed with dengue fever (which is contracted from the bite of an infected mosquito) in Bangladesh this year is twice the number diagnosed last year. The authorities have concluded that measures to control the mosquito population have failed in the region. All of the following, if true, would cast doubt on the authorities' conclusion EXCEPT-
(a) More cases are now reported because of increased administrative efficiency.
(b) A more effective diagnostic test was introduced about nine months ago.
(c) The incidence (number of cases per thousand) of malaria, also contracted from mosquito bites has increased.
(d) The disease is prevalent only in some industrialized areas which have shown a dramatic increase in population due to migration.
(e) A very high proportion of the cases were in people who had recently returned from neighboring countries

**Questions 67 to70.**

It is a bright sunny day and the last Cricket match of Micromax GDI series between Bangladesh had New Zealand is about to begin. All the people of Bangladesh are very excited and eagerly waiting to watch the match. On that day, witn no exception, three sophomores named Rakshan, Salsabil, Tarnnum with two seniors named Udvash & Vanu and four freshmen named Wajhat, Xanbi, Yasrib, Zeehan are going to enjoy the match at Mirpur Stadium, Though they have nine tickets for the game but the seats against those tickets are scattered in three different arenas of the gallery. Each arena has a group of three adjacent seats. In this circumstance, they have to divide themselves into three groups but that is not so easy as they have certain reservations that must be followed while forming the groups. A funny constraint is that no sophomores can be together in any group and so are any seniors. Not only that, Wajhat in his very first day at university had an unfortunate mishap with Rakshan and thereupon he is not in a position to be in the same group of Rakshan. Last but not the least, Xanbi, being a bit obstinate, constraints herself to be in a group with Salsabil or Udvash or both.

67. Any of the following pairs of people could be in Xanbi's group except
(a) Rakshan and Udvash (b) Salsabil and Tarannum (c) Udvash and Salsabil
(d) Wajhat and Salsabil (e) Udvash and Tarannum

68. Which of the following pairs of people can be in the same group as Wajhat?
(a) Udvash and Vanu (b) Zeehan and Xanbi (c) Udvash and Salsabil
(d) Vanu and Salsabil (e) Rakshan and Yasrib

69. Which of the following must be true?
(a) Tarannum's group includes exactly one freshman.
(b) One of the two seniors is in a group with Wajhat.
(c) Rakshan is in a group with a senior.
(d) One of the groups includes no freshmen.
(e) One of the sophomores is in a group with two freshmen.

70. If Rakshan and Udvash are two of the three people in the first group, who can be in the second and third groups respectively?
(a) Tarannum, Vanu, Wajhat; Salsabil, Yasrib, Zeehan
(b) Wajhat, Xanbi, Yasrib; Salsabil, Vanu, Zeehan
(c) Salsabil, Wajhat, Zeehan; Tarannum, Vanu, Xanbi
(d) Xanbi, Salsabil, Yasrib; Tarannum, Zeehan, Wajhat
(e) Zeehan, Vanu, Yasrib; Wajhat, Salsabil, Tarannum

71. The committee on gender discrimination in the workplace has highlighted Rainbow Company as a chief offender. Of the fifteen senior executives in the firm, only one is a woman. And of the thirty junior executives, only five are female. Rainbow could best defend itself against the charges by showing that-
(a) Male and female executives at the same level have the same qualifications.
(b) They pay the same salary to senior men and senior women.
(c) The work pressures and long hours make jobs with the company unattractive to married women.
(d) Ten times more men than women apply for jobs with the company.
(e) All job applicants who were rejected had fewer qualifications than those accepted.

72. Nineteenth-century art critics judged art by the realism of its method of representation. It was assumed that the realistic method developed from primitive beginnings to the perfection of formal realism. It is one of the permanent gains of the artistic revolution of the twentieth century that we are rid of this type of aesthetics. It can be inferred from the information given that the artistic revolution of the twentieth century had which of the following
(a) It de-emphasized realistic representation as an evaluative consideration for judging words of art.
(b) It permitted modern critics to appreciate the simplicity of primitive art.
(c) It repudiated the realistic representation found in art before the nineteenth century.
(d) It reinforced traditional ways of looking at and judging great art.
(e) It allowed art critics to understand the evolution and nature of art.

73. Stand next to the lamp-post and face west. Walk 20 yards and then turn 90 degrees clockwise. Walk another 10 yards and then turn 45 degrees anticlockwise. Walk another 15 yards, reverse your direction and walk 5 yards back. Turn 135 degrees clockwise and walk another 10 yards. In which direction are you now facing?
(a) West (b) East (c) South (d) North (d) South-East

74. Exactly 7 children - P, Q, R, S, T, U, and V - participated in and finished all of a series of races. There were no ties for any position at the finish of the races. The facts about the races were revealed as: V finished somewhere ahead of P and P finished somewhere ahead of Q. Not only that, either R finished first and T finished last, or S finishes first and U or Q finishes last. If in a race S finishes sixth and Q finishes fifth, which of the following can be true?
(a) V finishes first or fourth (b) R finishes second or third
(c) P finishes second or fifth (d) U finishes third or fourth
(e) T finishes fourth or fifth

75. Why save endangered species? For the general public, endangered species appear to be little more than biological oddities. A very different perception is gained from considering the issue of extinction in a wider context. The important point is that many major social advances have been made on the basis of life forms whose worth would never have been perceived in advance. Consider the impact of rubber-producing plants on contemporary life and industry: approximately two-thirds of the world's rubber supply come from rubber-producing plants and is made into objects as diverse as rubber washers and rubber boots. Any of the following facts could be used as illustrative examples in addition to the example of rubber-producing plants *EXCEPT*-

(a) The discovery of the vaccine for smallpox resulted from observing the effect of the cowpox virus on the hands of dairy workers.
(b) The major source of our pharmaceutical supplies is plants, some of them commonly thought of as weeds.
(c) Certain antibiotics were originally derived, from mold growing on cantaloupes.
(d) Plastic is a unique product derived from petroleum and petroleum by-products.
(e) Hamsters and other rodents have played an important role in laboratory tests of medicine for use on humans.

## Answer Key

### Section I: Mathematics

| | | | | |
|---|---|---|---|---|
| 1. D | 2. C | 3. D | 4. A | 5. C |
| 6. A | 7. D | 8. C | 9. C | 10. B |
| 11. E | 12. C | 13. E | 14. E | 15. B |
| 16. D | 17. E | 18. B | 19. B | 20. A |
| 21. D | 22. A | 23. B | 24. D | 25. B |
| 26. E | 27. E | 28. D | 29. B | 30. A |

### Section II: Language

| | | | | |
|---|---|---|---|---|
| 31. B | 32. B | 33. A | 34. D | 35. A |
| 36. B | 37. D | 38. D | 39. A | 40. A |
| 41. E | 42. C | 43. B | 44. A | 45. A |
| 46. B | 47. E | 48. D | 49. E | 50. E |
| 51. D | 52. D | 53. A | 54. B | 55. A |
| 56.A | 57. E | 58. C | 59. A | 60. B |

### Section III: Analytical Ability

| | | | | |
|---|---|---|---|---|
| 61. D | 62. C | 63. C | 64. B | 65. E |
| 66. C | 67. B | 68. D | 69. E | 70. A |
| 71. E | 72. A | 73. A | 74. D | 75. D |

## BBA (IBA) Admission Test (2010-2011) Solution

### Solution Section I: Mathematics (Questions 1 to 30)

**Part 1: MCQ**

01. (D) প্রশ্নে বলা আছে, প্রতি bounce এ যতটুকু উচ্চতা থেকে ফেলা হয়েছে, তার ঠিক অর্ধেক ওঠে। এক্ষেত্রে, 24 feet বা $\frac{24}{3} = 8$ yards থেকে ফেলা হয়েছে।
অর্থাৎ, $8 + 4 + 4 + 2 + 2 + 1 + 1 + .5 + .5 + .25 = 23.25$ yards দূরত্ব অতিক্রম করতে ৫টি bounce প্রয়োজন।
∴ Answer D

02. (C) P People $\times \frac{2}{5} = \frac{2P}{5}$ answered yes to q1
$\frac{2P}{5} \times \frac{1}{3} = \frac{2P}{15}$ answered yes to q1 and q2
$\therefore P - \frac{2P}{15} = \frac{13P}{15}$ did not answer yes to both questions
∴ Answer C

03. (D) ধরি, Principal = tk. X
তখন, দ্বিতীয় ক্ষেত্রে, interest = 400 − 300=Tk. 100 =
এবং rate of interest=$\frac{100}{5}$ = Tk.20
এই সুদের হারকে প্রথম ক্ষেত্রে ব্যবহার করে, ৩ বছরের interest = 3 × 20 = Tk. 60
অর্থাৎ, principal= 300 – 60 = Tk. 240
তখন, actual rate of interest=$\frac{60\times100}{240\times3}$ = Tk. 8.33
∴ Answer D

04. (A) ধরি, একটির cost=X এবং অপরটির cost =Y
যেহেতু, ১ম টি 25% profit-এ এবং ২য়টি 20% loss-এ বিক্রি করলে কোন লাভ ক্ষতি হয়না, সেহেতু-
x এর 25%= Yএর 20%
বা, $\frac{25x}{100} = \frac{20y}{100}$ বা, $25x = 20y$ বা, $x = \frac{4y}{5}$
এখন, $x + y = 18000 \quad =) \frac{4y}{5} + y = 18{,}000 \quad =) \frac{9y}{5} = 18000$
$=) y = 10{,}000$ এক $x = 8{,}000$
∴ Answer A

05. (C) ধরি, distance = x
Rahim এর Specd = $\frac{x}{20}$ এবং Sohail এর Speed = $\frac{x}{30}$
Rahim রওনা দেয়ার t min পরে Sohail এর সাথে মিলিত হবে ধরে নিলে,
t min এ Rahim যায় $\frac{x}{20} \times t = \frac{tx}{20}$; t min এ Sohail যায় $\frac{x}{30} \times t = \frac{tx}{30}$
Sohail 5 min আগে রওনা দিয়েছিল, অর্থাৎ (t + 5) minute হবে অতিক্রান্ত দূরত্ব
$\therefore \frac{tx}{20} = \frac{x(t+5)}{30} \quad =) \frac{tx}{2} = \frac{tx+5x}{3} \quad =) tx = 5x \quad =) t = 5$
অর্থাৎ (5 + 5) বা 10 min পরে Rahim, Sohail এর সাথে মিলিত হবে।
∴ Answer C

06. (A) ধরি, আগের Price = Tk. 100; ∴ বর্তমান price = Tk. 132
কিন্তু প্রকৃতপক্ষে, খরচ বেড়েছে 10%; ∴ বর্তমান খরচ = Tk. 110
এখন, 132 টাকা খরচ হতো 10 kg এর জন্য
∴ 110 " " হবে $\frac{10\times110}{132}$ = 8.33 kg এর জন্য
∴ Answer A

07. (D) $\frac{2}{5}$ of a mile = 0.4 mile
3.6 mile কে charge অনুযায়ী divide করে নিলে $\frac{3.6}{4}=9$ বার charge হবে
অর্থাৎ Total Charge = Tk. 55.5 + (Tk. 15.25 × 9)
= Tk. 192.75
∴ Answer D

08. (C) ধরি, প্রথমে লোকসংখ্যা ছিল X ∴ Biscuits এর সংখ্যা = 3x
পরবর্তী লোকসংখ্যা = X + 3 এবং পরবর্তী Biscuits এর সংখ্যা 3x + 1
প্রশ্নমতে, 3x + 1 = (x + 3) 2 ∴ x = 5
অর্থাৎ মোট (5 + 3) = 8 জন refreshment পেল।
∴ Answer C

09. (C) এটি আনেকটি Successive Discount এর অংকের মত, প্রথমে reflected হয় 80% অর্থাৎ, 100 এর মধ্যে 80
তারপর মেঘ শুষে নেয়, 40% of 80 = 32
অর্থাৎ, মোট আলো এসে পৌছায় 80 — 32 = 48%
∴ Answer C

10. (B) 20% for A, 60% for B, 100 – (20 + 60) = 20% uncertain
প্রশ্নমতে, 60% — 20% = 720 =) 40 = 720 =) 100% = 1800.
∴ Answer B

11. (E) average consumption = $\frac{2800+3200+3600}{3}=3200$ (৩টির মধ্যে difference সমান;
তাই divide না করে ও 3200 assume করা যায়)
Total cost = 3200 × Tk. 0.30 = Tk. 960 (answer choice এ 96 আছে, কিন্তু 960 নেই)
∴ Answer E

12. (C) ধরি, ছোটজনের বয়স = X বছর
Product 48 হলে বড়জনের বয়স = $\frac{48}{x}$ বছর
প্রশ্নমতে, $\frac{x+\frac{48}{x}}{2}=8$ =) $x+\frac{45}{x}=16$ =) $\frac{x^2+48}{x}=16$
=) $x^2-16x+48=0$ =) $x^2-12x-4x+48=0$
=) (x —4) (x —12) = 0 অর্থাৎ x এর value 4 ও 12 দুটিই হতে পারে, এক্ষত্রে, ছোট জনের বয়স 4 ও বড়জনের বয়স 12 ধরে নেয়াই যুক্তিসংগত।
এখন, প্রশ্নমতে, বাবার বয়স = (12 × 2) + (4 × 4) = 40 বছর
∴ Answer C

13. (E) xy এর highest possible value = 7 × 9=63
এবং lowest Possible value = -5×9=-45
এবার, answer choice গুলো থেকে দেখা যায়, সবগুলোই- 45 to 63 এর range এর ভিতরে রয়েছে এবং factorize করলে integer value ও আসে,
∴ Answer E

14. (E) 1 kg = 1000 gm solution এ 4% (40 gm) salt অর্থাৎ বাকী (100 – 40) = 960 gm water রয়েছে।
এখন, 25gm দ্রবীভূত থাকে 100gm water এ
অর্থাৎ 40 " " " $\frac{100\times40}{25}$ " " "
বা, 160gm water
আবার, 28gm উড়ে যায় 1 hour এ
$\therefore (960-160)$" " " $=\frac{960-160}{28}$" বা, $\frac{800}{28}$ hour বা, $28\frac{4}{7}$ hour এ
∴ Answer E

15. (B) $4x = 5y \quad =) x : y = 5:4$
$5y = 6z \quad =) y : z = 6 : 5$
এখন, $x : y : z = 15 : 12 : 10$
∴ x + y + z = 15 + 12 + 10 = 37 বা, 37 এর multiple
∴ Answer B

16. (D) Rajib এর initial investment 700 টাকা যেটা 3 months খাটল
সে withdraw করল $= 700\times\frac{2}{7} = 200$ টাকা; অর্থাৎ, পরের 3 monthss (700 – 200) = 500 টাকা খাটল,
then সে re-invest করল $200\times\frac{3}{5} = 120$ টাকা অর্থাৎ বাকী 6 months (500 + 120) = 620 টাকা খাটল।
সুতরাং Rajib এর time-weighted total = (700 × 3) + (500 × 3) + (620 × 6) = Tk. 7320
আর, Rahat এর time-weighted total = (600 x 12) = Tk. 7200
অর্থাৎ Total investment = Tk. (7320 + 720) = Tk. 14,520
investment এর time-weighted ratio এর difference = Tk. (7320-7200) = Tk. 120 এখন, 14520 হলে difference = 120
726 " " $=\frac{120\times726}{14520} = Tk.6$
∴ Answer D

17. (E) m একটি integer হলে এটি odd বা even যেকোনটি হতে পারে,
m কে odd ধরলে (m-1) (m+2)-(m–1) (m–2)
= (odd – 1) (odd + 2) – (odd – 1) (odd–2)
= (even x odd) – (even x odd) = even – even
= even

আবার, m- কে even ধরলে (m-1) (m+2) – (m–1) (m–2)
= (even-1) (even + 2) – (even–1) (even –2)
= (odd x even) – (odd x even) = even – even
= even
অর্থাৎ যেকোন ভাবেই y এর মান even
∴ Answer E

18. (B) Total Student = 900 ∴ Juniors $= 900\times\frac{24}{100} = 216$ জন Senior = 144 জন (100 -72) = 28%
of 900 $= \frac{28}{100} \times 900 = 252$ জন Sophomores
∴ freahers = 900 – (144 + 216 + 252) = 288 জন
অর্থাৎ freashmen- sophomores = 288 – 252 = 36 জন
∴ Answer B

19. (B) 22 minute এর জন্য mimute hand 12 টা থেকে move করবে = $22 \times 6 = 132$.
6 hours এর জন mimute hand 12 টা থেকে move করবে = $6 \times 30° = 180°$.
22 minute এর জন্য minute hand 12 টা থেকে move করবে = $22 \times \frac{1}{2} = 11°$
∴ hour hand মোট move করল = $180 + 11 = 191°$
minute hand মোট move করল = $132°$
∴ acute angle = $(191 - 132)° = 95°$
∴ Answer B

20. (A) মোট বই = 9+4+12+7=32 টি
Drama books 6টি তোলা সম্ভব নয় কারণ মোট আছে 4টি এখন, সর্বনিম্ন সংখ্যার বই তুলে একটি নির্দিষ্ট type এর 6টি বই pick করতে হবে। অর্থাৎ 3টি category থেকে 6 এর চেয়ে কম অথচ সর্বোচ্চ (অর্থাৎ 5টি) বই তুললে ব্যাপারটি দাঁড়ায় $5+5+4$ ( drama সর্বোচ্চ 4 টি) + 6 = 20 টি
∴ Answer A

21. (D) width যদি x হয় Length = 4x
area = $4x^2$ এক perimeter = $2(x + 4x) = 10x$
20 Tk / sq.mt করে মোট খরচ = 1280 Tk
অর্থাৎ মোট area = $\frac{1280}{20}$ sq.mt = 64 sq.mt
অতএব, $4x^2 = 64 \quad =) \; x^2 = 16 \quad =) \; x = 4$
∴ Perimeter = 10x = 40 meters
∴ Answer D

22. (A) ধরি, মোট ছাত্র-ছাত্রী = 100 জন ছাত্র সংখ্যা X হলে ছাত্রীসংখ্যা = (100 – x)
প্রশ্নমতে, $64x + 61(100 - x) = 62.2 \times 100$
$=) \; 64x + 6100 - 61x = 6220 \quad =) \; 3x = 120 \quad =) \; x = 40$
(এটিকে average এর shortcut অর্থাৎ cross-ratio দিয়েও করা যায়)
∴ Answer A

23. (B) দুটি inlet একসাথে কাজ করলে,
48 min এ ভরে 10 টি ট্যাংক
∴ 1 min এ ভরে = $\frac{1}{48}$ অংশ
শুধু 1st inlet 2 hrs বা 120 min এ ভরে 1 টি ট্যাংক
∴ 1st inlet 1 min এ ভরে $\frac{1}{120}$ অংশ
অতএব, 2nd inlet 1 min এ ভরে $\left(\frac{1}{48} - \frac{1}{120}\right) = \frac{1}{80}$ অংশ
অর্থাৎ $\frac{1}{80} - \frac{1}{120} = 50 \quad =) \; 1 = 12000 \, m^3$
∴ Answer B

24. (D) Cylinder's volume = $\pi r^2 h$ = base x height
Cone's volume = $\frac{1}{3}\pi r^2 h = \frac{1}{3}$ x base x height
∴ ratio = $\frac{b \times h}{\frac{1}{3} \times b \times h} = \frac{1}{\frac{1}{3}} = \frac{3}{1} = 3:1$
∴ Answer D

25. (B) 20 থেকে 50 এর মধ্যে যে integer গুলোকে 5 দিয়ে ভাগ করা যায়, সেগুলোর সাথে 2 যোগ করলে দাঁড়ায় : 25 + 2 = 27; 30 + 2 = 32; 35 + 2 = 37; 40 + 2 = 42; 45 + 2 = 47
যোগফল গুলিকে 6 দিয়ে ভাগ করলে শুধু 37 এর ক্ষেত্রে 1 অবশিষ্ট থাকে। অর্থাৎ, candy এর সংখ্যা = 37. 37-কে 7 জনের মধ্যে ভাগ করে দিলে 2 অবশিষ্ট (7 x 5 = 35) থাকে।
∴ Answer B

26. (E) Type a তে Milk: Fruit juice = 4:3 পরিমান ধরে নিই, 4x এবং 3x
type B তে Milk : Fruit juice = 3 : 4
এখন, $4x + 3x = 14$ =) $x = 2$ অর্থাৎ Milk = 8, F.J = 6

ধরি, y lit F.J add করতে হবে,
অর্থাৎ $8:6+y=3:4$ =) $\frac{8}{6+y}=\frac{3}{4}$ =) $3y=14$ =) $y=4\frac{2}{3}$

∴ Answer E

27. (E) বলা আছে, ABCD একটি square; AE এর length 4 এর AF এর length 3. লক্ষ্য করুন, EG রেখাটি সম্বন্ধে কিছু বলা হয়নি। অর্থাৎ EG রেখাটি AB বা DC এর সমান্তরাল কিনা অথবা $\angle$AEI বা $\angle$FIE সমকোন কিনা এ ধরণের কোন তথ্য দেয়া হয়নি। যদি এগুলো ধরে নেয়া হয় সেক্ষেত্রে C answer হয়। কিন্তু আসলে উত্তর বের করা সম্ভব নয়।

28. (D) Reservation Charge = R; Adult এর basic fare = A এবং child এর basic fare = C ধরে নিলে, $C = \frac{A}{2}$ - - - - - (I) $R + A + R + C = 327$ - - - (II) $R + A = 216$ - - - - - (III)

(II) – (III) করলে পাই, $R + C = 111$ ------ (IV)
(III) নং কে উভয়পক্ষে 2 দিয়ে divide করলে পাই $\frac{A}{2}+\frac{R}{2}=108$ বা, $C+\frac{R}{2}=108$ -------- (V)

(IV) – (V) থেকে পাই, $R + C - C - \frac{R}{2} = 111 - 108$ =) $\frac{R}{2}=3$ =) $R = 6$

∴ $A = 216 - 6 = 210$
Answer D

29. (B) ৩টি number কে যোগ করে যোগফলকে ৩ দিয়ে ভাগ করলে সংখ্যা ৩টির average পাওয়া যায়। দেখতে হবে I, II, III এর মধ্যে কোনটিতে average পাওয়া যায়।
I) এক্ষেত্রে সংখ্যাগুলোর difference সমান না হলে average পাওয়া যাবেনা।
II) এক্ষেত্রে অবশ্যই average পাওয়া যাবে।
III) এক্ষেত্রে average এর দ্বিগুন পাওয়া যাবে।
∴ Answer B (II only)

30. (A) 25 pairs অর্থাৎ মোট ৫০ টি pieces থেকে ৯ টি হারিয়ে গেছে; অতএব রয়ে গেছে (50 – 9) = 41 pieces. সর্বোচ্চ সম্ভব জোড়া = 20 টি; 20 x 2 = 40
∴ Answer A

## Solution Section II: Language & Communication (Questions 31-33)

**Reading Comprehension (31-33)**

31. B) Passage এর শুরুতে একটি natural phenomenon (creation of magnetic field and events like surge in the outer core, tenpest) নিয়ে কথা বলা হয়েছে পরবর্তীতে এই phenomenon study করার ক্ষেত্রে Limitations এবং challenge এর কথা আলোচনা করা হয়েছে।
32. B) passage শুরুর তিনটি লাইন (Especially 3rd) suggest করে, Inner core এর molted iron এর revolution (ঘূর্নন) এর ফলে outer core এর surge সংগঠিত হয়।
33. A) 5-10 লাইন মূলত Meteorologist এবং Geophysicist দের Research methodology-র অবতারনা করে geophysicist দের observation limitation-এ focus করা হয়েছে।

**Identification of incorrect sentences: (34-40)**

34. D) Don't even like এর পরিবর্তে Didn't even like হবে (Problem in Tense).
35. A) Perfect এর আগে more use করা Incorrect.
36. B) Not only এবং but also এর পরে similar pattern হবে। Correction to fund not only the construction___ but also the new research center অথবা not only to fund __ but also to fund __.
37. D) all right এর পরিবর্তে alright হবে।
38. D) Problem of Redundancy. শুধু Consensus (Uniformity of opinion) হবে।
39. A) it advisable এর জায়গায় it would be advisable হবে।
40. A) devil in it এর পরিবর্তে devil of it (insignificant flaw) হবে।

**Reading Comprehension (41-43)**

41. E) Passage-এ A, B, C, D চারটির সবগুলো mention করা হয়েছে। শুধু F mention করা নেই।
42. C) A sustained and controlled turn in place এর জন্য 6-10 এ describe করা বিভিন্ন complex approach যেমন Low of conservation of angular momentum, Linear motion etc. দরকার হবে।
43. B) Dance-এর বিভিন্ন body movement-কে physics এর বিভিন্ন theory দিয়ে explain করা হয়েছে।

**Fill in the gaps (44-48)**

44. A) reprimanded মানে তিরষ্কার বা ভৎসর্না করা, obstreperous মানে অবাধ্য আচরন।
45. A) euphemism মানে মূল শব্দের (Dying) পরিবর্তে অন্য কোন শব্দ (kicking the bucket) ব্যবহার করা।
46. B) mitigate মানে reduce করা, pleading (আর্জি), exacerbated মানে খারাপ করে দেয়া, এবং fuel into fire এখানে exacerbate এর Euphemism.
47. E) not purged of (মুক্ত নয়) correct answer.
48. D) Serendipity মানে sudden discovery without prior planning.

**Incorrect usage of idioms (49-53)**

49. E) সবগুলো correct.
50. E) সবগুলো correct.
51. D) Failure এর পর Day in the sun (মূল্যায়ন) does not make sense Failure এর জায়গায় success থাকলে Idioms appropriate হত।
52. D) Eager beaver (Very hardworking)-কে appreciate করা হয়।
53. A) Labor of Love (Action done voluntarily without any profit motive) এর জন্য huge reward anticipate করা হয় না।

**Reading Comprehension (54-55)**

54. B) (I) হবে না কারণ Economic and Social Development এর model তৈরি কঠিন কি না তা বলা হয় নি। (III) Qualitative impressions ব্যবহার করলে model complicated হয়ে যাবে। শুধু II সত্য। এ জন্য answer B.

55. A) শুরুতে Social এবং Economic model-এ Nation character use করার Problem এবং পরবর্তীতে Problem এর কারন ব্যাখ্যা করা হয়েছে।

**Appropriate Cotentual Words (56-60)**

56. A) Impetuous (ক্ষীপ্র) কে lugubrious (উদাসীন, ধীরস্থির) দিয়ে replace করা যাবে না।

57. E) সবগুলোর meaning-ই নোংরা অবস্থা নির্দেশ করে।

58. C) Condone মানে মার্জনা করা বা না দেখার ভান করা, condemned মানে নিন্দা করা।

59. A) nebulous (অস্পষ্ট) কে sententious (আড়ম্বরপূর্ণ) দিয়ে replace করা যাবে না।

60. B) সবগুলোর মানেই হাস্যকর শুধু generosity (উদারতা) মানে ভিন্ন। Plus, ludicrous adjective এর replace next generosity noun হবে না।

## Solution Section III: Analytical Ability (Questions 61 to 75)

61. (D) Question stem টি-মনোযোগ দিয়ে পড়লে যা বোঝা যায় তা হচ্ছে- KIRTONKHLA garments এর শ্রমিক ইউনিয়ন কর্তৃপক্ষের বিরুদ্ধে তাদের অসহযোগিতা বাড়ানোর পরিকল্পনা করছে। এর অংশ হিসেবে তারা BHUBONESHSHOR নামের দোকান থেকে কিছু না কেনার সিদ্ধান্ত নিয়েছে। দোকনটি এবং garments-এ দু'য়েরই মালিক RIVERINE BANGLADESH. অর্থাৎ তারা strike এর পাশাপাশি ভিন্ন দৃষ্টিকোন থেকে মালিকপক্ষকে ক্ষতিগ্রস্ত করে দাবী আদায়ের পথ সুগম করতে চাইছে। Answer choices এ কয়েকটি প্রশ্ন দেয়া আগে এবং জানতে চাওয়া হয়েছে কোন প্রশ্নের উত্তর জানাটি ইউনিয়নের নতুন plan কার্যকরী করার জন্য সবচেয়ে কম প্রাসঙ্গিক।
    a) অবশ্যই প্রাসঙ্গিক; কারন তারা Riverine কেই চাপে ফেলতে চাইছে।
    b) এটিও প্রাসঙ্গিক; বিকল্প দোকান না থাকলে তাদের plan কার্যকরী হবেনা।
    c) এটিও মোটামুটি প্রাসঙ্গিক; আগে অন্য কেউ এ ধরনের strategy-তে সাফল্য লাভ করেছে কিনা তা জানা important.
    d) অন্য garments এর এ রকম দোকান আছে কিনা সেটা জানা না জানার উপর কিছুই নির্ভর করেনা, এটি মোটামুটি অপ্রাসঙ্গিক।
    ∴ Answer D

62. (C) এখানে একটি argument (প্রথম বাক্যটি) এর সাথে relevant অপর একটি argument (বাচ্চাদের খেলনার ব্যাপারটি) তুলনা করা হয়েছে। এখন কিছু একটা করে পরবর্তীতে ফল ভোগ করে (delayed pleasure) আনন্দ পাওয়ার কথা বলা হয়েছে। বলা হয়েছে, আগে খেলনার যন্ত্রাংশ জোড়া লাগিয়ে পুরো খেলনা বানাত বাচ্চারা; আর এখন খেলনাটা বানানো অবস্থাতেই আসে। অতএব প্রথম argument এর delayed pleasure এর ব্যাপারটি ওদের মধ্যে চর্চিত হচ্ছেনা। এখন, missing assumption খুঁজতে গিয়ে দেখুন- যারা খেলনার part গুলো জোড়া লাগাতো, সেই একই বাচ্চারা ঐ খেলনা দিয়ে খেলত-এটা assume না করলে argument টি দাঁড়ায়না।
    ∴ Answer C

**63-65**

ছয়টি package (Hurricane, Torpedo, Cyclone, Tornado, Typhoon ও Thunder) deliver করতে হবে নিচের শর্তানুযায়ী-

a. দু'টি package একসাথে deliver করা যাবেনা।
b. Hurricane একদম প্রথমে বা একদম শেষে deliver করা যাবেনা।
c. Cyclone এর delivery হবে Tornado এর আগে।
d. Thunder এর delivery হবে Tornado এর পরে।
e. Typhoon ও Cyclone এর delivery হতে হবে ঠিক আগে-পরে, মাঝখানে অন্য কোন delivery হবে না। অর্থাৎ Typhoon এর পরপর cyclone বা cyclone এর পরপর Typhoon deliver করতে হবে।

63. (C) সবার শেষে delivery দেওয়া যাবেনা এরকম package আছে Hurricane (2 নং শর্ত), cyclone (3 নং শর্ত), Tornado (4 নং শর্ত), Typhoon (5 নং শর্ত)
    ∴ Answer C

64. (B) Torpedo কে ২ নং Position 3 বসলে শর্তগুলো পূরণ হয়না।
    ∴ Answer B

65. (E) Thunder এর আগে Torpedo (শর্ত -4) এবং Tornado এর আগে Cyclone ও Typhoon (শর্ত- 3 ও 5)
এখন, ৩টি Thunder এর আগে হলে Thunder এর Position 4 এ রেখে Hurricane কে 5 এ রাখতে হবে। কারণ Hurricane শেষে deliver করা যাবেনা (শর্ত ২)। অর্থাৎ Sequence হবে 1 আর 2 এ Cyclone ও Typhoon, 3-এ Tornado, 4-এ Thunder, 5-এ Hurricane, 6-এ Torpedo.
∴ Answer E

66. (C) Conclusion: Dengue এর বিরুদ্ধে যে প্রতিরোধমূলক কার্যক্রম গ্রহণ করা হয়েছে তা ব্যর্থ হয়েছে।
Premise: গত বছরের তুলনায় Dengue আক্রান্তের সংখ্যা দ্বিগুণ হয়েছে।
প্রশ্ন: answer choices এর মধ্যে একটি ছাড়া বাকীগুলো এই conclusion কে প্রশ্নবিদ্ধ করে। কোনটি করেনা?
a, b, d, e প্রত্যেকটি প্রশ্নবিদ্ধ করে কারণ প্রত্যেকটিতে বেশি আক্রান্ত হওয়ার বা আক্রান্ত হওয়া চিহ্নিত করার অন্য জোরালো কারন দেখানো হয়েছে।
C-তে malaria এর কথা বলা হয়েছে, যা প্রদত্ত argument এর সাথে অসংগতিপূর্ণ; তাই প্রশ্নবিদ্ধ করার প্রশ্নই ওঠেনা।
∴ Answer C

**67-70**

গুরুত্বপূর্ণ তথ্যগুলো হচ্ছেঃ ৩ জন Sophomore (R, S, T), ২ জন Senior (U, V) এবং ৪ জন Freshmen (W, X, Y, Z) এই মোট ৯ জন এর কাছে খেলার ৯ টি টিকেট আছে। কিন্তু seat member গুলো আছে এমনভাবে যাতে তাদেরকে ৩টি ভিন্ন জায়গায় বসতে হয়। ঐ ৩টি ভিন্ন জায়গার প্রতিটিতে পাশাপাশি ৩ জন বসতে পারবে। এমতাবস্থায় এই ৯ জনকে কিছু শর্ত মাথায় রেখে ৩টি ৩জনের group-এ ভাগ হয়ে বসতে হবে। শর্তগুলো হচ্ছে:
1) Sophomores রা একজন আরেকজনের সাথে থাকবে না।
2) Senior রা একজন আরেকজনের সাথে থাকবে না।
3) W এবং R একসাথে থাকবে না।
4) X, S অথবা U এর সাথে থাকবে অথবা দুজনের সাথে একসাথে থাকবে।
এবার প্রশ্নগুলো দেখা যাক।

67. (B) choice টি 1 নং শর্তানুযায়ী সম্ভব নয়।
∴ Answer B

68. (A) A) সম্ভব নয় (২ নং শর্ত)
B) সম্ভব নয় কারন W, Z, X একই group এ থাকলে ৩ জন sophomore কে আলাদা group এ দেয়া সম্ভব নয়।
C) U and S একসাথে W এর সাথে থাকবে X এর সাথে group form করা সম্ভব নয়।
D) সম্ভব;
E) ৩ নং শর্ত অনুযায়ী সম্ভব নয়।
∴ Answer D

69. (E) A, B, C, D কোনটিই অবশ্যম্ভাবী নয়। E অবশ্যই হতে হবে; কারন ৩ জন sophomore কে ৩টি আলাদা group এ রেখে এবং ২ জন senior কে ২টি আলাদা group এ রাখতে হলে অবশ্যই ১জন sophomore কে একটি group এ ২ জন freshmen এর সাথে থাকতে হবে।
∴ Answer E

70. (A) প্রথম group এ R এবং U এর সাথে থাকতে পারে – X, Y, Z এর মধ্যে যেকোন একজন
A) T, V, W; S, Y, Z সম্ভব, এক্ষেত্রে R, U, X হবে প্রথমটি। বাকী কোনটি সম্ভব নয়।
∴ Answer A

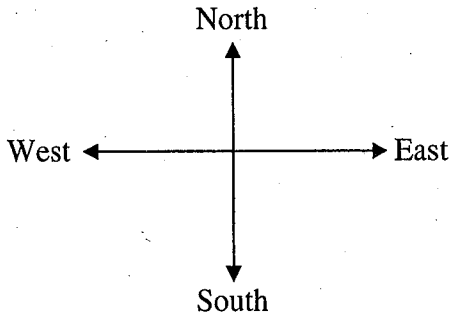
71. (E) ১৫ জন Senior executives এর মধ্যে মাত্র ১ জন মহিলা এবং ৩০ জন junior executives এর মধ্যে মাত্র ৫ জন্য মহিলা থাকার কারনে Rainbow Company কে gender discrimination এর অভিযোগে চিহ্নিত করা হয়েছে। প্রশ্ন হচ্ছে- answer choice এর মধ্যে কোনটি Rainbow এর পক্ষে এবং এই অভিযোগের বিপক্ষে বলা যায়।
a) এটি অভিযোগের পক্ষে চলে যায়।
b) Salary এর সাথে অভিযোগটির সম্পর্ক নেই।
c) শুধু বিবাহিত মহিলারা অভিযোগটির সাথে সম্পৃক্ত নয়।
d) দশগুণ বেশি পুরুষ আবেদন করলেও তাদের যোগ্যতা সম্পর্কে কিছু বলা হয়নি।
e) এই answer choice টি তে নির্বাচন প্রাক্রিয়ার স্বচ্ছতা তুলে ধরা হয়েছে এবং যোগ্যতার ভিত্তিতে employee selection এর কথা বলা হয়েছে, লিঙ্গ এখানে কোন ব্যাপার নয়। এটিই সবচেয়ে জোরালো যুক্তি।
∴ Answer E

72. (A) উনবিংশ এবং বিংশ শতব্দীর চিত্র সমালোচনার দৃষ্টিভঙ্গীর পার্থক্য তুলে ধরা হয়েছে। বলা হয়েছে, উনবিংশ শতাব্দীতে বাস্তববাদী প্রকাশকে বেশি গুরুত্ব দেয়া হতো (realistic representation) এবং বিংশ শতাব্দীর চিত্র সমালোচনা এ ধরণের সৌন্দর্যপ্রীতি থেকে মুক্ত। প্রশ্ন হচ্ছে- answer choice এর কোনটি বিংশ শতাব্দীর style বা চিত্র-বিপ্লব এর উপর প্রভাব বিস্তার করেছে।

A) এখানেই আমরা answer পেয়ে যাই। Realistic representation কে de-emphasize করাটাই বিংশ শতাব্দীর মূলধারা অন্য answer choice গুলোর কোন effect পাওয়া যায়না।

∴ Answer A

73. (A) দুরত্ব জানতে চাওয়া হয়নি; সুতারং শুধু দিক বদল টা consider করলেই হবে। তার আগে, নিচের চিত্রটি দেখুন-




West থেকে 90° clockwise turn করলে North-facing হবে। সেখানে থেকে 45° anti- clockwise গেলে North–West facing হবে। Direction reverse করলে South-East facing হবে। সেখান থেকে 135° clockwise গেলে আবার West-facing হবে।

∴ Answer A

74. (D) 9 জন children (P, Q, R, S, T, U, V) race শেষ করেছে নিচের শর্তানুযায়ী -

a. কোন position এ tie হয়নি; 2. V, P এর আগে শেষ করেছে; 3. P, Q এর আগে শেষ করেছে;
4. R $1^{st}$ এবং T $7^{th}$ অথবা S $1^{st}$ এবং U/Q $7^{th}$-এ দু'টি result-ই সম্ভব।

প্রশ্ন হচ্ছে-) S $6^{th}$ হয় এবং Q $5^{th}$ হয় সেক্ষেত্রে Answer choice গুলোর কোনটি true হতে পারে।
লক্ষ করুন, S যদি $6^{th}$ হয়; 4 নং শর্তানুযায়ী R $1^{st}$ এবং T $7^{th}$ হয়েছে। অর্থাৎ আমরা কয়েকটি Position সম্বন্ধে নিশ্চিত হয়ে গেলাম।

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| R | U/V | U/V/P | U/P | Q | S | T |

আমরা P, U, V এর positions সম্বন্ধে uncertain. কিন্তু 1 ও 2 নং শর্তানুযায়ী, V 4 নং এ থাকতে পারবেনা এবং P 2 নং এ থাকতে পারবেনা। Answer choice গুলো দেখা যাক। শুধু D সম্ভব।

∴ Answer D

75. (D) এই প্রশ্নটি দেখতে অনেক complicated মনে হলেও আসলে খুবই simple. পুরো passage টি হচ্ছে জীব এবং জীবানু জগৎ এর উপকারিতা নিয়ে। কোন্ answer choice টি exception সেটি সহজেই বোঝা যায়। প্রত্যেকটিতে জীবানুর কার্যকারিতা নিয়ে বলা হয়েছে, একমাত্র D তে petroleum (জীবানু নয়) এর উপকারিতা বলা হয়েছে।

∴ Answer D.

# BBA (IBA)

## Admission Test Question (2011-2012) with Solution

## PART 1: Multiple Choice Questions (MCQS)

**Section I: Language** — **30 Questions, 30 marks**

**Question 1 to 6**

**Instruction: Select the correct word(s) for filling up the blank in each sentence.**

1. Before submitting the proposal I will _____ for a final review.
   (A) run it by you (B) run it for you (C) run it over you
   (D) run it to you (E) run it through you
2. Rafi, please don't get ____ about something so trivial. It just isn't worth it !
   (A) worked on (B) worked up (C) worked over (D) worked out (E) worked in
3. He had _____ the law just last week for unruly behavior. If I were him, I would be more careful.
   (A) Deviated from (B) a run with (C) a brush with (D) to face (E) aggravated
4. Mutual mistrust has _____ countries of the region from _____ building multiple connectivity.
   (A) promoted; signifying (B) compelled; highlighting
   (C) prevented; prioritizing (D) arrested; applying (E) led; promoting
5. Globalization has led to the contradictory trends of_____ trading partners and the simultaneous _____ of societies.
   (A) Assimilation: amalgamation (B) integration; dissolution
   (C) fragmentation: disintegration (D) absorption; ingestion
   (E) changing; entanglement
6. 6. There is a huge demand, especially in these_____ markets, to grasp opportunity out of the chaos, but it's really about the management controls that are in place to allow that to happen in a _____manner.
   (A) stable; unstructured (B) fickle; disorganized
   (C) steady; controlled (D) capricious; inchoate (E) volatile; coordinated

Questions 7 to 9

Instruction: Choose the most appropriate **ANTONYM** to the word in capital letters.

7. PENSIVE
   (A) Malevolent (B) Despondent (C) Focused (D) Torpid (E) Frugal
8. PAUCITY
   (A) Hardship (B) Dearth (C) Sparing (D) Surplus (E) Dexterous
9. CONCORD
   (A) Harmony (B) Thrifty (C) Subtle (D) Scanty (E) Conflict

**Questions 10 to 12**

**Instruction:** Choose the most appropriate SYNONYM to the word in capital letters.

**10. MANIFEST**

(A) Discernible (B) Enjoyable (C) Invisible (D) Plenteous (E) Imperceptible

**11. BLIGHT**

(A) Damage (B) Disdain (C) Moderate (D) Painful (E) Pivot

**12. PROFUSION**

(A) Proliferate (B) Glut (C) Infusion (D) Fabrication (E) Insulation

**Questions 13 to 15**

**Instruction:** A related pair of words in capital letters is followed by five pairs of words. Select the pair of words that best **expresses a relationship similar to** that expressed in the original pair of words.

**13. INTEREST: FASCINATION**

(A) Dislike: Abhorrence (B) Faith: Belief (C) Fire: Torch
(D) Story: Fact (E) Polite: Courteous

**14. CIRCLE: SPHERE.**

(A) Rectangle: Hand (B) Pyramid: Base (C) Line: Triangle
(D) Square: Cube (E) Triangle: Hexagon

**15. TOXIC: HARMFUL**

(A) Iron: Useful (B) Police: Awful (C) Gay: Cheerful
(D) Cruel: Joyful (E) Criminal: Lawful

**Questions 16 to 20**

**Instruction:** Read the following passage and select the best answer for each of the question that follows.

Rock and sea salt is no different from ordinary table salt, despite claims it is natural and more healthy, say consumer groups. Producers dispute the report saying it does not give the full picture.

Eating a diet high in salt is linked with high blood pressure, a risk factor for stroke, heart failure and heart disease. The research analyzed the chemical content of several gourmet brands of sea and rock salt, and compared this with ordinary table salt. They say all contain almost equal proportions of sodium chloride and are equally damaging to health in large quantities. The lead researcher stated, "The most important message is that you don't need to add a chemical (sodium chloride) to your food. Food without salt tastes much better. There's quite enough already present in fruit, vegetables, meat and fish." The report says brands claiming some salts are more natural and contain essential minerals are confusing the public. An online survey of 1,358 consumers found around one in three admitted thinking that rock and sea salts were healthier than table salt. Salt producers disputed the research. According to them, "This report is not giving a full picture by not going into the other things in either sea salt or the additives in table salt. Table salt is a highly refined, processed white substance that's devoid of nutrients."

16. The main objective of the article is:

(A) To present information on the harmful effects of table salt as well as rock salt.
(B) To provide the pros and cons of consuming salt in higher-than-moderate quantities.
(C) To provide the background for research into components as well as consumption of salt.
(D) To address the erroneous picture presented by salt producers as to the true contents of their salt.
(E) To present opposing views of health implications of natural salt versus processed salt.

17. The last line of the second paragraph refers to an online survey.

(A) To show that consumers' health is being negatively affected by brands false fully marketing their products.
(B) To illustrate the ease of conducting surveys among large groups online.

(C) To criticize the consumers of not being informed enough and remaining confused on salt components
(D) To highlight the formation of consumers' perception based on brands' marketing efforts.
(E) To state that 2/3rd of consumers know the health benefits of table salt over unprocessed salt.
18. The argument presented by salt producers against the consumer groups' research is based on:
(A) Health benefits of other minerals in unprocessed salt, absent in refined salt.
(B) The research being biased against the salt producers' claim about natural salt being healthier than table salt.
(C) The taste of food improving through the use of mineral salts.
(D) The claim that some salts are less natural and contain essential minerals.
(E) The claim that the salt already present in fruit, vegetables, meat and fish, is not in enough quantity.
19. Which of the following, if true, would most strengthen the consumer groups claim?
(A) Consuming too much salt results in health problems, including heart diseases.
(B) Food without salt tastes much better.
(C) The salt in vegetables is very similar to table salt.
(D) Consumers are confused about the health benefits of rock and sea salts compared to table salt.
(E) The amount of sodium chloride in any type of salt is around 100%.
20. Which of the following, if true, would most strengthen the salt producers' claim?
(A) Rock and sea salts are naturally found in fish.
(B) Consumers are confused about the amount of sodium chloride in rock salt versus table salt.
(C) Rock and sea salts have nutrients in them other than sodium chloride.
(D) The consumer group's research has only been conducted on ordinary table salt, but not fortified processed salt.
(E) All table salts are white substances, but not all rock and sea salts are white.

**Questions 21 to 22**

Instruction: Identify the pair of words to replace the underlined pair of words that will change the Meaning of the sentence to the opposite of what is originally conveyed.

21. A group protested the depiction of their country's map, which they say is an inaccurate representation of the borders.
(A) remonstrated; accurate (B) opposed; erroneous (C) applauded; approximate
(D) Commended; appropriate (E) None of the above
22. The new edict is intended to encourage reconciliation, while creating a sense of solidarity.
(A) Urge; discordance (B) hinder; friction
(C) Inhibit; camaraderie (D) stifle: esprit de corps
(E) Embolden; disunity

**Questions 23 to 26**

**Instruction:** For each question, choose the alternative where the prefix or suffix (that is given in all Capital has not been properly used.

**23. DIS**
(A) Discontent (B) Dislocate (C) Distrust (D) Disarray (E) None of these

**24. NON -**

(A) Nonarticulate (B) Nonviolent (C) Nonsectarian (D) Nonstandard (E) None of These

**25. EN**

(A) Strengthen (B) Shorten (C) Frighten (D) Delighten (E) None of these

**26. UN**

(A) Unaccustomed (B) Unkempt (C) Unruffled (D) Uncourteous (E) None of these

**Questions 27 to 30**

Instruction: Underlined parts of the following sentences may contain error(s) in grammar, diction, usage or idiom. Choose the underlined portion that is incorrect. If there is no error then select (E).

27. Above all, cooperation and good relations among the region's countries are a must for the
(A) (B) (C)
South Asia everyone dreams. No Error,
(D) (E)

28. Both lawyers interpreted the law differently and they needed a judge to settle its dispute.
(A) (B) (C) (D)
No Error.
(E)

29. As a young adult, I want to travel, to learn and, in some indescribable way, to make a
(A) (B) (C)
difference in the world around me. No Error.
(D) (E)

30. Your argument is no different from the last speaker who also opposes this timely legislation.
(A) (B) (C) (D)
No Error.
(E)

| Section II: **Mathematics** | **30 Questions, 30 Marks** |
|---|---|

**Instructions:** DO NOT USE A CALCULATOR. Figures are not drawn **to** scale.

31. A 112 meter rope is cut into three pieces with each piece twice as long as the previous one. How long is the longest piece?
(A) 56 (B) 64 (C) 68 (D) 72 (E) None of these

32. A company has 3,600 employees of which 1/3 are clerks. If the clerical staff is reduced by 1/3, what percent of the total number of remaining employees would be clerical staff?
(A) 25.00 (B) 22.22 (C) 20.00 (D) 12.50 (E) None of these

33. If m is an even integer and n is an integer (either odd or even), then which of the following will always be even?
I. $m^2 + n^2 + n$ fl. $(m - n) \times (n + 1)$ III. $m^2 - n^2 + 1$
(A) Only I (B) Only II (C) Only III (D) Both I and II (E) Both II and III

34. An amount of money is to be distributed among P, Q and R in the ratio of 6:19:7 respectively. If R gives Tk. 200 of his share to Q. the ratio among P, Q and R becomes 3:10:3 respectively. What was the total amount in taka?
(A) 3, 200 (B) 3,500 (C) 5,200 (D) 6,400 (E) None of these

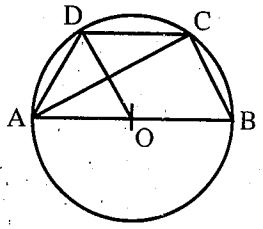
35. A lady went shopping and bought one red bag and 15 black bags. The cost of the red bag was 3 times the average cost of a black bag. If she had spent a total of Taka x for the bags, what was the cost of the red bag (in terms of x)
(A)x/5 (B)4x/17 (C)x/6 (D)3x/16 (E) None of these

36. If a < b. which of the following must be positive?
(A) $a^2-b^2$ (B) $b^2 - a^2$ (C) $a^3 - b^2$ (D) $b^2-ab$ (E) None of these

37. Alam can do a job in 3 hours. BIPU can do the same work in 20% lesser time but he charges 30% per hour more than Alam does. Alam works for 1 hour and the rest is completed by Bipu. If Alam receives Tk. 100, how much did Bipu receive?
(A) 196 (B) 208 (C) 224 (D) 256 (E) None of these

38. In the figure, O is the centre of the circle, AB is parallel to DC and <AOD = 58°. Find <ABC.

(A) 47o (B) 56: (C) 61°
(D) 670 (E) None of these




39. Last year Mrs. Shahana received Tk. 160 in dividends on her shares in Company X stock If she had 15 more shares of the stock last year, she would have received Tk. 25 more in total dividends. How many shares of the stock did she have last year?
(A) 60 (B) 72 (C) 84 (D) 96 (E) None of these

40. X and Y are positive integers. If 5X is the square of a number and 75XY is the cube of another number, what is the smallest value for X + Y?
(A) 14 (B) 16 (C) 18 (D) 23 (E) None of these

41. An employee can choose one of two methods of annual payment - either an annual salary of Tk. 35,000 with no commission or an annual salary of Tk. 10,000 plus a 20% commission on her annual sales. What must be her total annual sales to get the same annual payment in either method?
(A) Tk. 100,000 (B) Tk. 120,000 (C) Tk. 125,000 (D) Tk. 130,000 (E) None of these

42. If the product of 6 integers is negative, at most how many of the integers can be negative?
(A) 2 (B) 3 (C) 4 (D) 5 (E) None of these

43. A company rents parking spaces at the rate of Tk. 100 per week or Tk. 300 per month. How much does a person save in a year (in Taka) by renting by month rather than by week?
(A)1200 (B)1600 (C) 2200 (D)2400 (E) None of these

44. A CD player and a DVD player have the same price. If the price of the CD player goes up by 10% and that of the DVD player is decreased by 5%, how much more will it cost to buy 5 CD players and 5 DVD players?
(A) 5% (B) 10% (C) 15% (D) 25% (E) None of these

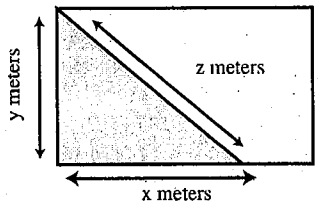
45. A store has five shelves and the average weekly sale of the store is Tk. 30,000. Shelf 1 accounted for 1/4 of the store's average weekly sales and stores 2 and 3, each accounted for 2/3 as much as shelf 1. If shelf 4 alone accounted for as much as shelf 1 then, which of the following could have been the average weekly sales of shelf 5 for the store?
(A) 4,000 (B) 4,500 (C) 5,000 (D) 6,000 (E) None of these

46. If $y = (3x-6)/x$, then for what values of x, y will always be positive?
(A) $x>2$ or $x<0$ (B) $x>0$ (C) $x<2$ (D) $-2<x<2$ (E) None of these

47. There are two examination rooms A and B. If 10 students are sent from A to B, the number of students in each room becomes the same. If 20 candidates are sent from B to A, the number of students in A becomes double the number of students in B. What is the number of students in room A?
(A) 100 (B) 120 (C) 130 (D) 150 (E) None of these

48. Given $a = x/12$ and $b = y/27$, if $a > b$, which of the following must be true?
(A) $x > y$ (B) $x > 2y$ (C) $X < y$ (D) $9x > 4y$ (E) None of these

49. The shaded portion of the rectangle represents a flower bed. If the area of the flower bed is 12 square meters and $x = y + 2$, then z equals:




(A) $\sqrt{13}$ meters (B) $2\sqrt{13}$ meters (C) 6 meters
(D) 8 meters (E) None of these

50. Anwar is 3 times as old as Babu. In 13 years, Anwar will be 1 year younger than twice Babu's age. How old is Anwar now?
(A) 24 (B) 27 (C) 33 (D) 36 (E) None of these

51. In a recent survey among 362 BBA students of IBA, 281 students responded that they watch IPL or English Premier League or both. If 97 of these students do not watch IPL and a total of 204 students watch English Premier League, how many of these students watch both?
(A) 12 (B) 14 (C) 18 (D) 20 (E) None of these

52. If a, b, and c are three sides of a right angled triangle, which of the following statements cannot be - true?
(A) $a = b = c$
(B) $a > b$ and $a > c$
(C) If the lengths of any two sides are given, length of the other side can be determined.
(D) $b = c$ or $a = c$ or $a = b$
(E) None of these

53. A small square area inside a larger square is shaded. The diagonal of the larger square is three times the diagonal of the smaller square in length. What fraction of the area of the larger square is not shaded?
(A) 1/9 (B) 1/3 (C) 2/3 (D) 8/9 (E) None of these

54. The price of sugar has increased by 32%. A family reduces its consumption so that the expenditure of sugar is up by 10% only. If the total consumption of sugar before the price rise was 10 kg per month, what is the current consumption of sugar per month (in kg)?
(A) 8.33 (B) 8.50 (C) 8.75 (D) 9.00 (E) None of these

55. If $5 > x > 2$ and $7 < y < 10$ which of the following expression must be positive?
(A) x2y- xy2 (B) xy2 – x2y (C) 2xy-x2y (D) 4xy - xy2 (E) None of these

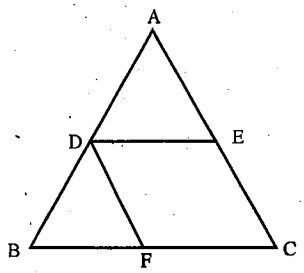
56. In Hotel Sea View, the daily rate for an economic room, which can accommodate a maximum of four people, is Taka 800 for one person and Taka X for each additional person. If 3 friends take the room for one day and each pays Taka. 450 for the room, what is the value of X?
(A) 550 (B) 350 (C) 275 (D) 183 (E) None of these

57. The population of City X is 40% percent of the population of City Y. The population of City X is what percent of the total population of city X and City y together?
(A)16.66 (B) 22.33 (C) 28.57 (D) 32. 66 (E) None of these

58. $x = y - (50/y)$, where x and y are both positive numbers. If the value of y is doubled, the value of x will
(A) Decrease (B) stay the same (C) double
(D) increase to more than double (E) None of these

59. The ratio of marbles owned by X and Y is 8:3. If X gives 8 marbles to Y, the ratio becomes 6:5. How many marbles does X have?
(A) 28 (B) 32 (C) 40 (D) 48 (E) None of these

60. The side AB of triangle ABC is divided at D in the ratio 3:4. DE is parallel to BC and DF is parallel to AC. DE= 15 cm and DF = 16cm. Find the length of AC in cm.
(A) 20 (B) 24 (C) 28
(D) 32 (E) None of these




**Section III: Analytical Ability** **15 Questions; 15 Marks**

**Questions 61 to 63**

Exactly six RAB officers — S, T, U, X, Y, and Z — take turns watching a suspect. To minimize the chance that the suspect will observe them or will escape their surveillance, the officers will operate according to the following conditions:

- There must be exactly two officers watching the suspect at all times.
- Whenever the suspect travels by car, either U or X must be one of the two officers watching, but U and X cannot take a turn together.
- Whenever the suspect travels by train, either Tor Z must be one of the two officers watching, but T and Z cannot take a turn together.
- If Z is one of the officers watching the suspect, S must be the other officer watching the suspect.
- S and X cannot take a turn together watching the suspect.

61. If Y is one of the officers watching the suspect, which of the following cannot be the other officer watching the suspect?
(A) S (B) T (C) U (D) X (E) 2

62. If the suspect is traveling by car, which of the following is a pair of officers who could be watching?
(A) S and T (B) S and X (C) T and Y (D) U and X (E) U and Y

63. If a pair of officers was watching while the suspect traveled by car, and the same pair of officers continued watching after the suspect began to travel by train, one member of that pair of officers must have been
(A) T (B) U (C) X (D) Y (E) Z

**Questions 64 to 69**

The students of IBA debating club will publish **three** Magazines in 2012 - one each in January, April and August. Seven students namely - Arshad. Behroz, Dipu, Emon, Faruk, Rashed, and Sakib -have each submitted one or more articles.

Each of the seven students will have at least **one** article published, but some may have more than one article published. The following restrictions apply to the publication of their articles:

- Each of the magazines must contain at least two articles.
- An article by Rashed cannot be published in a magazine that contains an article by Sakib.
- If an article by Arshad appears in a magazine, then *an* article by Behroz must also appear in that magazine.
- If an article by Emon appears in a magazine, then an article by Rashed must appear in the immediately preceding magazine.
- No author may publish in each of two consecutively published magazines or twice in the same magazine.

64. If the January publication consists exclusively of articles by Arshad and Behroz, then the April publication can consist exclusively of articles by which of the following groups of authors?
(A) Dipu and Rashed (B) Dipu and Faruk (C) Emon and Sakib
(D) Emon & Faruk (E) None of these

65. Which of the following aulhors cannot contribute to the magazine published in January?
(A) Dipu (B) Emon (Q Faruk (D) Sakib (E) None of these

66. II the January publication consists exclusively of articles by Behroz, Dipu, and Sakib, then the August publication must contain an article by which of the following authors?
(A) Behroz (B) Dipu (C) Rashed (D) Sakib (E) None of these

67. If the August publication consists exclusively of articles by Behroz, Dipu and Emon, then the April publication must have consisted of articles by which of the following groups or authors?
(A) Arshad and Sakib (B) Arshad and Faruk (C) Benroz and Rashed
(D) Faruk and Rashed (E) None of these

68. Articles by which group, if published in January, wili result in only one valid combination for the April issue?
(A) Arshad. Behroz. Sakib (B) Arshad, Behroz, Rashed (C) Dipu and Faruk
(D) Dipu, and Rashed (E) None of these

69. The magazine published in January can consist exclusively of articles by which of the following groups of authors?
(A) Arshad and Dipu (B) Arshad, Rashed and Sakib (C) Dipu. Faruk and Rashed
(D) Arshad, Behroz. Faruk. Rashed, and Sakib (E) None of these.

**Questions 70 to 75**

The Gulshan Gallery owner is preparing to exhibit a sample of an artist's painting and sculpture. The artist has submitted one large sculpture one small sculpture, two large paintings, and three small paintings. The gallery owner plans to show at least three, but no more than five, works selected according to the following conditions:

- At least one sculpture must be selected.
- At least one large work must be selected.
- The three large works cannot all be selected.
- The four small works cannot all be selected.
- If the small sculpture is selected, at least one small painting must also be selected.

70. Which of the following could be a complete selection for the- exhibit?
(A) Three small paintings
(B) The two large paintings and two small paintings
(C) The small sculpture and two small paintings
(D) The small sculpture, a large painting, and two small paintings
(E) The large sculpture, the two large paintings, and one small painting

71. If the small sculpture and one of the large paintings are selected, an acceptable exhibit can be made by the addition of each of the following selections EXCEPT
(A) one small painting (B) two small paintings (C) the other large painting
(D) the other large painting and one small painting
(E) the other large painting and two small paintings

72. If both sculptures are selected, an acceptable exhibit can be made by the addition of each of the following selections EXCEPT.
(A) three small paintings (B) one small painting
(C) two small paintings (D) one large painting and one small painting
(E) one large painting and two small paintings

73. If five works are selected for the exhibit, which of the following must be true?
(A) Exactly two of the works selected are large.
(B) Exactly three small paintings are selected.
(C) Exactly four of the works selected are small (D) Both sculptures are selected.
(E) Only one of the two large paintings is selected

74. If the only sculpture selected for the exhibit is the large sculpture, which of the following must be true?
(A) Exactly three additional works are selected.
(B) The additional works selected are all small paintings.
(C) One of the large paintings is selected along with exactly three small paintings.
(D) Either two or more small paintings are selected, or one large painting and at least one small painting are selected.
(E) Either two small paintings and one of the large paintings are selected, or exactly three small paintings are selected.

75. If three small paintings are selected for the exhibit, which of the following must also be selected?
(A) The small sculpture (B) The large sculpture (C) One large painting
(D) One large painting and the large sculpture
(E) One large painting and the small sculpture

**End of Part I PART II: Writing Ability** **25 Marks**

**A.** Summer and Winter are the two vividly distinct seasons in our country. Narrate your feelings and experiences of the seasons.

**B: Write a summary of the following article in five sentences along with a suitable title. [5]**

Today there are more than seven billion people in the world. Twelve years ago about six (6) billion people lived in it; and only fifty years ago, the world population was three billion. If earth's population were evenly distributed over its land surface, there would be about thirteen people to each square kilometer. But Earth has vast areas of forest, mountains and desert which are almost uninhabited. On the other hand, it has great cities each with millions of people living in a few square kilometers.

To feed the fast growing population of our earth, scientists and planners have to discover new ways to produce more food and nutrition. One possible way is to bring more land under cultivation. This can be done only in places where there is lot of land not used for productive purposes. In many places this is no longer possible as all the arable land is already cultivated.

A second way is to make use of new types of seeds to produce more. Already a number of new strains of paddy and wheat have been developed in different parts of the world. Bangladesh is one of the countries where a lot of useful work has been done in the field of agricultural research. In order to continue this line of development, more young people have to be encouraged to take agriculture as their main course of study. These bright, young minds will eventually become tomorrow's brilliant scientists, producing crops that can feed a burgeoning world.

**C.** আপনার জীবনের একটি স্মরণীয় ছুটির দিন সম্পর্কে সংক্ষেপে বর্ণনা দিন।

## Answer Key

**Section I: Language and Communication**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. A | 2. B | 3. C | 4. C | 5. B | 6. E | 7. D | 8. D | 9. E | 10. A |
| 11. A | 12. B | 13. A | 14. D | 15. C | 16. E | 17. D | 18. A | 19. E | 20. C |
| 21. D | 22. B | 23. E | 24. A | 25. D | 26. D | 27. D | 28. D | 29. E | 30. C |

**Section II: Mathematics**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.B | 32.A | 33.D | 34.D | 35.C | 36.E | 37.B | 38.C | 39.D | 40.A |
| 41.C | 42.D | 43.B | 44.E | 45.C | 46.A | 47.A | 48.D | 49.B | 50.D |
| 51.D | 52.A | 53.D | 54.A | 55.B | 56.C | 57.C | 58.D | 59.B | 60.C |

**Section III: Analytical ability**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 61.E | 62.E | 63.A | 64.A | 65.B | 66.A | 67.D | 68.C | 69.C | 70.D |
| 71.C | 72.A | 73.A | 74.D | 75.B | | | | | |

# BBA (IBA) Admission Test (2012) Solution

## Section I: English

1. (A) এখানে "run it by you" এর অর্থ হল "to let someone review or check" অথবা কাউকে কোন কিছু খতিয়ে দেখতে দেয়া।
2. (B) এখানে "to get worked up" এর অর্থ হল "to get angry or annoyed by something" অথবা কাউকে কোন কিছু নিয়ে বিরক্ত হওয়া অথবা প্রকাশ করা।
3. (C) এখানে "have a brush with" এর অর্থ হল "to have a brief contact or conflict with something or someone" অথবা কোন কিছুর সংস্পর্শে আসা অথবা সেটির সাথে সংঘাতে পতিত হওয়া।
4. (C) এখানে "prevent" এর অর্থ হল "to stop something from happening" অথবা কোন কিছু প্রতিহত করা এবং "prioritize" এর অর্থ হল "to give importance to someone/something due to urgency" অথবা কোন কিছু কে অগ্রাধিকার দেয়া। আরেকটি বিষয় এখানে দ্রষ্টব্য যে বাক্যটিতে "from" ব্যবহার করা হয়েছে যার সাথে শুধুমাত্র "prevent" ব্যবহার করা সম্ভব।
5. (B) এখানে "integration" এর অর্থ হল "the act of combining into a integral whole" এবং "dissolution" এর অর্থ হল "separation into component parts"। এখানে খেয়াল করা উচিত যে "contradictory" শব্দটি ব্যবহার করা হয়েছে। অর্থাৎ যে দুটি শব্দ আমরা উত্তর হিসেবে ব্যবহার করব, সে দুটি শব্দকে বিপরীতমুখী, (opposites) হতে হবে।
6. (E) এখানে "volatile" এর অর্থ হল "subject to sudden change/violence/changeableness" অথবা দ্রুত পরিবর্তনশীল এবং "coordinated" এর অর্থ হল "organized" অথবা সমন্বিত। এখানে "volatile" শব্দটি ব্যবহার করা হয়েছে কারণ "markets"- এ "chaos" এর কথা উলেস্নখ করা হয়েছে যা থেকে শুধুমাত্র একটি সমন্বিত উদ্যোগ এ পাওয়া সম্ভব।
7. (D) এই প্রশ্নগুলোতে সবচেয়ে নিকটবর্তী Antonym (বিপরীতার্থক শব্দ) বেছে নিতে বলা হয়েছে। এই প্রশ্নতে "pensive" এর অর্থ হল "thoughtful or representing a state of intense mental activity"। অপরদিকে, "torpid" এর অর্থ হল "sluggish or representing a state of mental inactivity"। অতএব, উত্তর হবে option D।
8. (D) এখানে "paucity" এর অর্থ হল "shortage or insufficient quantity" অথবা অপ্রতুলতা এবং "surplus" এর অর্থ হল "a quantity much larger than needed" অথবা উদ্বৃত্ত বা বাড়তি।
9. (E) এখানে "concord" এর অর্থ হল "a state of harmony or agreement" অথবা মতৈক্য বা মিল এবং "conflict" এর অর্থ হল "a state of clash or opposition" অথবা দ্বন্দ্ব বা মতবিরোধ।
10. (A) এখানে "manifest" এর অর্থ হল "clearly revealed to mind/senses/judgment" অর্থাৎ সুস্পষ্ট বা স্পষ্টত প্রতীয়মান এবং "discernible" এর অর্থ হল "capable of being perceived clearly" অথবা প্রত্যক্ষ বা সহজে দৃশ্যত।
11. (A) এখানে "blight" এর অর্থ হল "damage or loss"। অতএব, উত্তর হল A।
12. (B) এখানে "profusion" এর অর্থ হল "the property of being extremely abundant" অর্থাৎ অতিপ্রাচুর্য অতএব, উত্তর হল B. "glut" যার অর্থ হল "overabundance"।
13. (A) এখানে আমাদের কে প্রথমে question pair এর মাধ্যে একটি relationship বের করে নিতে হবে। তারপর answer options গুলোর মধ্য থেকে একই ধরণের relationship আছে এমন একটি কে উত্তর হিসেবে বেছে নিতে হবে। শুরম্নতে আমরা দেখতে পাচ্ছি যে "interest" এবং "fascination" এর মধ্যে একটি relationship তৈরি করতে হবে। "Interest" এর অর্থ হল "curiosity" অথবা উৎসাহ এবং "fascination" এর অর্থ হল আকর্ষণ অথবা মোহ। অতএব আমরা বলতে পারি, অতিমাত্রায়, উৎসাহ থেকে আকর্ষণ বা মোহের সৃষ্টি হয়। এখন আমরা যদি options গুলোর দিকে তাকাই তাহলে দেখতে পাই যে option A ছাড়া আর কোন option এ আমাদের উপরোক্ত relatio প্রয়োগ করা যায় না "Dislike" এর অর্থ হল অপছন্দ এবং "abhorrence" এর অর্থ হল ঘৃণা এই option যদি

আমাদের উপরোক্ত relation টি প্রয়োগ করি, তাহলে আমরা উত্তর সম্পর্কে নিশ্চিত হতে পারি কারণ অতিমাত্রায় অপছন্দ থেকে ঘৃণার সৃষ্টি হয় (or, too much disliking results in abhorrence) ।

14. (D) এখানে ও আমাদের আগে question pair টিকে দেখাব।এখানে "circle" এর অর্থ হল বৃত্ত এবং "sphere" এর অর্থ হল গোলক। এখন আমরা যদি এই দুটি শব্দের মধ্যে একটি relationship তৈরি করি, তাহলে আমরা দেখি যে একটি বৃত্তের তৃতীয় মাত্রার রূপ হল একটি গোলক (or, the 3D form of a circle is a sphere)। অতএব, খুব সহজেই উত্তর হয় D। কারণ আমরা জানি একটি চতুর্ভুজ এর তৃতীয় মাত্রার রূপ হল একটি ঘনক্ষেত্র (or, the 3D form of a square is a cube)।
15. (C) Question pair এ "toxic" এর অর্থ হল "relating to poison/harmful" অর্থাৎ বিষাক্ত অথবা ক্ষতিকর এবং "harmful" এর অর্থ একই অতএব, আমরা দেখতে পাচ্ছি যে এইখানে question pair এর শব্দ দুটির মধ্যে একটি synonymous relation অথবা সমার্থক সম্পর্ক আছে। তাই আমাদের উত্তর হল option C যেখানে "gay" শব্দের অর্থ হল delighted এবং "cheerful" শব্দের অর্থ ঠিক একই।
16. (E) এখানে আমরা দেখতে পাই যে প্রথম দুটি topic sentence এ দুটি আলাদা গ্রুপ এর কথা বলা হয়েছে। প্রথমটি হল consumer groups যারা বিশ্বাস করে যে, "rock and sea salt is not different from sea salt" আর অন্য গ্রুপটি হল producer দের যারা বলে যে, "rock and sea salts are actually better than table salts" দ্বিতীয় paragraph এ consumer groups গুলোর দাবির স্বপক্ষে আলোচনা করা হয়েছে এবং শেষ paragraph এ producer দের মতামত উল্লেখ করা হয়েছে। অতএব, উত্তর হবে E।
17. (D) দ্বিতীয় paragraph এর সপ্তম লাইন এ বলা আছে, "brands claiming some salts are more natural and contain essential minerals are confusing the public"। এ যুক্তির পক্ষে এর পরের বাক্যেই উল্লেখ করা হয়েছে একটি অনলাইন জরিপ ("online survey") এর কথা যেখানে একতৃতীয়াংশ consumer রা বিশ্বাস করে যে, rock and table salts অন্য processed table salts থেকে স্বাস্থ্যকর। এর মাধ্যমে আমরা বুঝতে পারি যে brands গুলোর claims ক্রেতাদের perception কে প্রভাবিত করতে পারে। অতএব, উত্তর হবে D।
18. (A) শেষ paragraph এর শেষের দুটি লাইনে পরিষ্কারভাবে producer দের এই যুক্তির কথা বলা আছে।
19. (E) এই প্রশ্নে consumer's claim কে strengthen করার কথা বলা হয়েছে। এখানে consumer group গুলোর দাবি হলো যে rock and sea salt অন্য table salt থেকে আলাদা নয় Option E তে যা উল্লেখ করা আছে, তা সত্যি হলে এই দুই রকম salt এর মধ্যে কোন তফাৎ থাকেনা।
20. (C) এই প্রশ্নে producer's claim কে strengthen করার কথা বলা হয়েছে। Producer দের দাবি হলো rock and sea salt অন্য table salt থেকে আলাদা Option C সত্যি হলে producer দের এই দাবি অবশ্যই জোরালো হয়।
21. (D) এই প্রশ্নগুলোতে আমাদের কে underlined শব্দগুলোর পরিবর্তে তাদের বিপরীতার্থক (antonymous) শব্দ আছে এমন option বেছে নিতে হবে। তাহলে পুরো বাক্যটির অর্থ বিপরীতার্থক হয়ে যাবে। বাক্যটিতে "protested" শব্দটির অর্থ হল প্রতিবাদ করা এবং "inaccurate" শব্দটির অর্থ হল অশুদ্ধ বা বেঠিক। এখানে শুধুমাত্র option D তে যথাযথ শব্দ আছে যা এই বাক্যটির অর্থ কে বিপরীতার্থক করে দেয়। "Commended" এর অর্থ হল "to praise" বা প্রশংসা করা অথবা গ্রহণযোগ্য বলে সুপারীশ করা। "Appropriate" এর শব্দটির অর্থ হল।
22. (B) এই প্রশ্নতেও উপরোক্ত প্রশ্নের মত বিপরীতার্থক (antonymous) শব্দ আছে এমন option বেছে নিতে হবে। এই বাক্যতে "encourage" (উৎসাহ দেয়া) এবং "solidarity" (একতা বা সংহতি) শব্দগুলো underline করা আছে। আমরা যথাযথ শব্দ পাই option B থেকে এই option এ আছে "hinder" যার অর্থ হল বাধা দেয়া অথবা নিরুৎসাহিত করা এবং "friction" এবং মতপার্থক্য বা বিরোধ।
23. (E) এই প্রশ্নগুলোতে আমাদের কে "prefix" (উপসর্গ)এবং "suffix" (অনউপসর্গ) এর যথাযথ ব্যবহার নিশ্চিত করতে হবে। এই প্রশ্নতে prefix হিসেবে। "dis-" (উপসর্গ) এর ব্যবহার যাচাই করা হয়েছে। যেহেতু সকল option এ এই prefix এটি যথাযথ ভাবে ব্যবহার করা হয়েছে, তাই উত্তর হল option E।

24. (A) এই প্রশ্নতে prefix হিসেবে "non-" এর ব্যবহার যাচাই করা হয়েছে। যেহেতু A option এ এই prefix টি যথাযথ ভাবে ব্যবহার করা হয় নি, তাই উত্তর হল option A। "Nonarticulate" একটি সঠিক ইংরেজি শব্দ নয়। সঠিক শব্দটি হল "inarticulate"।
25. (D) এই প্রশ্নতে suffix হিসেবে "-en" এর ব্যবহার যাচাই করা হয়েছে। যেহেতু D option এ এই suffix টি যথাযথ ভাবে ব্যবহার করা হয় নি, তাই উত্তর হল option D। "Delighten" একটি সঠিক ইংরেজি শব্দ নয়। সঠিক শব্দটি হল "delight"।
26. (D) এই প্রশ্নতে prefix হিসেবে "un-" এর ব্যবহার যাচাই করা হয়েছে। যেহেতু D option এ এই prefix টি যথাযথ ভাবে ব্যবহার করা হয় নি, তাই উত্তর হল option D। "Uncourteous" একটি সঠিক ইংরেজি শব্দ নয়। সঠিক শব্দটি হল "discourteous"।
27. (D) এই প্রশ্নগুলো তে চারটি অংশ underline করা আছে এবং এর মধ্যে থেকে ভূল অংশটি খুজে বের করতে হবে। কোন ভূল না থাকলে option E কে উত্তর হিসেবে গণ্য করতে হবে। এই প্রশ্নতে option D তে ভূল আছে কারণ এখানে শুধু "dreams" না হয়ে "dreams of" হবে।
28. (D) এই প্রশ্নের বাক্যটিতে Pronoun-Antecedent Agreement এর সমস্যা আছে । যেহেতু বাক্যের শুরুর দিকে দুইজন উকিল এর কথা উল্লেখ করা আছে ("Both lawyers..."), তাই শেষের দিকে "its" না হয়ে "their" হবে।
29. (E) এই প্রশ্নের বাক্যটিতে কোন ভূল নেই বিধায় উত্তর হবে option E।
30. (C) এই প্রশ্নের বাক্যটিতে Inappropriate Comparison এর সমস্যা আছে । এখানে খেয়াল করতে হবে যে প্রথমজন এর "argument" এর সাথে "last speaker" এর ভূল তুলনা করা হয়েছে যেখানে argument এর সাথে ওই "last speaker" এর argument এর তুলনা প্রয়োজন ছিল। অতএব, উত্তর হবে option C যেখানে "the last speaker" এর পরিবর্তে "the last speaker's" হবে।

## Section II: Mathematics

31. (B) In this case, প্রত্যেকটি টুকরো তার আগের টুকরোটির তুলনায় twice as long. মনে করি, সবচেয়ে ছোট টুকরোটি x. অতএব, বাকী দুটো টুকরো যথাক্রমে 2x and 4x.
    According to the question, $x + 2x + 4x = 112$
    $\therefore x = 16$.
    Therefore, the longest piece = 64. (B)
32. (A) 3600 টি employee এর মাঝে 1/3 clerk. So, number of clerks = 1200. Clerk এর সংখ্যা 1/3 বা 1200*1/3 = 400 কমানোর পরে,
    Number of clerks = 1200 – 400 = 800, and
    Number of employees = 3600 – 400 = 3200 [Clerk এর সংখ্যা কমালে Employee এর সংখ্যাও কমতে হবে]
    Therefore, percentage of clerks = 800/3200 x 100 = 25%
33. (D) দেয়া আছে, m একটি even integer এবং n একটি integer (even বা odd দুটিই হতে পারে)
    I. n যদি even হয়, $m^2 + n^2 + n = (Even)^2 + (Even)^2 + Even = Even$
    n যদি odd হয়, $m^2 + n^2 + n = (Even)^2 + (Odd)^2 + Odd = Even + Odd + Odd = Even$
    II. n যদি even হয়, $(m - n) \times (n + 1) = (Even - Even) \times (Even + 1) = Even \times Odd = Even$ n যদি odd হয়, $(m - n) \times (n + 1) = (Even - Odd) \times (Odd + 1) = Odd \times Even = Even$
    III. n যদি even হয়, $m^2 - n^2 + 1 = (Even)^2 - (Even)^2 + Odd = Odd$
    n যদি odd হয়, $m^2 - n^2 + 1 = (Even)^2 - (Odd)^2 + Odd = Even - Odd + Odd = Even$
    শুধুমাত্র statement I and II ই সবসময় even হয়।

34. (D) মনে করি, শুরুতে P, Q এবং R এর কাছে যথাক্রমে 6x, 19x এবং 7x টাকা ছিলো। R যখন Q কে 200 taka দেয়, তখন P, Q এবং R এর টাকার পরিমাণ হয় যথাক্রমে 6x, 20x এবং 6x. এখন, Q এর টাকার পরিমাণ 19x থেকে বেড়ে 20x হয়। Therefore, $20x - 19x = 200$ or $x = 200$.
Therefore, total amount = $6x + 19x + 7x = 32x = 32 \times 200 = 6{,}400$.
35. (C) মনে করি, average এ প্রতিটি black bag এর দাম 'b' taka. অতএব, প্রতিটি red bag এর দাম '3b' taka. According to the question, $3b + 15b = x$
$\Rightarrow b = x/18$
$\therefore 3b = x/6$
36. (E) এই problem টি সংখ্যা ধরে করলে কম সময়ে করা যায়।
If $a = 1$ and $b = 2$, $a^2 - b^2 = -3$ [(A) can be negative]
$a^3 - b^2 = -3$ [(C) can be negative]
If $a = -2$ and $b = -1$ $b^2 - a^2 = -3$ [(B) can be negative]
$b^2 - ab = -1$ [(D) can be negative]
Therefore, none of them must be positive.
37. (B) Alam পুরো কাজটি করে 3 hours এ। এর মাঝে সে 1 hour এর কাজ করে ফেলে এবং বাকি কাজ করতে তার লাগবে 2 hours. Bipu Alam- এর থেকে 20% কম সময়ে কাজ করতে পারে। অতএব, বাকি কাজটি করতে Bipu- এর সময় লাগবে = $2 \times (100\text{-}20)/100 = 1.6$ hours. Alam প্রতি hour কাজ করার জন্য পায় 100 taka. যেহেতু Bipu Alam- এর থেকে 30% বেশী charge করে, Bipu per hour পাবে = $100 + 100 \times 30/100 = 130$ Taka. Therefore, Bipu will receive = $1.6 \times 130$ = Tk. 208.
38. (C) এই problem টি সহজভাবে solve করার জন্য আমার O এবং C যোগ করি। যেহেতু, AO = OD [Radius] and $\angle AOD = 58$, $\angle ODA = 61$. আবার যেহেতু, AB এবং CD একে অপরের parallel, $\angle AOD = \angle CDO = 58$ [Alternate angles]. In triangle ODC, OD = OC [Radius]. Therefore, $\angle ODC = \angle OCD = 58$ and $\angle COD = 64$. Now, in triangle COB, $\angle COB = 58$, and OC = OB [Radius]. Therefore, $\angle ABC = 61$.
39. (D) 15 টি share বেশী থাকলে dividend Tk. 25 বেশী হোতো। যেহেতু Tk. 25 dividend পাওয়া যায় 15 টি share এ, Tk. 160 dividend পাওয়া যায় = $160 \times 15/25 = 96$ টি share এ।
40. (A) 5X যদি একটি number এর square হয়, X এর minimum value 5 হতে হবে। In that case, $75XY = 5 \times 5 \times 5 \times 3 \times Y$ হবে। যেহেতু, প্রশ্নে বলা আছে যে, 75XY একটি সংখ্যার cube, Y এর minimum value হবে = $3 \times 3 = 9$. অতএব, X + Y এর minimum value = $5 + 9 = 14$.
41. (C) মনে করি, salary 'x' হলে 2টি method এই annual payment same হবে।
অতএব, $35{,}000 = 10{,}000 + 0.2x$
$\Rightarrow 0.2x = 25{,}000$
$\Rightarrow x = 125{,}000$
42. (D) যদি 6 টি number ই negative হয়, product negative হবে। অতএব maximum 5টি number negative হতে পারবে।
43. (B) Per week rent করলে 1 Year (52 weeks) এ খরচ হয় = $52 \times 100$ = Tk. 5200
Per month rent করলে 1 Year (12 months) এ খরচ হয় = $12 \times 300$ = Tk. 3600
Therefore, savings = 5200 – 3600 = 1600.
44. (E) মনে করি, আগে প্রত্যেকটি CD player and DVD player এর price ছিলো = Tk. 10.
অতএব, 5টি CD Player ও 5টি DVD Player এর দাম ছিলো = Tk. 1.00
এখন CD Player এর দাম বেড়ে হয় = $10 \times 1.10$ = Tk. 11 এবং DVD Player এর দাম বেড়ে হয় = $10 \times 0.95$ = Tk. 9.5
অতএব, 5টি CD Player ও 5টি DVD Player এর দাম হয় = $5 \times 11 + 5 \times 9.5$ = Tk. 102.5
Increase in price = 2.5%

45. (C) Average weekly sales যদি Tk. 30,000, Shelf 1 এর sales = 30,000/4 = Tk. 7,500. Shelf 2 and 3 এর combined sales = 2 x 7,500 x 2/3 = Tk. 10,000. Shelf 4 এর sales = Tk. 7,500. Shelf 5 এর sales = 30,000 – 7,500 – 10,000 – 7,500 = Tk. 5,000.

46. (A) $(3x - 6)/x > 0$
y কে positive হতে গেলে এখানে either $(3x - 6)$ এবং x দুটোকেই positive অথবা দুটোকেই negative হতে হবে। If $3x - 6 > 0$, $x > 2$ and $x > 0$. এই দুটোর মাঝে common relation টি নিলে আমরা পাই $x > 2$.
On the other hand, if $3x - 6 < 0$, $x < 2$ and $x < 0$. এই দুটোর মাঝে common relation টি নিলে আমরা পাই $x < 0$.
Therefore, either $x > 2$ or $x < 0$.

47. (A) মনে করি, Room A-তে student সংখ্যা 'a' এবং Room B-তে student সংখ্যা 'b'. Room A থেকে Room B-তে 10টি student পাঠালে আমরা পাই,
$a - 10 = b + 10; \Rightarrow b = a - 20$
Room B থেকে Room A-তে 20wU student পাঠালে আমরা পাই,
$a + 20 = 2(b - 20)$
$\Rightarrow a + 20 = 2b - 40$
$\Rightarrow a + 20 = 2(a - 20) - 40$
$\Rightarrow a + 20 = 2a - 40 - 40$
$\Rightarrow a = 100$

48. (D) $x/12 > y/27$
$\Rightarrow 27x > 12y$
$\Rightarrow 9x > 4y$

49. (B) $\frac{1}{2}xy = 12$
$\Rightarrow xy = 24$
$x = y + 2$
Therefore, $x = 6$ and $y = 4$.
$z = \sqrt{(6^2 + 4^2)} = 2\sqrt{13}$

50. (D) $a = 3b$
$(a + 13) = 2(b + 13) - 1$
$\Rightarrow 3b + 13 = 2b + 26 - 1$
$\Rightarrow b = 12$
Therefore, $a = 3 \times 12 = 36$

51. (D) Number of students who watch English Premier League or IPL or both = 281
Number of students who do not watch IPL = 97
Number of students who watch only English Premier League = 281 – 97 = 184
Number of students who watch English Premier League = 204
Number of students who watch both English Premier League and IPL = 204 – 184 = 20

52. (A) যদি a, b, and c একটি right triangle এর sides হয়, hypotenuse বাকি দুই side এর থেকে বড় হতেই হবে। Therefore, the three sides cannot be equal.

53. (D) Large square টির diagonal small square টির diagonal এর three times. অতএব Large square টির area small square টির area এর = $(3)^2 = 9$ times. সুতরাং, Unshaded area = $(9 - 1)/9 = 8/9$

54. (A) মনে করি, previous price of sugar = Tk. 100 per kg. 32% বৃদ্ধি পাবার পরে price হয় = Tk. 132. Previous consumption of sugar was 10 kg. Therefore, previous expense = 100 x 10 = Tk. 1000. Current expenditure কে 10% বৃদ্ধিতে আবদ্ধ করতে গেলে তা হবে = 1000 x 1.1 = 1,100. Therefore, current consumption = 1,100/132 = 8.33 kg.

**Alternative Method:**

Price of sugar 32% বৃদ্ধি পাবার পরে expenditure কেবলমাত্র 10% বৃদ্ধিতে আবদ্ধ করতে গেলে consumption কমাতে হবে = 1 - 1.1/1.32 = 0.167 or 1/6 অংশ। অতএব, new consumption = 10 x (1 – 1/6) = 8.33 kg.

55. (B) If $2 < x < 5$ and $7 < y < 10$, $x^2 < y^2$ and $x < y$
এখন option (B) থেকে আমরা পাই, $xy^2 - x^2y = xy(y - x)$ which is positive [ যেহেতু xy এবং $(y - x)$ উভয়ই positive.

56. (C) প্রশ্নানুসারে, first person Tk. 800 এবং additional 2টি people 'X' করে দিলে total rent = 800 + 2X. আবার, প্রত্যেক Tk. 450 করে দিলে total rent = 450 x 3 = Tk. 1350.
Now, 800 + 2X = 1350; Therefore, X = Tk. 275.

57. (C) মনে করি, City Y এর population 100. অতএব, City X population = 0.4 x 100 or 40. Therefore, City X এর population total population of City X and Y এর = (40/140) x 100 or 28.57%.

58. (D) y কে double করা হলে x এর নতুন value হয় 2y – (50/2y) = 2y – 25/y. যেহেতু এই expression টির positive part টি doubled হয় এবং negative part টি halved হয় x এর value will increase to more than double. For example, যদি y = 25 হয় x = 25 – (50/25) = 23. Y কে double করা হলে x এর নতুন value হয় = 50 – (50/50) = 49 which is more than double of 23, the previous value of x.

59. (B) মনে করি, X ও Y এর কাছে marble আছে যথাক্রমে 8x ও 3x টি।
প্রশ্নমতে, $(8x - 8)/(3x + 8) = 6/5$
$\Rightarrow 40x - 40 = 18x + 48$
$\Rightarrow x = 4$
Therefore, X has (8 x 4) or 32 marbles.

60. (C) যেহেতু, DE is parallel to BC এবং DF is parallel to AC, DECF একটি parallelogram. DF = CE = 16. Moreover, ADE and ABC are similar triangles. Therefore, AB/BD = AC/CE = 7/4. As a result, AC = (AB/BD) x CE = 7/4 x 16 = 28.

## Section III: Analytical Ability:

### Question 61 to 63

এই puzzle টির condition গুলো হল:

1. Exactly 2টি officer কে suspect watch করতে হবে।
2. Suspect যদি car এ travel করে, U অথবা X কে watch করতে হবে, কিন্তু 2- জনই একসাথে watch করতে পারবেনা।
3. Suspect যদি train এ travel করে, T অথবা Z কে watch করতে হবে, কিন্তু 2- জনই একসাথে watch করতে পারবেনা।
4. Z থাকলে S কেও থাকতে হবে।
5. S এবং X একসাথে watch করতে পারবেন।

61. (E) Condition 4 থেকে আমরা জানি, Z suspect-কে watch করলে S কেও করতে হবে। Therefore, Z এর partner কখনোই Y হতে পারবেনা।

62. (E) Condition 2 violate করার কারণে Options (A), (C) এবং (D) answer হতে পারবেনা। Condition 5 violate করার কারণে Option (B) answer হতে পারবেনা। Therefore, the answer is (E) as it does not violate any condition.

63. (A) যেহেতু officer দুজন train এ suspect কে watch করে, তাদের মাঝে একজনকে অবশ্যই T অথবা Z হতে হবে [Condition 3]. যদি Z কে select করা হয়, অন্য partner টিকে অবশ্যই S হতে হবে [Condition 5]. কিন্তু Z ও S কখনোই car এ suspect কে watch করতে পারবেনা because it violates Condition 2. Therefore, one of the officers must be T.

### Questions 64 to 69

এই puzzle টির condition গুলো হল:

1. প্রত্যেকটি magazine এ কমপক্ষে 2-টি articles থাকতে হবে।
2. Rashed ও Sakib এর articles একই magazine এ published হতে পারবেনা।
3. কোন magazine এ Arshad এর article published হলে Behroz এর article ও published হতে হবে।
4. কোন magazine এ Emon এর article published হলে Rashed এর article তার immediate আগের magazine এ published হতে হবে।
5. কোন author এর article পরপর দুটি magazine এ বা একই magazine এ দুবার published হতে পারবেনা।

64. (A) Condition 4 অনুসারে, Emon এর article published হতে গেলে তার আগের period এ Rashed এর article published হতে হবে। যেহেতু January publication এ Rashed এর article নেই, April publication এ Emon এর article থাকতে পারবেনা [Option (C) and (D)]. অতএব, Emon এর article August publication এ হতেই হবে যার ফলে April publication এ Rashed এর article থাকতেই হবে [Condition 4] যার কারণে Option (B) answer হবেনা। যেহেতু Option (a) কোন condition violate.

65. (B) যেহেতু Emon এর article published হতে গেলে তার আগের period এ Rashed এর article published হতে হবে [Condition 4], এবং January publication এর আগে অন্য কোন publication নেই সেহেতু Emon এর article January তে published হতে পারবেনা।

66. (A) যেহেতু Behroz এর article January publication এ আছে, April publication এ Behroz এর article থাকতে পারবেনা [Condition 5], যার ফলে April publication এ Arshad- এর article ও থাকতে পারবেনা [Condition 3]. সুতরাং, Arshad এর article August publication এ থাকতেই হবে এবং Condition 3 অনুসারে Behroze এর article ও August publication এ থাকতে হবে।

67. (D) August publication এ Emon এর article থাকার কারণে April publication এ Rashed এর article থাকতে ই হবে [Condition 4]. April publication এ Rashed এর article থাকার কারণে Sakib এর article থাকতে পারবেনা [Condition 2]. Behroz, Dipu Emon এর article Condition 5 এর কারণে April publication এ থাকতে পারবেনা। এবং Behroz এর article না থাকার কারণে Arshad এর article ও থাকতে পারবেনা [Condition 3]. অতএব বাকি থাকবে কেবল Faruk.
68. (C) যদি Dipu ও Faruk এর article January publication এ থাকে তাহলে Rashed এর article April publication এ থাকতেই হবে otherwise Emon এর article August publication এ থাকতে পারবেনা [Condition 4]. Rashed এর article থাকার কারণে Sakib এর article থাকতে পারবেনা [Condition 2]. Dipu ও Faruk এর article ও Condition 5 এর কারণে April publication এ থাকতে পারবেনা। Condition 1 fulfill করার কারণে Arshad ও Behroz এর article April publication এ থাকতে হবে [Condition 3]. April publication এর তখন কেবলমাত্র একটিই combination হবে যা কিনা Arshad, Behroz ও Rashed.
69. (C) Option (A) ও (B) Condition 3 কে violate করে কারণ Arshad এর article এর সাথে Behroz এর article publish করা হয়নি। Option (D) Condition 2 কে violate করে। Therefore.

**Questions 70 to 75**

এই puzzle টির condition গুলো হল:
1. কমপক্ষে একটি Sculpture select করতেই হবে।
2. কমপক্ষে একটি Large work select করতেই হবে।
3. 3টি Large work একসাথে select করা যাবেনা।
4. 4টি Small work একসাথে select করা যাবেনা।
5. Small Sculpture-টি select করা হলে কমপক্ষে একটি Small Painting select করতেই হবে।

70. (D) Option (A) ও (C) Condition 2 কে violate করে। Option (B) Condition 1কে violate করে। Option (E) Condition 3 কে violate করে। Therefore, the answer is (D).
71. (C) যেহেতু Option (C) Condition 5 কে violate করে, it is not an acceptable exhibit.
72. (A) যেহেতু Option (A) Condition 4 কে violate করে, it is not an acceptable exhibit.
73. (A) 5-টি work কে select করা হলে এদের মাঝে 4-টি small work থাকতে পারবেনা [Condition 4]. অতএব কমপক্ষে 2-টি large works থাকতে হবে। আবার 3-টি large work থাকলে Condition 3 violated হয়ে যায়। Therefore, there must be exactly 2 large works.
74. (D) যদি sculpture গুলোর মাঝে কেবলমাত্র large টিকে select করা হয়, তাহলে minimum requirement of 3 works fulfill করার কারণে two or more small paintings select করতে হবে অথবা one large painting and one or more small paintings select করতে হবে কিন্তু 2-টি large painting select করা যাবেনা কারণ এটি Condition 3 কে violate করে।
75. (B) 3-টি small painting select করা হলে small sculpture টিকে select করা যাবেনা কারণ it violates Condition 4. আবার Condition 1 কে fulfill করার জন্য Large Sculpture টিকে select করতেই হবে।

# BBA (IBA)

## Admission Test Question (2012-2013) with Solution

# Part I: Multiple Choice Questions (MCQs)

## Section I: Language & Communication — 30 questions, 30 Marks

**Questions 1 to 9**

Instruction: Choose the most appropriate word(s)/phrase(s) to fill in the blanks in the following sentences.

1. There is no need to be _____, you should _____.
(A) respondent; keep your pace up (B) despondent; keep your chin up
(C) redolent; keep your eyes open (D) negligent; keep body and soul together
(E) none of these

2. As the house was uninhabited for quite a while, it was _____ with pests when the new tenants went in to take a look.
(A) populated (B) teeming (C) full (D) reeking (E) covered

3. Urbanization is unstoppable; it should only be _____ consistent with the availability of _____.
(A) discouraged; resources (B) regulated; amenities
(C) professed; fund (D) encouraged; facilities (E) none of these

4. Because of the career breaks she has taken on account of her personal situations, and also the training opportunities that she missed out on, she has reached _____ in her career quite early on compared to her contemporaries.
(A) a predicament (B) a limit (C) a level (D) an impasse (E) a state

5. How arrogant you must be to think that you can win the election just like that! You need to _____ a plan, and you need people to execute it.
(A) contrive (B) set (C) scheme (D) work (E) connive

6. The Senior Manager was angry at being taken for a junior level executive. He was _____.
(A) indigent (B) indignant (C) intransigent (D) indolent (E) none of these

7. The Senior Manager was angry at being taken for a junior level executive. He felt _____.
(A) slighted (B) blighted (C) knighted (D) benighted (E) none of these

8. The opposing team was eager to refute the debaters' points. It was hard to _____.
(A) play for keeps (B) keep them at arms length (C) keep out of harm's way
(D) keep them at bay (E) none of these

9. Please leave out unnecessary details and _____.
(A) cut the fat (B) chew the fat (C) cut to the chase
(D) chew the scenery (E) none of these

**Questions 10 to 15**

Instruction: In which one or more of the following sentences in each set, the underlined word is being used correctly.

10. (i) It is animal nature to horde food for the winter.
    (ii) This is the time of the year when the roads are crowded as hordes of tourists roam the area.
    (iii) You have no excuse for your accident. Have you not seen the hoarding cautioning passers-by of the construction of the building?
    (A) i and ii (B) ii and iii (C) i and iii (D) ii only (E) all three

11. (i) The shoppers thronged the malls every day before the Bid as shops displayed their latest collections.
    (ii) The speaker will need a megaphone to address the vast throng of sit-in demonstrators that have gathered today
    (iii) This throng of business requires hiring a multitude of employees, fast!
    (A) i and ii (B) ii and iii (C) i and iii (D) ii only (E) all three

12. (i) I do believe my idea was well accepted since it was seconded by the chairperson.
    (ii) She was ranked second: her performance was absolutely unparalleled.
    (iii) The competition was at its peak as only a few seconds remained.
    (A) i and ii (B) ii and iii (C) i and iii (D) ii only (E) all three

13. (i) If you cannot dissolve the problem, please let us look into it.
    (ii)The Parliament was dissolved prior to the General Election.
    (iii) The granules quickly dissolved in oil, whereas they remained solid in water.
    (A) i only (B) iii only (C) i and ii (D) ii and iii (E) all three

14. (i) The girl showed great resolve as she persevered through hard times.
    (ii) Through a third party's mediation, the matter was quickly resolved between them.
    (iii) I have resolved to pay more attention in class.
    (A) i only (B) iii only (C) i and ii (D) ii and iii (E) all three

15. (i) The artist gave a moving rendition of the musical piece.
    (Ii) As he receives more training, his position is constantly moving.
    (iii) The chess player is one move away from victory.
    (A) iii only (B) i and ii (C) i and iii (D) ii and iii (E) all three

**Questions 16 to 18**

Instruction: Select the word that best expresses the underlined word in each sentence.

16. A new recruit must be given time to get internalized with the organization's culture.
    (A) involved with (B) learned about (C) into
    (D) committed to (E) acclimatized with

17. It is indeed a shame for an academic institution, acclaimed as one that is top notch and change-driven, when its students give an appalling performance in front of a crowd.
    (A) mediocre (B) terrific (C) abysmal (D) atypical (E) uncharacteristic

18. Your behavior is reproachable, as you are vilifying, him without a shred of fact!
    (A) backstabbing (B) criticizing (C) defaming (D) accusing (E) gossiping about

**Questions 19 to 22**

Instruction: Choose the most appropriate SYNONYM to the word in capital letters.

19. CULMINATE
(A) Grow (B) Reject (C) Render (D) Conclude (E) Collapse

20. TANTAMOUNT
(A) Equal (B) Huge (C) Highest (D) Gullible (E) Trifling

21. SUPPLE
(A) Impressive (B) Dubious (C) Delicate (D) Perfect (E) Agile

22. ARDOR
(A) Metaphor (B) Passion (C) Agony (D) Mood (E) Severity

**Questions 23 to 25**

Instruction: Underlined parts of the following sentences may contain error(s) in grammar, diction, usage or idiom. Choose the underlined portion that is incorrect. If there is no error then select (E).

23. The animals who (A) were chosen (B) to present (C) the political parties were created (D) by a famous cartoonist. No Error (E)

24. I hate (A) that kind of a person (B) who distracts (C) me during important discussions. (D) No Error (E)

25. On the contrary, (A) you will (B) find that Arif is better (C) qualified than him (D) for the position of analyst at the office. No Error (E)

**Questions 26 to 30**

Instruction: Read the following passage and select the best answer for each of the questions.

More children as well as adults get their vaccinations when the shots are coordinated and given by nurses instead of doctors, a new research suggests, According to the researcher, "The family physician has all of the responsibility to look after the patient, and so a child with cholera, for example, comes in and the physician's first concern is the test for cholera bacteria, medical checkup and pretty soon, the time for the visit is up. But for a nurse in the primary care setting, vaccinations and other preventive care might be the first thing they're responsible for." The researchers found that changing who performs vaccinations was one of the most successful vaccination-promoting strategies, apart from with calls and texts to the general populace reminding them about the shots.

26. The objective of the article is:
(A) To highlight the ineffectiveness of doctors in performing an essential health service.
(B) To illustrate new research on means of increasing vaccination incidences among the beneficiary group.
(C) To promote calls and texts as means of promoting vaccination among people.
(D) To quote from a new research project, where the respective roles of doctors versus nurses are defined.
(E) To show the importance of vaccination as a preventive measure as opposed to treatment.

27. Which of the following if true, would most undermine the effectiveness of the vaccination promotion approach using nurses instead of doctors?
(A) Even with the new strategy, typically less than a quarter of all eligible people get their vaccines.
(B) Nurses do not provide treatment for patients, rather they provide preventive care.
(C) Calls and texts via cell phones are also effective mechanisms for promoting vaccination.
(D) Doctors are better in preventive care only when they have conducted basic research in the area of vaccinations
(E) Some doctors are better than others in ensuring vaccination, whereas nurses tend to be equally responsible.

28. The phrase "general populace" in the last line, means:
(A) All individuals as a group
(B) All patients as a group
(C) Common public
(D) Individuals not visited by doctors
(E) (E) Individuals not visited by nurses

29. Which of the following best reflects the main premise of the article?
(A) Nurses often forget to suggest using vaccines, but they still visit patients more frequently than doctors.
(B) Doctors provide a number of health services, vaccination is sometimes one such; however, nurses specifically provide greater preventive care.
(C) Doctors often forget to suggest using vaccines, but they still visit patients more frequently than nurses.
(D) Nurses are not as effective as sending texts to people in order to encourage them to vaccinate themselves and their dear ones.
(E) Cholera is a disease better prevented than treated.

30. Reference to "cholera" has been made in the article in order to:
(A) Identify a disease where the doctors have been more successful in treatment rather than prevention.
(B) Exemplify a disease where the doctors have been more successful In prevention rather than treatment.
(C) Belittle the role of the doctor, while ennobling the role of the nurse in disease treatment.
(D) Cite an example where the doctor performs a treatment role, while overlooking a preventive role.
(E) Identify a disease where the doctors have been less successful in treatment compared to nurses.

**Section II: Mathematics** **30 Questions; 30 Marks**

**Instruction:** Figures are not drawn to scale.

31. The ratio of Kalam's salary to Bashir's salary is 3:2. The ratio of Bashir's salary to Imran's salary is 3:1. What is the ratio of Kalam's salary to Imran's salary?
(A) 2:1 (B) 1:2 (C) 9:2 (D) 3:1 (E) none of these

32. If x is an integer such that $2x - 5 \leq 16$ and $5x - 7 > 26$, then which of the following must be true?
(A) $x \leq 10$ (B) $x \geq 7$ (C) $8 \leq x \leq 12$ (D) $7 \leq x \leq 10$ (E) none of these

33. A triangle has a perimeter 13. The two shorter sides have integer lengths equal to x and x + 1. Which of the following could be the length of the other side?
(A) 8 (B) 7 (C) 6 (D) 5 (E) any of these

34. If x and y are both positive integers and xy=156, what is the smallest possible value of x – y ?
(A) 1 (B) 2 (C) 3 (D) 4 (E) none of these

35. The average of two numbers is 2x+1. If one of the numbers is x– 2, then the other number is
(A) x + 1 (B) 2x + 2 (C) 3x + 4 (D) 4x– 1 (E) none of these

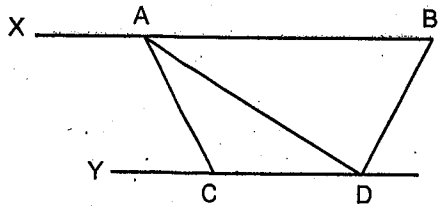
36. If $n > 0$, which of the following must be true?
(A) $n^2 > 1$ (B) $(n^2 - n) > 0$ (C) $2n - 1 > 0$ (D) $(n^2+1)/n > 1$ (E) none of these

37. The arithmetic mean of 3x - 8 and another number is 5x. The arithmetic mean of the other number and 3x is
(A) 4x + 4 (B) 2x + 8 (C) 5x + 4 (D) 4x + 8 (E) none of these

38. Hundred and twenty chocolates were equally distributed among the students present in the class. If there were 4 more students, each of them would have received one chocolate less. How many students were present In the class?
(A) 16 (B) 20 (C) 24 (D) 32 (E) none of these

39. If a + b – c = d, and a – b + c = e, then which of the following represents the value of a?
(A) 0.5(d+e) (B) d – e (C) 2d+e (D) d+e (E) none of these

40. In the diagram, XB is parallel to YD, AC = CD, $\angle XAC = 130°$ and $\angle ADB = 90°$. Calculate $\angle ABD$.
(A) 55° (B) 60° (C) 65°
(D) 70° (E) none of these




41. If $\phi$ is a function such that $x \phi y = (x - y)^2$, then what will be the value of $[x \phi (x - y)] \phi [y \phi (y - x)]$?
(A) $(xy)^4$ (B) $(x^2 - y^2)^2$ (C) $x^4 - y^4$ (D) $x^4$ (E) none of these

42. In what ratio should a 20% sugar solution (sugar + water) be mixed with a 50% sugar solution so that the resultant solution has 40% sugar in it?
(A) 1 : 2 (B) 2 :1 (C) 1 : 3 (D) 3:1 (E) none of these

43. A ship with a faulty engine sailed for only 7 hours over a period of 2 days and covered a distance of 59 km. Its average speed on the first day was 5 km per hour slower than that on the second day. But it sailed 3 hours longer on the first day than that on the second day. What was its average speed on the second day?
(A) 7 (B) 12 (C) 14 (D) 15 (E) none of these

44. A certain integer n when divided by 5 yields a remainder of 4. Which of these cannot be an integer?
(A)n/9 B)n/10 (C)n/14 (D)n/19 (E) none of these

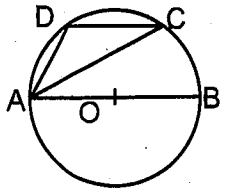
45. A trader purchased a box of apple at the rate of 90 taka per kg. It was found that 1/4 of the apples were already rotten. What must be the selling price of the apples per kg (in taka) so that the trader does not make any loss or profit?
(A) 96 (B) 108 (C) 112 (D) 120 (E) none of these

46. When the integer n is divided by 3, the quotient is p and the remainder is 1. When p is divided by 5, the quotient is q and the remainder is 2. What will be the remainder when n is divided by 5?
(A) 4 (B) 3 (C) 2 (D) 1 (E) none of these

47. If $4x - 3y = 24$, then what is the value of $2y - 8(x/3)$ ?
(A) – 6 (B) – 8 (C) – 12 (D) – 16 (E) none of these

48. A hospital treats 4 patients in the first hour, 8 patients in the second hour, 12 patients in the third hour and so on. [patients treated at nth hour is 4 more than the patients treated in (n–1) th hour]. How many hours will it require to treat a total of 84 patients?
(A) 6 (B) 7 (C) 8 (D) 9 (E) none of these

49. In the figure, AB is the diameter of the circle. Given that $\angle BAC = 40°$, calculate $\angle ADC$.
(A) 110° (B) 120° (C) 130°
(D) 140° (E) cannot be determined




50. Anwar has thrice as much marbles as Babu has. If Anwar gives 6 marbles to Babu then the ratio of marbles possessed by Anwar and Babu becomes 5:3. How many marbles does Anwar have?
(A) 24 (B) 28 (C) 36 (D) 48 (E) none of these

51. If $x = y = z / 3$ and $xyz = 384$, then $x$ =?
(A) $2(2^{1/3})$ (B) 4 (C) 2 (D) $4(2^{1/3})$ (E) none of these

52. A trader purchases blue paint and yellow paint at a price of Tk. 110 and Tk. 100 per litre respectively. He mixes blue and yellow paint at a ratio of 1:2 to make a certain paint of green color. He sells the green paint at a price of Tk. 120 per litre. If the trader makes a profit of Tk. 2000, how much yellow paint (in kgs) did he use in the mixture?
(A) 72 (B) 80 (C) 85 (D) 90 (E) none of these

53. If x and y are positive integers and x – y = 7, which of the following can be the value of x + y?
(A) 15 (B) 36 (C) 42 (D) 64 (E) none of these

54. A notation # is defined as a # b= $4a^2+4b^2+8ab$ for all non-negative integers. What is the value of (x+y)+ 6 when x#y = 144?
I. 1.0 II. 6 III.12
(A) Only I (B) Only II (C) only III (D) both I & II (E) both I & III

55. The difference of two numbers equals 60% of the smaller number. What is the ratio of the bigger number to the smaller number?
(A) 5:3 (B) 7:4 (C) 8:5 (D) 9:7 (E) none of these

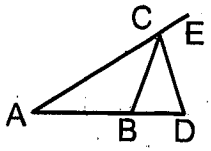
56. Which of the following describes the relationship between A and B as shown in the pairs of numbers (A.B) = {(2,5), (3,10), (4,17), (5,26)}?
(A) B=A+3 (B) B= 2A+4 (C) B=3A– 1 (D) $B=A^2+1$ (E) none of these

57. It takes 24 hours for 10 men to make 15 Christmas cakes. How many cakes can be made if 8 men work for 36 hours?
(A) 12 (B) 15 (C) 18 (D) 24 (E) none of these

58. A rectangle having an area of 56 $cm^2$ is formed when one side of a square is decreased by 5 cm and another side of the same square is increased by 5 cm. What is the perimeter of the original square (in cm)?
(A) 36 (B) 40 (C) 44 (D) 48 (E) none of these

59. X, Y and Z share Tk. 1800 in such a way that X has 2.5 times as much as Y, and Y has 4 times as much as Z. How much money (in taka) does Z receive?
(A) 120 (8)132 (C) 145 (D) 200 (E) none of these

60. In the figure, AB = BC = CD and ∠DCE = 105°. Calculate ∠CAB.
(A) 35° (B) 38° (C) 40°
(D) 42° (E) none of these




**Section III: Analytical Ability** **15 Questions; 15 Marks**

61. In mammals it is the secondary palate that permits breathing while eating. Clearly, breathing while eating is necessary to maintain the high rate of metabolism of mammals.

The author's assertion would be most weakened by the discovery of a mammalian species that had a
(A) high rate of metabolism and the ability to breathe while eating
(B) low rate of metabolism and the ability to breathe while eating
(C) low rate of metabolism and no ability to breathe while eating
(D) high rate of metabolism and no secondary palate
(E) low rate of metabolism and a secondary palate

62. The world's annual food production slightly exceeds the amount of food required to provide a minimally adequate diet for the world's population. To predict that insufficient food production will cause a hunger crisis in the future is nonsense. Any hunger crisis will result from a distribution problem rather than a production problem.

The statement above assumes which of the following?

(A) The world's food requirements are greater than they will be in the future.
(B) A shortfall in the world's food production can be prevented by a better distribution system.
(C) The world's food production will continue to be sufficient to meet or exceed needs.
(D) The distribution of the world's existing food supply will be improved in the future.
(E) The world hunger crisis will not exist in the future.

63. Jamil : "Because he is a superb athlete, Bashar is qualified for admission to the Hall of Fame."
Sonia : "But because Bashar has used illegal drugs, he is a poor role model for young people.

Therefore, Bashar should not be admitted to the Hall of Fame."

Sonia's conclusion depends on which of the following assumptions?,
(A) Superb athletes usually do not use illegal drugs.
(B) Bashar is interested in being admitted to the Hall of Fame.
(C) Bashar's use of illegal drugs has had a negative effect on his athletic performance.
(D) Being an adequate role model for young people should be one of the criteria for admission to the Hall of Fame.
(E) All athletes who are good role models for young people are qualified for admission to the Hall of Fame.

**Questions 64 to 66**

Recently concluded Hay Festival in the Bangla Academy held two discussion sessions. The discussion leader of the festival was selecting two groups of books — Group 1 and Group 2 — for the sessions. She was choosing from seven books — T, U, V, W, X, Y, and Z. Group 1 would contain four of the books and Group 2 would contain the other three books. The leader must select the books for each group according to the following restrictions:

- T cannot be in the same group as U.
- If X was in Group 2, Z must also be in Group 2.
- If Z was in Group 1, W must also be in Group 1.

64. If T and Z were in Group 2, any of the following books could also be in Group 2 EXCEPT
(A) U (B)V (C)W (D)X (E)Y

65. If Z was in Group 1, which of the following must have been true?
(A) T was in Group 1 (B) V was in Group 2 (C) X was in Group 2
(D) U was in the same Group as V (E) W was in the same Group as Y

66. If X was in Group 2, which of the following must have been true?
(A) T was in Group 2 (B) U was in Group 2 (C) W was in Group 1
(D) Y was in the same Group as Z (E) Z was in the same Group as U

**Questions 67 to 69**

A loop bus has exactly six stops on its route. The bus first stops at stop one and then at stops two, three, four, five and six in that order. After leaving stop six, the bus returns to stop one and continues around the loop again. The stops are at six buildings that are, in alphabetical order, Gendaria, Hatirpool, Jigatala, Khilgaon, Lichubagan, and Mohammadpur.

- Lichubagan is stop three.
- Hatirpool is stop six.
- Khilgaon is the stop immediately before Mohammadpur.
- Jigatala is the stop immediately before Gendaria.

67. If Jigatala is stop four, which of the following must be the stop immediately before Lichubagan?
(A) Khilgaon (B) Mohammadpur (C) Jigatala (D) Gendaria (E) Hatirpool

68. If Gendaria is stop two, which of the following must be the stop immediately before Hatirpool?
(A) Jigatala (B) Gendaria (C) Lichubagan (D) Khilgaon (E) Mohammadpur

69. If a passenger gets on the bus at Khilgaon, rides past one of the stops, and gets off at Lichubagan, which of the following must be true?
(A) Khilgaon is stop one.
(B) Mohammadpur is stop three.
(C) Lichubagan is stop four.
(D) Jigatala is stop five.
(E) Gendaria is stop six.

**Questions 70 to 75**

Two male singers, Peer and Shaer; two female singers Rina and Vina; two male dancers Tapu and Wahed; and two female dancers Queen and Usha, are the eight entertainers who are to perform at the Bengal Theater on a certain night. Each entertainer is to perform alone and only once that night. The entertainer may perform in any order that conforms to the following restrictions:

- The performances by singers and the performances by the dancers must alternate throughout the evening.
- The first performance that evening must be by a female entertainer, and the second performance by a male entertainer.
- The final performance must be by a male singer.

70. If Rina is to perform fourth, which of the following must perform sixth?
(A) Peer (B) Shaer (C) Usha (D) Vina (E) Wahed

71. If Usha is to perform seventh, which of the following must perform first?
(A) Queen (B) Rina (C) Shaer (D) Tapu (E) Vina

72. If Peer is to perform eighth, which of the following must perform second?
(A) Rina (B) Shaer (C) Tapu (D) Vina (E) Wahed

73. If Tapu is to perform third, Wahed must perform
(A) first or fifth (B) second or fifth (C) fourth or seventh
(D) fifth or seventh (E) sixth or seventh

74. If Queen is to perform third, Vina fourth, and Wahed fifth, which of the following must perform sixth?
(A) Peer (B) Rina (C) Shaer (D) Tapu (E) Usha

75. Which of the following could be the first of the entertainers to perform?
(A) Peer (B) Rina (C) Usha (D) Vina (E) Wahed

## PART II: Writing Ability — 25 Marks

A. Youth unemployment is a major factor for social unrest in our country. Share your thoughts on means to overcome this problem for a better society. [15]

B. Write a summary of the following article (not exceeding five sentences) along with a suitable title. [5]

Trees give shade for the benefit of others, and while they themselves stand in the sun and endure the scorching heat, they produce the fruit of which others profit. The character of good men is like that of trees. What is the use of this perishable body if no use is made of it for the benefit of mankind? Sandalwood, the more it is rubbed, the more scent does it yield. Sugarcane, the more it is peeled and cut up into pieces, the more juice does it produce. The men who are noble at heart do not lose their qualities even in losing their lives, What matters whether men praise them or not? What difference does it make whether they die at this moment or whether lives are prolonged? Happen what may, those who tread in the right path will not set foot in any other. Life itself is unprofitable to a man who does not live for others. To live for the mere sake of living one's life is to live the life of dog and crows. Those who lay down their lives for the sake of others will assuredly dwell forever in a world of bliss.

C. Translate into Bangla:

| English | Bangla |
|---|---|
| IBA is the pioneer in rendering business education in Bangladesh. | বাংলাদেশের ব্যবসা শিক্ষা প্রদান-এ আইবিএ পথিকৃৎ। |
| Aarong sells a whole variety of handicraft products supplied by small cottage industry. | আড়ং ক্ষুদ্র কুটির শিল্প দ্বারা সরবরাহকৃত বিভিন্ন ধরনের পণ্য বিক্রি করে। |
| The winter brings a lot of green vegetables in the market. | শীতকালে বাজারে অনেক ধরনের সবুজ সবজি পাওয়া যায়। |
| He is both interested in and dedicated to cancer research. | তিনি ক্যান্সার গবেষণায় একই সাথে আগ্রহি এবং নিবেদিত। |
| Bangladesh government has set up several export processing zones to attract foreign investment. | বাংলাদেশ সরকার বৈদেশিক বিনিয়োগ আকর্ষণের জন্য অনেক রপ্তানি প্রক্রিয়াকরণ অঞ্চল স্থাপন করেছে। |

# Answer Key

## Section I: Language & Communication

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1.B | 2.B | 3.B | 4.D | 5.C | 6.B | 7.A | 8.D | 9.C | 10.A |
| 11.A | 12.E | 13.E | 14.E | 15.C | 16.E | 17.D | 18.D | 19.D | 20.A |
| 21.E | 22.B | 23.A | 24.E | 25.D | 26.B | 27.A | 28.C | 29.B | 30.D |

## Section II: Mathematics

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.C | 32.D | 33.C | 34.A | 35.C | 36.D | 37.C | 38.B | 39.A | 40.C |
| 41.B | 42.A | 43.B | 44.B | 45.D | 46.C | 47.D | 48.A | 49.E | 50.C |
| 51.E | 52.B | 53.A | 54.C | 55.C | 56.D | 57.C | 58.A | 59.A | 60.A |

## Section III: Analytical Ability

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 61.D | 62.B | 63.D | 64.A | 65.B | 66.C | 67.B | 68.E | 69.A | 70.D |
| 71.A | 72.B | 73.D | 74.B | 75.C | - | - | - | - | - |

# BBA (IBA) Admission Test (2012) Solution

## Section I: Language & Communication

1. (B) 'despondent' শব্দটির মানে 'frustrated' আর 'to keep your chin up' শব্দটির মানে 'to remain cheerful'।
2. (B) 'teeming' শব্দটির মানে 'full of'।
3. (B) প্রথম gap এ, unstoppable শব্দটির ঠিক বিপরীত meaning এর একটি শব্দ থাকবে, সুতরাং option B সব চাইতে suitable।
4. (D) তার অগ্রগতি থেমে গেছে, সুতরাং উত্তর টি হচ্ছে 'impasse'।
5. (C) plan develop করা মানেই 'scheme'।
6. (B) সে unfair treatment এর জন্য angry হয়েছিল, তাই indignant।
7. (A) 'slighted' অর্থ insulted।
8. (D), 'keep them at bay' এর অর্থ হল 'maintain a safe distance'. যেহেতু opposition বরাবার points refute করেছিল, তাদের থেকে safe margin এ থাকা কঠিন ছিল।
9. (C) 'cut to the chase' এর অর্থ 'going directly to the point by cutting the irrelevant talk'।
10. (A) 'horde' এর অর্থ হল collect করা আর 'hordes' অথাৎ 'groups' ও হয়।
11. (A) 'throng' এর অর্থ হল 'A large, densely packed crowd of people or animals'।
12. (E) 'seconded' এর অর্থ supported, আর second মানে দ্বিতীয় অথবা সময় (1 minute এর ৬০ ভাগ এর 1 ভাগ) ও ভোঝায়।
13. (E) 'dissolved' এর অর্থ মিলিয়ে যাওয়া অথাব 'শেষ করে দেওয়া'।
14. (E) 'resolve' অর্থৎ 'determination,' 'decide' অথবা 'Settle or find a solution' হয়।
15. (C) (ii) ভূল কারণ position এই ক্ষেত্রে 'move' না, 'improve' করবে।
16. (E) 'internalized' অর্থ 'ধীরে ধীরে সরে যাওয়া' আর 'acclimatized' অর্থ 'ধীরে ধীরে মানিয়ে নেওয়া'।

17. (D) 'appalling' অর্থ ঘৃণ্য আর 'atypical' অর্থ non-conforming।
18. (D) Vilify আর accuse দু'টি শব্দরই অর্থ দোষারোপ করা।
19. (D) Synonym
20. (A) Synonym
21. (E) Synonym
22. (B) Synonym
23. (A) Animals এর ক্ষেত্রে which হওয়া উচিত।
24. (E) no error.
25. (D) 'him' বলতে এখানে কার কথা বোঝাচ্ছে সেটা clear না।
26. (B) article এর main objective হচ্ছে কি করে vaccination এর rate বাড়ানো যায়, কারন ডাক্তার দের থেকে নার্স রা সময় কম নেয় এবং ওদের কেউ দায়িত্ব দেওয়া suggestion দেওয়া হয়েছে article টা তে।
27. (A) New strategy নেওয়ার পরেও যদি এখনকার মতন population এর একচতুর্থাংশ সাহায্য পায়, তাহলে effectiveness টা weaken হয়ে যায়।
28. (C) texts to the general populace বলতে বুঝিয়েছে সাধারণ জনগণ এর কাছে text পাঠানো।
29. (B) article এর main premise হচ্ছে ডাক্তার রা হয়তো vaccination কারন ঠিক ই, কিন্তু nurse দের specialty ই ইচ্ছে vaccination আর preventive basic treatment।
30. (D) Cholera' র example দেওয়া হয়েছে এইটা বোঝানোর জন্য যে ডাক্তার রা রোগ-প্রতিরোধকারী role এর থেকে রোগ এর treatment করাতে আরো স্বাচ্ছন্দ্য বোধ করেন।

## Section II: Mathematics

31. (C) বলা আছে,
কালাম এর বেতন: বশির এর বেতন= 3:2
বশির এর বেতন: ইমরান এর বেতন = 3:1
প্রথম অনুপাত এর দুই দিকে 3 দিয়ে গুণ করি এবং দ্বিতীয় অনুপাত এর দুই দিকেই 2 দিয়ে গুণ করি।
কালাম এর বেতন: বশির এর বেতন: ইমরান এর বেতন = 9:6:2
∴ কালাম এর বেতন: ইমরান এর বেতন = 9:2

32. (D) $2x - 5 \leq 16$
$\Rightarrow x \leq 10.5$
আর $5x - 7 > 26$
$\Rightarrow x > 6.6$
দু'টি inequality satisfy করে একমাত্র option (D).

33. (C) Elimination প্রক্রিয়া apply করলে দেখা যায়,
A) একটি বাহু 8 হলে, বাকি দু'টি বাহু হয় 2 আর 3. কিন্তু 2+3 = 5 আর 5 হচ্ছে 8 এর থেকে ছোট, যা কখানো হতে পারেনা কারণ আমরা জানি যে একটি ত্রিভুজ এর দু'টি ছোট বাহু'র সমষ্টি বৃহত্তর বাহু'র থেকে বড় হতে হয়। সুতরাং, A) হবেনা।
B) যতি অন্য বাহু 7 হয়, $x + (x+1) = 13 - 7 = 6$ condition টি কে কোনও পূর্ণসংখ্যা satisfy করতে পারেনা। সুতরাং, B) হবেনা।
C) যদি অন্য বাহু 6 হয়, বাকি দু'টি বাহু হতে পারে $x = 3$ এবং $x+1 = 4$. সুতরাং, C) সঠিক।
D) যদি অন্য বাহু 5 হয়, $x + (x+1) = 13 - 5 = 8$ condition টি কে কোনও পূর্ণসংখ্যা satisfy করতে পারেনা। সুতরাং, D) হবেনা।

34. (A) বলা আছে, $156 = xy$, $x - y$ এর সবচেয়ে ছোট মান পেতে x এর অনেক মান ধরতে হবে আর y এর সব চেয়ে বড় মান ধরতে হবে। x ও y এর অন্তর সবচেয়ে কম হলে, $\therefore 156 = 12 \times 13$
সুতরাং $x - y = 1$

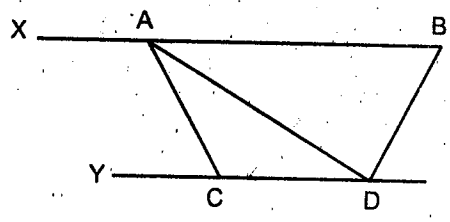
35. (C) দু'টি number এর বড় গড় হচ্ছে $2x + 1$. $\therefore$ যোগফল $= 2(2x+1) = 4x + 2$. বলা আছে, একটি number হচ্ছে $x - 2$. $\therefore$ অন্যটি হবে $(4x + 2) - (x - 2) = 3x + 4$.

36. (D) Elimination প্রক্রিয়া apply করলে দেখা যায়,
A) $n^2 > 1$ সব $n > 0$ মান এর জন্য কাজ করেনা, উদাহরণঃ $(0.5)^2 = 0.25$
B) $(n^2 - n) > 0$ সব $n > 0$ মান এর জন্য কাজ করেনা, উদাহরণঃ $(0.5^2 - 0.5) = 0.25 - 0.5 = -0.25$
C) $2n - 1 > 0$ সব $n > 0$ মান এর জন্য কাজ করেনা, উদাহরণঃ $2(0.5) - 1 = 1 - 1 = 0$
D) ভগ্নাংশ এবং যেকোনো পূর্ণসংখ্যা দিয়ে পরিক্ষা করে দেখলে দেখলে দেখা যায় যে, $(n^2 + 1)/n > 1$ সব $n > 0$ মান এর জন্যই কাজ করে।

37. (C) দু'টি number এর গড় হচ্ছে $5x$ $\therefore$ যোগফল $= 10x$. বলা আছে, একটি number হল $3x - 8$. $\therefore$ অন্য number টি হচ্ছে $(10x) - (3x - 8) = 7x + 8$। সুতরাং $7x + 8$ আর $3x$ এর গড় হল $= (10x + 8)/2 = 5x + 4$.

38. (B) ধরে নিই, class এ x students ছিল। সুতরাং, প্রতিটি ছাত্র পাবে $120/x$ chocolate.
যদি 4 জন ছাত্র বেশি থাকতো, এক একটি ছাত্র পেত $120/(x+4)$ chocolate.
বলা আছে, $120/(x+4) = 120/x - 1$
⇨ $120/(x+4) = (120 - x)/x$
⇨ $120x = 120x - x^2 + 480 - 4x$
⇨ $x^2 + 4x - 480 = 0$
⇨ $x^2 + 24x - 20x - 480 = 0$
⇨ $(x + 24)(x - 20) = 0$
⇨ $x = 20$
[এই অঙ্কটি process of elimination দিয়েও করা যায়। আপনার যে প্রক্রিয়ায় করতে সহজ লাগে ও সময় কম লাগে সেই প্রক্রিয়াই ব্যবহার করবেন।

39. (A) দু'টি সমীকরণ যোগ কররে আমরা পাইঃ $2a = d + e$ $\therefore$ $a = 0.5(d+e)$




40. (C) $\angle XAC$ যদি $130°$ হয়, তাহলে $\angle CAB$ হবে $(180-130) = 50°$. AC আর CD দুই বাহু সমান দৈর্ঘ্য হলে ওদের বিপরীত দিকের দুই কোন সমান হবে। অর্থাৎ, $\angle CAD$ আর $\angle ADC$ সমান। আবার, $\angle ADC$ আর $\angle DAB$ সমান (XB আর YD সমান্তরাল)। অর্থাৎ, $\angle CAD$ আর $\angle BAD$ সমান হবে। যেহেতু $\angle CAB$ হচ্ছে $50°$, কোন CAD আর $\angle$ BAD এর সমান হবে $25°$ করে। আরো বলা আছে, $\angle ADB$ সমান $90°$. এইবার ABD ত্রিভুজ থেকে আমরা পাই ABD+ADB+BAD $= 180°$ (একটি ত্রিভুজ এর তিনটি কোণ এর যোগফল). অর্থাৎ, ABD $= 180° - 90° - 25° = 65°$

41. (B) বলা আছে, $x \phi y = (x - y)^2$
সুতরাং, $[x \phi (x - y)] \phi [y \phi (y - x)]$
$= (x - x + y)^2 \phi (y - y + x)^2$
$= y^2 \phi x^2$
$= (y^2 - x^2)^2 = (x^2 - y^2)^2$

42. (A) ধরে নিই, অনুপাত টি হচ্ছে x:y
তাহলে, x (20% চিনি) + y(50% চিনি) = (x+y)(40% চিনি)
⇨ $0.2x + 0.5y = 0.4(x+y)$
⇨ $0.5y - 0.4y = 0.4x - 0.2x$
⇨ $0.1y = 0.2x$
⇨ $x/y = 1/2$

43. (B) ধরে নিই, দ্বিতীয় দিন এর avg. speed ছিল x
∴ প্রথম দিন এর avg. speed ছিল x–5
ধরে নিলাম, জাহাজ কি দ্বিতীয় দিন এ t hours ধরে চলছে.
∴ প্রথম দিন t+3 hours চলছে।
বলা আছে, $t + t+3 = 7$
⇨ $2t = 4, t = 2, t+3 = 5$
আমরা জানি, speed = distance/time, ∴distance = speed x time
সুতরাং, $2x + 5(x–5) = 59$
⇨ $7x = 84$
⇨ $x = 12$

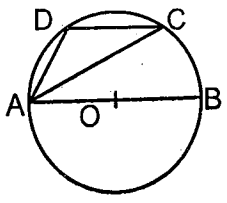
44. (B) বলা আছে, একটি পূর্ণসংখ্যা, অর্থাৎ n কে 5 দিয়ে ভাগ করলে তার ভাগশেষ 4 থাকে।
∴n = 5x + 4, যেখানে n একটি positive number।
x = 1, 2, 3 হলে n = 9, 14, 19 হয়; সুতরাং answer (A), (C) এবং (D) পূর্ণসংখ্যা হতে পারে।
কিন্তু x এর কোনো পুরনস্যাঙ্খিক পান ই 5x+4 =10 কে satisfy করতে পারেনা। সুতরাং (B) হচ্ছে সঠিক উত্তর।

45. (D) ধরে নিই, ব্যবসায়ী কিনেছেন 1 kg আপেল. আপেল এর $1/4^{th}$ পচে গেছিল; অর্থাৎ, 0.75 kg আপেল বাকি ছিল।
কোন লাভ বা ক্ষতি না করতে চাইলে এই আপেল গুলি বিক্রি করতে হবে 90 tk তে।
সুতরাং, 0.75 kg আপেল বিক্রি করতে হবে 90 tk. তে।
1 kg আপেল এর বিক্রয় মূল্য হবে $\frac{90}{0.75}$ tk = 120 tk. (ঐকিক নিয়ম)

46. (C) বলা আছে, n কে 3 দিয়ে ভাগ করলে ভাগফল হয় p এবং ভাগশেষ হয় 1। সুতরাং, $n = 3p + 1$
যখন p কে 5 দ্বারা ভাগ করা হয়, ভাগফল হয় q আর ভাগশেষ হয় 2।
সুতরাং, $p = 5q + 2$
∴ $n = 3(5q + 2) + 1 = 15q + 7$
যেহেতু $15q + 5$ কে 5 দ্বারা ভাগ করা যায়, $15q + 7$ এর অবশ্যই 2 ভাগশেষ থাকতে হবে।

47. (D) $2y – 8(x/3) = \frac{6y-8x}{3}$
বলা আছে, $4x – 3y = 24$
⇨ $-2(4x – 3y) = – 48$
⇨ $6y – 8x = – 48$
⇨ $\frac{6y-8x}{3} = – 16$

48. (A) 4 + 8 + 12 + 16 + 20 + 24 = 84; সুতরাং, 84 জন patient treat করতে লাগবে 6 hours।



49. (E) Given information ছবি তে বসালে দেখা যায় যে $\angle ADC$ কে যেকোনো ভাবেই আঁকা সম্ভব। অর্থাৎ, $\angle ADC$ এর কোনো fixed value নেই। উত্তর হচ্ছে Cannot be determined, এবং এই option টি কোনটার মধ্যেই নেই। সুতরাং উত্তর হচ্ছে (E)

50. (C) ধরে নিই, বাবু'র marble = x
∴ আনোয়ার এর marble = 3x
এখন, $\frac{3x-6}{x+6} = \frac{5}{3}$
⇨ $9x - 18 = 5x + 30$
⇨ $4x = 48$
⇨ $x = 12$
⇨ $3x = 36$

51. (D) বলা আছে, $x = y = z/3$
এখন, $\frac{xyz}{3} = 128$
⇨ $x^3 = 128$
⇨ $x = 4\sqrt[3]{2}$

52. (B) ধরে নিই, আমাদের ক্রেতা কিনলেন 1 liter নীল আর 2 liters হলুদ পেইন্ট।
খরচ = $110 + (100 \times 2) = 310$ Tk
বলা আছে প্রস্তুতকৃত সবুজ পেইন্ট বিক্রি করা হয় 120 Tk. প্রতি liter.
সুতরাং, 3 liter সবুজ পেইন্ট এর বিক্রয় মূল্য = $3 \times 120 = 360$ Tk
∴ লাভ= 50 Tk.
এখন, 50 Tk লাভ করতে ব্যবহার করতে হয় 2 kg হলুদ পেইন্ট
∴ 1 Tk লাভ করতে ব্যবহার করতে হবে 2/50 kg হলুদ পেইন্ট।
∴ 2000 Tk লাভ করতে ব্যবহার করতে হবে $\frac{2 \times 2000}{50} = 80$ kg হলুদ পেইন্ট।

53. (A) x–y= 7 হলে একটি combination of values হতে পারে 11–4=7. এই ক্ষেত্রে, x+y এর value হবে 15, যা answer option (A) তে আছে।

54. (C) বলা আছে, $a\#b = 4a^2 + 4b^2 + 8ab$
তাহলে $x\#y = 4x^2 + 4y^2 + 8xy$
এখন $4x^2 + 4y^2 + 8xy = 144$
⇨ $x^2 + y^2 + 2xy = 36$
⇨ $(x + y)^2 = 36$
⇨ $x + y = 6$
সুতরাং, $x + y + 6 = 6 + 6 = 12$

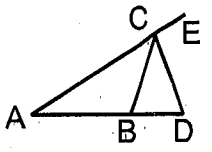
55. (C) ধরে নিলাম, বড় number টি হচ্ছে x আর ছোট number টি হচ্ছে y
বলা আছে, $x - y = 0.6y$
⇨ $x = 1.6y$
⇨ $x/y = 1.6:1 = 16:10 = 8:5$

56. (D) Process of Elimination দিয়ে try করতে হবে সবগুলো options.

57. (C) 10 জন 24 hour কাজ করলে বানায় 15 ক্রিসমাস কেক।
1 জন 24 hour কাজ করলে বানায় 15/10 ক্রিসমাস কেক।
1 জন 1 hour কাজ করলে বানায় $\frac{15}{10 \times 24}$ ক্রিসমাস কেক।
8 জন 36 hours কাজ করলে বানায় $\frac{15 \times 8 \times 36}{10 \times 24}$ ক্রিসমাস কেক।
$= 18$

58. (A) ধরে নিই, বর্গক্ষেত্রের এক বাহুর দৈর্ঘ্য x
বলা আছে, $(x + 5)(x - 5) = 56$
$\Rightarrow x^2 - 25 = 56$
$\Rightarrow x^2 = 81$
$\Rightarrow x = 9$
$\therefore$ পরিসীমা $= 4x = 4 \times 9 = 36$

59. (A) ধরে নিই, Z এ ভাগ এর অংশ হল z
$\therefore$ Y এর অংশ হল 4z
X এর অংশ হচ্ছে $2.5 \times 4z = 10z$
Total টাকার অঙ্ক $= z + 4z + 10z = 15z$
$\therefore$ Z এর অংশ হচ্ছে $\frac{z}{15z} = 1/15$
$\therefore$ Z পাচ্ছে $1800 \times 1/15 = 120$




60. (A) বলা আছে, AB=BC=CD. ত্রিভুজ ABC তে ধরে নিলাম angle CAB হল x degrees. সেই ক্ষেত্রে $\angle$ ACB ও $x°$ হবে, কারণ বিপরীত বাহু সমান হলে বিপরীত angles সমান হয়। একই ভাবে, ত্রিভুজ BCD তে $\angle$ CBD যদি $y°$ ধরি তাহলে $\angle$CDB $y°$ হবে। ত্রিভুজ ABC তে খেয়াল করলে, $\angle y$ হচ্ছে ত্রিভুজ ABC'র exterior angle. এর থেকে আমরা বলতে পারি যে $\angle CAB + \angle ACB = \angle CBD$ (exterior angle equals to the sum of interior opposite angles), অর্থাৎ $y = 2x$। আবার খেয়াল করলে দেখা যায়, $\angle$DCE হচ্ছে ত্রিভুজ ACD এর exterior angle. । অর্থাৎ, বলা যায় যে $x + y = 105°$। পূর্বে বার করা হয়েছিল যে $y = 2x$। সেই মান এই equation এ বসালে আমরা পাই $x + 2x = 105°$. অথবা, $x = 35°$।

## Section III: Analytical Ability

61. (D) যেহেতু বলা আছে যে secondary palate এর জন্যই breathing while eating সম্ভব এবং high rate of metabolism এর জন্য breathing while eating necessary, যদি আমরা এম কোনো species পাই যার secondary palate নেই (অর্থাৎ breathing while eating পারেনা) তারপরেও high rate of metabolism আছে, তাহলেই তাঁর প্রথম conclusion কে weaken করা হয়।

62. (B) বলা আছে যে food production দরকার এর থেকে সামান্য হলেও বেশি আছে। তার অর্থ এই, যে food production enough হলেও তার distribution সঠিক হচ্ছেনা। এর থেকে বোঝা যায় যে ঠিক distribution থাকলে food production enough হবে।

63. (D) জামিল এর যুক্তি ছিল যে বাশার superb athlete দেখে hall of fame এ chance পাবে। কিন্তু সোনিয়া বললেন যে illegal drugs ব্যবহার করার জন্য বাশার একটা poor role model এ পরিণত হয়েছে, যে জন্য তাকে hall of fame এ admit করা উচিত না। এর মানে সোনিয়া conclude করছেন যে hall of fame এ admit হতে হলে poor role model হওয়া যাবেন, অর্থাৎ অন্তত adequate role model হতে হবে।

64. (A) যেহেতু condition এ বলা আছে যে T থাকলে U থাকতে পারবেনা, group 2 তে T থাকলে অবশ্যই U থাকবেনা।

65. (B) Z group 1 এ থাকলে X group 2 তে থাকতে পারবেনা, যেহেতু বলা আছে X group 2 তে থাকলে Z কেও group 2 তে থাকতে হবে। আরো বলা আছে যে Z group 1 এ থাকলে W group 1 এ থাকবে। অর্থাৎ, 4 টা বই এর মধ্যে আমরা 3 টা পেয়ে গেলাম Z, X আর W। যেহেতু T আর U এটি group এ থাকতে পারবেনা, যেকোনো একজন কে group 1 এর আরেকটা খালি spot এ থাকতে হবে। অর্থাৎ V কে group 2 তে must থাকতে হবে।

66. (C) X group 2 কে থাকলে Z কেও group 2 তে থাকতে হবে। আর একটা খালি spot এ হয় T নয়তো U বসবে। সুতরাং W কে group 1 এ থাকতে হবে।

67. (B) ধরে নিই, Gendaria = G, Hatirpool = H, Jigatala = J, Khilgaon = K, Lichubagan = L আর Mohammadpur = M। J যেহেতু stop 4 এ আছে, stop 5 এ থাকবে G। আর stop 1 আর 2 কে থাকবে K আর M, respectively. সুতরাং L এর ঠিক আগে থাকছে M।

68. (E) Stop 2 তে G থাকলে stop 1 এ থাকবে J, আর L এর পরের দুইটা stop হবে K আর M। সুতরাং H এর ঠিক আগে থাকবে M।

69. (A) L আছে stop 3 তে, এবং এক stop পার হয়ে L এ আসা মনে passenger টি উঠেছিলেন stop 1 এ। সুতরাং stop 1 হচ্ছে K।

70. (D) ধরে নিই, singers রা হচ্ছেন S এবং dancers রা হচ্ছেন D। Male রা হচ্ছেন M এবং Female রা হচ্ছেন F. তাহলে given conditions থেকে যতটুকু পাওয়া যায় তা হলঃ

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| F | M | | | | | | MS |
| | | | | | | | |

শেষ এ যেহেতু Singer আছেন, তাঁর আগে সবাই alternatively Dancer ও Singer বসবে। তা বসালে পাইঃ

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FD | MS | D | S | D | S | D | MS |
| | | | | | | | |

Rina যেহেতু Female Singer, এর থেকে আমরা যা পাই তা হলঃ

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FD | MS | D | FS | D | FS | D | MS |
| | | | Rina | | | | |

দুইজন Male Singer যেহেতু বসে গেছেন slot এ, 6th place এ একজন Female Singer থাকবেন এবং Rina ছাড়া শুধু বাকি আছেন Vina.

71. (A) Usha হচ্ছেন Female Dancer, তাই ওনার position table এ বসালে পাইঃ

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FD | MS | D | S | D | S | FD | MS |
| | | | | | | Usha | |

First slot এ একজন Female Dancer থাকতে হবে, এবং Usha ছাড়া শুধু বাকি আছেন Queen.

72. (B) Peer কে 8th position এ বসালে আমরা পাইঃ

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FD | MS | D | S | D | S | D | MS |
| | | | | | | | Peer |

Second slot এ একজন Male Singer বসবেন, আর Peer ছাড়া একমাত্র Male Singer বাকি আছেন Shaer.

73. (D) Tapu কে 3rd slot এ বসালে পাইঃ

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FD | MS | MD | S | D | S | D | MS |
| | | Tapu | | | | | |

প্রথম slot এ Female Dancer থাকছেন, আর বাকি দুইটা Dancer এর যেকোনো slot এ বসবেন Wahed. সুতরাং Wahed বসবেন হয় 5th slot এ অথবা 7th slot এ।

74. (B) Queen কে 3rd slot এ, আর Vina আর Wahed কে 4th আর 5th slot এ বসালে পাইঃ

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FD | MS | FD | FS | MD | S | D | MS |
| | | Queen | Vina | Wahed | | | |

যেহেতু Female Singer আরেকটা slot এ থাকতেই হবে আর Male Dancer আরেকটা slot এ থাকতেই হবে, বাকি দু'টো slot এ হবে একজন Female Singer আর একজন Male Dancer. তাহলে 6th slot এ থাকে Rina.

75. (C) First entertainer কে হতে হবে Female Dancer, অর্থাৎ Queen অথবা Usha. Options এ শুধু Usha আছে।

## PART II: Writing Ability — 25 Marks

**A.** The youths of our country are energetic and full of potential. They have it inside them to make something of themselves, to prosper; however, due to unemployment they are unable to do so. Thus, they are turning to violence and causing unrest in the society.

The best way to solve this problem is to create job opportunities and one way to do this is by increasing the wages for the already employed people in the country. If the wages are increased, then people have more money to spend and if they spend more money, then the manufacturers will be encouraged to produce more. To increase production, companies will hire more workers.

Another way to increase the amount of money circulation in the economy is by cutting down income tax. If income tax is decreased then the consumers will have more money to spend on products. This will give the producers the confidence to hire more workers to increase production.

The government can also increase public investment in the economy. If it employs more people in the national companies, then a large number of youths will leave the streets and make use of the increased job opportunities.

Training will create skillful workforce. If the youths are given the proper education and training, then they will be able to do their jobs much better and will be more sought after for hiring. We can also send these skilled youthful labors abroad to countries which need them.

These are some of the ways we can create job opportunities for our youthful population. Since an idle mind breeds trouble, if given the opportunity to stay busy and hold a job, we can solve the stated issue.

**B.**

### The Righteous Path

The characters of good men are like the trees which endure many hardships for the benefit of others. Their sole purpose in life is to benefit mankind. Noble men do not care for their lives or for the opinions of others. No matter what, they tread on a righteous path. To truly live is to dedicate one's life for the welfare of others.

**C.**

| English | Bangla |
|---|---|
| IBA is the pioneer in rendering business education in Bangladesh. | বাংলাদেশের ব্যবসা শিক্ষা প্রদান-এ আইবিএ পথিকৃৎ। |
| Aarong sells a whole variety of handicraft products supplied by small cottage industry. | আড়ং ক্ষুদ্র কুটির শিল্প দ্বারা সরবরাহকৃত বিভিন্ন ধরনের পণ্য বিক্রি করে। |
| The winter brings a lot of green vegetables in the market. | শীতকালে বাজারে অনেক ধরনের সবুজ সবজি পাওয়া যায়। |
| He is both interested in and dedicated to cancer research. | তিনি ক্যান্সার গবেষণায় একই সাথে আগ্রহি এবং নিবেদিত। |
| Bangladesh government has set up several export processing zones to attract foreign investment. | বাংলাদেশ সরকার বৈদেশিক বিনিয়োগ আকর্ষণের জন্য অনেক রপ্তানি প্রক্রিয়াকরণ অঞ্চল স্থাপন করেছে। |

# BBA (IBA)

## Admission Test Question (2013-2014) with Solution

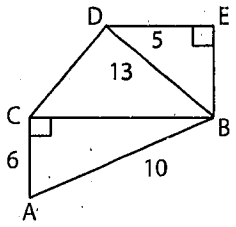
# BBA Admission Test December 2013

## [PART I: Multiple Choice Questions (MCQs) 75 Questions: 75 Marks]

## SECTION I: MATHEMATICS (Questions 1 to 30)

1. Event E is defined to be rolling an even number on a 6-sided die and Event F is defined to be rolling a 1, 2 or 3.Calculate the probability of rolling a die such that events E and F occur simultaneously on a single roll of the die.
   A) 1/2 B) 1/6 C) 0 D) 5/6 E) 1
2. At 9:00 a.m. train *A*left the Airport Railway Station and two hours later train B left the same station on a parallel track. If train *A*averaged 60 kilometers per hour and train *B*averaged 75 kilometers per hour until B passed *A*, at what time did B pass *A*?
   A) 2:00 p.m. B) 5:00 p.m. C) 6:00 p.m. D) 7:00 p.m. E) 9:00 p.m.
3. Kalim is asked to write a study guide for a textbook. For his work, the publishing company is giving him a choice of a one-time payment of Tk 13,375 or Tk 2,000 plus 10% royalties per copy sold. If the proposed royalty rate results in a royalty of Tk 3.25 per study guide sold, how many study guides need to be sold for the total income received by Kalim to be the same from either choice?
   A) 3,250 B) 3,437 C) 3,500 D) 3,550 E) none of these
4. In dividing a number by 585, a student employed the method of short division. He divided the number successively by 5, 9 and 13 (factors of 585) and got the remainders 4, 8, 12 respectively. If he had divided the number by 585, what would have been the remainder?
   A) 24 B) 144 C) 292 D) 584 E) none of these
5. Three pipes A, B and C can fill a tank from empty to full in 30 minutes, 20 minutes, and 10 minutes respectively. When the tank is empty, all the three pipes are opened. A, B and C discharge chemical solutions P,Q and R respectively. What is the proportion of the solution R in the liquid in the tank after 3 minutes?
   A) 5/11 B) 6/11 C) 7/11 D) 8/11 E) 9/11
6. The integers between 1 and 100, inclusive, are put in list A if they are divisible by 2 and in list B if they are divisible by 3. How many integers in list A are not in list B?
   A) 11 B) 16 C) 25 D) 33 E) 34
7. The mile meter of a highway bus misses every $11^{th}$ mile being travelled. After a certain time, the meter shows that 1,251 miles were travelled. How many miles were actually travelled?
   A) 1360 mites B) 1460 miles C) 1386 miles D) 1376 miles E) none of these
8. A metallic sheet is of rectangular shape with dimensions 48 m x 36 m. From each of its corners, a square is cut off so as to make an open box. If the length of the square is 8 m, the volume of the box (in $m^3$) is-
   A) 5120 B) 6420 C) 8960 D) 4830 E) none of these
9. Two boats on the opposite shores of a river start moving towards each other. When they pass each other they are 750 yards from one shoreline. They each continue to the opposite shore, immediately turn around and start back. When they meet again they are 250 yards from the other shoreline. Each boat maintains a constant speed throughout. How wide is the river?
   A) 2400 yards B) 3000 yards C) 2000 yards D) 4000 yards E) none of these
10. Mr. Saif has n luxury apartments, where n is an integer such that $20 < n < 50$. If he divides the apartments equally among his 5 children, he will have 2 apartments remaining. If he divides the apartments among 6 children, he will have 1 apartment remaining. How many apartments will remain if he divides the apartments among 7 children?
    A) 3 B) 2 C) 4 D) 1 E) none of these

11. A milk vendor has 2 cans of milk. The first can contains 25% water and the rest is milk. The second can contains 50% water. How much milk should he mix from each of the cans respectively so as to get 12 litres of milk such that the ratio of water to milk is 3 : 5 in that mixture?
    A) 4 litres, 8 litres  B) 6 litres, 6 litres  C) 5 litres, 7 litres
    D ) 7 litres, 5 litres  E) 8 litres, 9 litres
12. A group of hikers is planning a trip that will take them up a mountain using one route and back down using another route. They plan to travel down the mountain at a rate of one and a half times the rate they will use on the way up, but the time each route will take is the same. If they will go up the mountain at a rate of 4 miles per day and it will take them two days, how many miles long is the route down the mountain?
    A) 8  B) 6  C) 12  D) 16  E) none of these
13. 8 litres are drawn from a container full of mango juice and is then filled with water. This operation is performed three more times. The ratio of the quantity of mango juice now left in container to that of water is 16: 81. How much mango juice did the container hold originally?
    A) 24 litres  B) 30 litres  C) 36 litres  D) 42 litres  E) none of these
14. What is the area of the triangle BCD?
    A) 40  B) 42
    C) 44  D) 46  E) 48




15. There are six different models who are to appear in a fashion show. Two are from Europe, two are from South America, and two are from North America. If all the models from the same continent are to stand next to each other, how many ways can the fashion show organizer arrange the models?
    A) 48  B) 64  C) 24  D) 8  E) 72
16. If the length of each sides of three square garden plots is increased by 50%, by what percent is the sum of the areas of the three plots increased?
    A) 375%  B) 200%  C) 150%  D) 125%  E) 50%
17. A restaurant meal had cost Tk 35.50 and there was no tax. If the service charge was more than 10 percent but less than 15 percent of the cost of the meal, then the total amount paid must have been between Tk -
    A) 40 and 42  B) 39 and 41  C) 36 and 42  D) 37 and 39  E) 36 and 37

**Questions 18 to 20:** Each of the following questions consists of a problem followed by two statements. Decide whether the data in the statements are sufficient to answer the question. Select your answer according to whether:

A) statement 1 alone is sufficient, but statement 2 alone is not sufficient to answer the question.
B) statement 2 alone is sufficient, but statement 1 alone is not sufficient to answer the question.
C) both statements taken together are sufficient to answer the question, but neither statement alone is sufficient
D) each statement alone is sufficient.
E) statements 1 and 2 together are not sufficient, and additional data is needed to answer the question.

Mark your answer sheet for answer choice A/B/C/D/E as appropriate for each of the questions.

18. A certain straight corridor has four doors, A, B, C and D (in that order) leading off from the same side. How far apart are doors B and C?

Statement 1: The distance between doors B and D is 10 meters.
Statement 2: The distance between A and C is 12 meters.

19. After a long career, Mr. Iqbal is retiring. If there are 25 associates who contribute equally to a parting gift for Iqbal in an amount that is an integer, what is the total value of the parting gift?

Statement 1: If four associates were fired for underperformance, the total value of the parting gift would have decreased by Tk 200.
Statement 2: The value of the parting gift is greater than Tk 1,225 and less than Tk 1,275.

20. A die is rolled randomly on a circular board with a triangle inscribed in the circle. (All three vertices of the triangle are on the circumference of the circle.) What is the probability that the die comes to rest outside the triangular region?

Statement 1: The hypotenuse of the triangle is the diameter of the circle.
Statement 2: The radius of the circle is 2 units, and the area of the triangle is 4 square units.

21. A certain recipe makes enough batter (a semi-liquid mixture of one or more grains used to prepare various foods) for exactly 8 circular pancakes that are each 10 inches in diameter. How many circular pancakes, each 5 inches in diameter and of the same thickness as the 10-inch pancakes, should the recipe make?

A) 4 B) 15 C) 24 D) 32 E) 40

22. Ajit, Bilash and Chinu start at the same time in the same direction to run around a circular stadium. Ajit completes a round in 252 seconds, Bilash in 308 seconds and Chinu in 198 seconds, all starting at the same point. After what time will they all be again at the starting point?

A) 26 minutes and 18 seconds B) 42 minutes and 36 seconds
C) 45 minutes and 38 seconds D) 46 minutes and 12 seconds E) none of these

23. If a rectangular block that is 4 inches by 4 inches by 10 inches is placed inside a right circular cylinder of radius 3 inches and height of 10 inches, the volume of the unoccupied portion of the cylinder is how many cubic inches?

A) $6\pi-16$ B) $9\pi-16$ C) $160\pi-30\pi$ D) $60\pi-160$ E) $90\pi-160$

24. Mathematically, Force (F) is proportionate to Mass (m) multiplied by Acceleration (a); i.e. symbolically, $F \propto m * a$. If an object increases its acceleration by 10%, and loses 5% of its mass, by how much will the resultant force change?

A) Increase by 5% B) Decrease by 5% C) Increase by 4.5%
D) Decrease by 4.5% E) No change

25. Azhar plans to visit the National Museum once each month in 2014 except in March and May when he plans to go three times each month. A single admission costs Tk 5.50, a pass valid for unlimited visits in any 3 month period can be purchased for Tk 27, and an annual pass costs Tk 80. What is the least amount that Azhar can spend for his intended number of visits?

A) Tk 70 B) Tk 75 C) Tk 76.50 D) Tk 80 E) none of these

26. A certain integer n is a multiple of both 5 and 9. Which of the following must be true?

I. n is an odd integer II. n is equal to 45 III. n is a multiple of 15

A) II only B) III only C) I and II only D) I and III only E) II and III only

27. A company paid Tk. 500,000 in merit raises to employees whose performance were rated A, B, or C. Each employee rated A received twice the amount of the raise that was paid to each employee rated C, each employee rated B received 1.5 times the amount of the raise that was paid to each employee rated C. If 50 workers were rated A, 100 were rated B, and 150 were rated C, how much was the raise paid to each employee rated A?
A) Tk. 370 B) Tk. 625 C) Tk. 740 D) Tk. 1250 E) Tk. 2500

28. 6 men and 8 boys can finish a work in 10 days while 26 men and 48 boys can do the same in 2 days. How many days will 15 men and 20 boys take in completing the same work?
A) 4 days B) 5 days C) 6 days D) 7 days E) none of these

29. A store charges Tk 52 for a video game. This price is 30% greater than the store's cost to buy the game from its supplier. As an incentive to the store's clerks, the manager allows a clerk to purchase the video game for 10% less than the store's cost. How much would a store clerk have to pay for this video game?
A) Tk 15.60 B) Tk 20.80 C) Tk 31.20 D) Tk 32.76 E) Tk 36.00

30. On a 300-mile trip, a car went 30 miles per hour for the first 100 miles, 50 miles per hour for the second 100 miles, and 60 miles per hour for the third 100 miles. For what fractional part of the time taken for the entire 300-mile trip was the car going 30 miles per hour?
A) 1/10 B) 1/3 C) 10/21 D) 11/21 E) 3/14

## SECTION II: LANGUAGE & COMMUNICATION (Questions 31 to 60)

**Questions 31 to 35:** *Identify the sentence(s) that is/are showing the **correct use** of the underlined words.*

31. The word: scathe
(i) We were advised to buy a lawn mower and get rid of this scathe once and for all!
(ii) With perseverance and hard work, you are earning quite a scathing reputation,
(iii) It was not the judgment, but his scathing remarks that had truly hurt.
A) ii only B) iii only C) both i and ii D) both ii and iii E) all three sentences

32. The word: ash
(i) When he returned, he was beyond recognition - with a face ashen and haggard,
(ii) It was reported that the new insecticide is taking a toll on the ash trees.
(iii) The phoenix is a mythical bird that is reborn from its ashes.
A) ii only B) both i and ii C) both i and iii D) both ii and iii E) all three sentences

33. The word: privy
(i) The parties are surely holding privy meetings with high-level representatives, with the citizens being none the wiser.
(ii) Don't point your finger at me! I was not privy to the matter of employee downsizing myself,
(iii) In our country home, the privy is not attached to our main house.
A) i only B) both i and ii C) both i and iii D) both ii and iii E) all three sentences

34. The word: credit
(i) You have earned a medal in every competition you have participated in. You are a credit to our school.
(ii) There are too many unpaid bills, I don't think we can accredit your account any further,
(iii) The bank is crediting your account for the full amount.
A) i only B) both i and ii C) both i and iii D) both ii and iii E) all three sentences

35. The word: fate
(i) It is not right to leave the well-being of the destitute to fate.
(ii) We are all awaiting the fated decision,
(iii) Many choices in life must be left upon fate or chance.
A) i only B) both i and ii C) both i and iii D) both ii and iii E) all three sentences

**Questions 36 to 40:** In the questions below, each passage consists of six sentences. The first and sixth sentences are given in the beginning as (S1) & (S6) respectively. The middle four sentences of each passage have been removed and jumbled up. These are labeled as P, Q, R and S. Find out the proper order for the four sentences.

36. 51: For some time in his youth Abraham Lincoln was manager of a shop.
S6: Never before had Lincoln had so much time for reading as he had then.
P : Then a chance customer would come.
Q : Young Lincoln's way of keeping shop was entirely unlike anyone else's.
R : Lincoln would jump up and attend to his/her needs and then revert to his reading.
S : He used to lie full length on the counter of the shop eagerly reading a book.
The proper sequence should be:
A) SRQP B) QSPR C) SQRP D) QPSR E) RSPQ

37. 51: Smoke oozed up between the planks. S6: Most people bore the shock bravely.
P : Passengers were told to be ready to quit the ship.
Q : The rising gale fanned the smoldering fire.
R : Everyone now knew there was fire on board.
S : Flames broke out here and there.
The proper sequence should be:
A) SRQP B) QPSR C) RSPQ D) QSRP E) PQSR

38. S1: Growing up means not only getting larger, but also using our sense and our brain to become more aware of things around us.
S6: In other words, we must develop and use our ability to reason, because the destruction or the preservation of the places in which we live depend on us.
P : Not only does he have a memory but he is also able to think and reason.
Q : In this, man differs from all other animals.
R : Before we spray our roadside plants or throw sewage into our rivers, we should pause to think what the results of our action are likely to be.
S : This is to say, he is able to plan what he is going to do in the light of his experience before he does it.
The proper sequence should be:
A) QRSP B) SPQR C) SPRQ D) QPSR E) RPQS

39. S1: In the middle of one side of the square sits the Chairman of the committee, the most important person in the room.
S6: From the moment its members meet, it begins to have a sort of nebulous life of its own.
P : For a committee is not just a mere collection of individuals.
Q : On him rests much of the responsibility for the success or failure of the committee.
R : While this is happening we have an opportunity to get the 'feel' of this committee.
S : As the meeting opens, he runs briskly through a number of formalities.
The proper sequence should be:
A) RSQP B) PQRS C) SQPR D) QSRP E) RPQS

40. S1: Since the sixties there has been an increasing interest in neurophysiology, which deals with the neural bases of mental activity and behavior.
S6: So far the journal has published the mixture of articles including reports and investigations.
P: It has format which is very similar to that of Brain and Language, a sister journal.
Q: Since then, a number of journals devoted entirely to this area of research have appeared.
R: Before the 1960's when this field was the concern of a small number of investigators, research articles were scattered in various neurological journals.
S: Brain and cognition is one such journal.

The proper sequence should be:
A) RQSP B) QRSP C) QSPR D) RSPQ E) RQPS

**Questions 41 to 44 - Reading comprehension:**
*Read the following passage and select the best answer for each of the questions that follow.*
At this stage of civilization, when many nations are brought in to close and vital contact for good and evil, it is essential, as never before, that their gross ignorance of one another should be diminished, that they should begin to understand a little of one another's historical experience and resulting mentality. It is the fault of the English to expect the people of other countries to react as they do, to political and international situations. Our genuine goodwill and good intentions are often brought to nothing, because we expect other people to be like us. This would be corrected if we knew the history, not necessarily in detail but in broad outlines, of the social and political conditions which have given to each nation its present character.

41. According to the author 'Mentality' of a nation is mainly product of it's -
A) History B) international position C) politics D) present character E) attitude
42. The need for a greater understanding between nations -
A) was always there B) is no longer there C) is more today than ever before
D) will always be there E) is gradually increasing
43. The character of a nation is the result of its -
A) Mentality B) cultural heritage C) Gross ignorance
D) socio-political conditions E) history
44. According to the author his countrymen should -
A) Read the story of other nations B) have a better understanding of other nations
C) Not react to other actions D) have vital contacts with other nations
E) None of these

**Questions 45 to 49:***The following sentences in each of the questions describe the same event. Select the most grammatically correct choice.*

45. A) You can use these machines only between 9 A.M and 5 A.M.
B) You can use these machines only 9 A.M and 5 A.M.
C) You can use this machines only between 9 A.M and 5 A.M.
D) You can use these machines just only between 9 A.M to 5 A.M.
E) You can use these machines between only 9 A.M and 5 A.M.
46. A) The four basic elements that make up all but one percent of terrestrial matter include carbon, hydrogen, nitrogen, and oxygen is also.
B) The four basic elements that make up all but one percent of terrestrial matter including carbon, hydrogen, nitrogen, and oxygen is also.
C) The four basic elements that making up all but one percent of terrestrial matter including carbon, hydrogen, nitrogen, and oxygen is also.
D) The four basic elements that make up all but one percent of terrestrial matter include carbon, hydrogen, nitrogen, and oxygen also.
E) The four basic elements which make up all but one percent of terrestrial matter including carbon, hydrogen, nitrogen, and oxygen is also.
47. A) To apply for a passport, fill out the application form; attach two recent photographs, and taking to your local post office or passport office.
B) To applying for a passport, filling out the application form; attach two recent photographs, and taking it to your local post office or passport office.
C) To apply for a passport, fill out the application form; attaching two recent photographs, and taking it to your local post office or passport office.

D) To apply for a passport, fill it out the application form; attach two recent photographs, and taking it to your local post office or passport office.
E) To apply for a passport, fill out the application form; attach two recent photographs, and take it to your local post office or passport office.

48. A) Even on the most careful prepared trip, problems are developing.
B) Even on most careful prepared trip, problems are developed.
C) Even on the most carefully prepared trip, problems develop.
D) Even on the most careful prepared trip, problems develop.
E) Even on the most careful prepared trip, problems developing.

49. A) Residents in some cities can call an electrical inspector to have the wiring in their house is checked.
B) Residents in some cities can call an electrical inspector to have the wiring in their house checked.
C) Residents in some cities can call an electrical inspector to make the wiring in their house is checked.
D) Residents in some cities can call an electrical inspector to have the wiring in their house to be checked.
E) Residents in some cities can call an electrical inspector to have the wiring in their house checking.

**Questions 50 to 54 - Reading comprehension:** *Read the following passage and select the best answer for each of the questions that follow.*

But man is not destined to vanish. He can be killed, but he cannot be destroyed, because his soul is deathless and his spirit is irrepressible. Therefore, though the situation seems dark in the context of the confrontation between the superpowers, the silver lining is provided by the amazing phenomenon; that the very nations which have spent incalculable resources and energy for the production of deadly weapons are desperately trying to find out how they might never be used. They threaten each other, intimidate each other and go to the brink, but before the total hour arrives they withdraw from the brink.

50. The main point from the author's view is that -
A) Man's soul and spirit cannot be destroyed by superpowers.
B) Man's destiny is not fully clear or visible.
C) Man's soul and spirit are immortal.
D) Man's safety is assured by the delicate balance of power in terms of nuclear weapons.
E) Human society will survive despite the serious threat of total annihilation.

51. The phrase 'Go to the brink' in the passage means -
A) Retreating from extreme danger. B) Declare war on each other.
C) Advancing to the stage of war but not engaging in it. D) Negotiate for peace.
E) Commit suicide.

52. 'Irrepressible' in the second line means -
A) incompatible B) strong C) oppressive D) un-restrain able E) inspirited

53. In the author's opinion -
A) Huge stockpiles of destructive weapons have so far saved mankind from a catastrophe.
B) Superpowers have at last realized the need for abandoning the production of lethal weapons.
C) Mankind is heading towards complete destruction.
D) Nations in possession of huge stockpiles of lethal weapons are trying hard to avoid actual conflict.
E) There is a silver lining over the production of deadly weapons.

54. A suitable title for the above passage is -
A) Destruction of mankind is inevitable.
B) Man's desire to survive inhibits use of deadly weapons.
C) Mounting cost of modern weapons.
D) Threats and intimidation between super powers.
E) Cowardly retreat by man

**Questions 55 to 60:** *For each question, select the word(s)/phrase(s) that appropriately fill(s) in the gaps.*

55. The study focused on the extent of the country's ____ of import and export processes ___ its access to efficient maritime services.
A) facilitation - as well as B) acceleration- and also C) improvement - coupled to
D) degeneration-caused by E) none of these

56. If every move you make is being ____, liberty is ____.
A) chronicled - curtailed B) preempted- buoyant C) obstructed - feted
D) observed - reinstated E) none of these

57. Life is unpredictable, in a matter of seconds, the mighty are ___ helpless; tranquility ___ turbulent; the familiar becomes alien.
A) made-causes B) created- converts C) rendered- turns
D) habitually- replaces E) none of these

58. The U.S.A. is _____ the most inventive country of the past century, a fact ____ by not only the sheer number of innovations originating from there but also by popular opinion.
A) strikingly- negated B) manifestly- backed C) nebulously- supported
D) conspicuously- undermined E) indiscernibly- bolstered

59. The two countries have begun talks on a landmark investment agreement, a positive move_____ between the two sides.
A) through lingering trade tensions B) amid lingering trade tensions
C) sparking lingering trade tensions D) accentuating lingering trade tensions
E) none of these

60. Because of its inclination to ____, most Indian art is ____ Japanese art, where symbols have been minimized and meaning has been conveyed by the merest suggestion.
A) exaggerate - related to B) imitate - superior to C) understate - reminiscent of
D) overdraw - similar to E) sentimentalize - supportive of

## SECTION III: ANALYTICAL ABILITY (Questions 61 to 75)

**Questions 61 to 64:** *Read the situation below and select the best answer for each of the questions that follow.*

An employee has been assigned the task of allotting offices to six of the staff members. The offices are numbered 1 - 6. The offices are arranged in a row and they are separated from each other by six foot high dividers. Hence voices, sounds and cigarette smoke flow easily from one office to another.

Ms. Ruby needs to use the telephone quite often throughout the day. Mr. Milon and Mr. Belal need adjacent offices as they need to consult each other often while working. Ms. Helen is a senior employee and has to be allotted the office number 5, having the biggest window.

Mr. Didar requires silence in the offices next to his. Mr. Tutul, Mr. Milon and Mr. Didar are all smokers. Ms. Helen is allergic to tobacco smoke and wants the offices next to hers to be occupied by non-smokers.

Unless specifically stated all the employees maintain an atmosphere of silence during office hours.

61. The ideal candidate to occupy the office furthest from Mr. Belal would be -
A) Ms. Helen B) Mr. Milon C) Mr. Tutul D) Mr. Didar E) Ms. Ruby

62. The three employees who are smokers should be seated in the offices -
A) 1, 2 and 4 B) 2, 3 and 6 C) 1, 2 and 3 D) 1, 2 and 5 E) 1, 2 and 6

63. The ideal office for Mr. Milon would be -
A) 2 B) 6 C) 1 D) 3 E) 4

64. In the event of which occurrence, within a period of one month since the assignment of the offices, would a request for a change in office be put forth by one or more employees?
A) Mr. Didar quitting smoking.
B) The installation of a noisy teletype machine by Ms. Helen in her office.
C) Ms. Ruby needing silence in the office (s) next to her own.
D) Mr. Belal suffering from laryngitis.
E) Mr. Tutul taking over the duties formerly taken care of by Ms. Ruby.

65. "Fifty percent of our products are sold in rural area, fifty-eight percent are sold in semi-urban area, sixty-five percent of the employees are from rural area." is the statement of a FMCG producer. Which of the following statements can be considered true based on the above?
A) The company's products are purchased only by its employees and their family.
B) The company is not interested in recruiting urban employees.
C) The company's products are required in big urban cities and metro cities.
D) The company has approximately 90 percent of the market share in its product line.
E) None of the statements can be considered true based on the company's statement.

66. Here is a proud proclamation of a consumer durable producer: "We do not advertise, our product speaks for itself". Which of the following statements, if true, would support and strengthen the statement?
A) The prices of the consumer durable are higher
B) The firm has won an award for its quality control system
C) The product is sleek and has excellent colors
D) Both (B) & (C) E) All of (A), (B) & (C)

67. There are 75 girls in a row. The first three have red ribbons in their hair, and the next two have blue ribbons in their hair. The next three have red, and the next two have blue. This pattern continues all the way down the row. What color ribbon do girls in 68th, 69th and 70th position respectively, have in their hair?
A) red, red, red B) red, red, blue C) red, blue, blue
D) blue, blue, red E) blue, red, red

**Questions 68 to 70:** *Read the situation below and select the best answer for each of the questions that follow,*

'A and 'B are brothers. They are married to 'C and 'D'. 'F' is the father-in-law of 'D'. 'N, daughter of 'D' calls 'A' uncle. 'M is cousin of 'N, 'L is brother of 'D'. I, is mother of 'M and sister-in-law of 'D'. 'Z is granddaughter of 'E and calls 'A' papa.

68. What is the relation of E to D?
A) Mother in law B) Daughter C) Daughter-in-law D) Mother E) Uncle

69. What is the relation of E to M?
A) Sister B) Grandfather C) Grandmother D) Father E) Cannot be determined

70. How is L related to B?
A) Brother-in-law B) Sister-in-law C) Uncle D) Grandfather E) Cannot be determined

71. A greater number of newspapers are sold in Town S than in Town T. Therefore, the citizens of town S are better informed about major world events than are the citizens of Town T.

Each of the following, if true, weakens the conclusion above except:
A) Town S has a larger population than town T.
B) Most citizens of town T work in town S and buy their newspapers there.
C) The average citizen of town S spends less time reading newspapers than does the average citizen of town T.
D) A weekly newspaper restricted to the coverage of local events is published in town S.
E) The average news-stand price of newspapers sold in town S is lower than the average price of newspapers sold in town T.

72. New employees of Ramna Industries are complaining about discomfort caused by excessive noise inside Ramna's factory. Experienced Ramna factory employees, however, do not suffer any such discomfort. Although Ramna accepts responsibility for the health of its employees, it has decided not to issue earplugs to new employees. Ramna reasoned that the new employees would also become accustomed to the noise without using earplugs. Which of the following, if true, indicates a flaw in Ramna's decision not to issue earplugs to new employees?
A) Because the noise in Ramna's factory is absorbed by soundproof walls, it cannot be heard by Ramna executives in their offices.
B) Many of the new employees interviewed said they would not wear earplugs on the job.
C) Issuing earplugs to all new employees would be a less effective method of reducing employees exposure to noise than altering the machinery to be less noisy would be.
D) The experienced employees' lack of discomfort is attributable to hearing loss caused by the factory noise.
E) The machines in Ramna's factory have not become any noisier since the experienced workers were originally hired.

73. Most consumers do not get much use out of the sports equipment they purchase. For example, seventeen percent of the adults in Dhaka own jogging shoes, but only forty-five percent of the owners jog more than once a year, and only seventeen percent jog more than once a week. Which of the following, if true, casts most doubt on the claim that most consumers get little use out of the sports equipment they purchase?
A) Joggers are most susceptible to sports injuries during the first six months in which they jog.
B) Joggers often exaggerate the frequency with which they jog in surveys designed to elicit such information.
C) Many consumers purchase jogging shoes for use in activities other than jogging.
D) Consumers who take up jogging often purchase an athletic shoe that can be used in other sports.
E) Joggers who jog more than once a week are often active participants in other sports as well.

**Questions 74 to 75:** *Read the situation below and select the best answer for each of the questions that follow.*

On a particular Saturday, a student will perform six activities— grocery shopping, hedge trimming, jogging, kitchen cleaning, laundry, and motorbike servicing. Each activity will be performed once, one at a time. The order in which the activities are performed is subject to the following conditions:

- Grocery shopping has to be done immediately after hedge trimming.
- Kitchen cleaning has to be done before grocery shopping.
- Motorbike servicing has to be done before laundry.
- Motorbike servicing has to be done either immediately before or immediately after jogging.

74. If laundry is done before kitchen cleaning, then hedge trimming must be the -
A) fifth B) fourth C) third D) second E) first

75. Which one of the following, if substituted for the condition that motorbike servicing has to be done before laundry, would have the same effect in determining the order of the student's activities?
A) Laundry has to be one of the last three activities.
B) Laundry has to be done either immediately before or immediately after jogging.
C) Jogging has to be done before laundry.
D) Laundry has to be done before hedge trimming.
E) Laundry has to be done before jogging.

## Part II: Written Section — 25 Marks

### SECTION I. — 10 Marks

টীকা লিখন

"সামাজিক মূল্যবোধ" বিষয়টির উপর একটি টীকা লিখুন।

### SECTION II. — 10 Marks

a) Thematic writing

Prepare a write up on the theme **"Bengali New Year".** Your write up should include the history, culture, mode as well as the usual festivities of the occasion.

b) Creative writing **10 Marks**

Prepare a write up on **"Imagination".**

## Answer Key

### Section II: Mathematics

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1.B | 2.D | 3.C | 4.D | 5.B | 6.E | 7.D | 8.A | 9.C | 10.B |
| 11B | 12.C | 13.A | 14.E | 15.A | 16.D | 17.B | 18.E | 19.D | 20.C |
| 21.D | 22.D | 23.E | 24.C | 25.C | 26.B | 27.E | 28.A | 29.E | 30.C |

### Section I: Language & Communication

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.B | 32.D | 33C | 34.E | 35.E | 36.B | 37.D | 38.D | 39.D | 40.A |
| 41.A | 42.C | 43.D | 44A | 45.A | 46.D | 47.E | 48.C | 49.B | 50.E |
| 51.C | 52.C | 53.D | 54.B | 55.E | 56.A | 57.C | 58.B | 59.B | 60.E |

### Section III: Analytical Ability

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 61.D | 62.C | 63.D | 64.E | 65.E | 66.D | 67.C | 68.A | 69.C | 70.A |
| 71.B | 72.D | 73.C | 74.A | 75.C | | | | | |

## BBA (IBA) Admission Test (2013) Solution

### Section II: Mathematics

**1.** **(B)**Event E তখনই হবে, যখন একটি diceএ কোন জোড় সংখ্যা পড়বে।
একটি dice এ জোড় সংখ্যা 3 টি। 2, 4 and 6.
Event F তখনই হবে, যখন একটি dice এ 1, 2বা3, এই 3 টি সংখ্যার কোন একটি পড়বে।
সুতরাং, Event E এবং Event F2 টি হবে তখনই, যখন উভয় dice-এই 2 পড়বে।
যেহেতু শুধুমাত্র 2 পড়লেই, উভয় event ই হচ্ছে, উভয় হবার probability $\frac{1}{6}$

**2.** **(D)**Train A সকাল 9 am এ ছেড়ে গেল 60 km/hr গতিতে
Train B সকাল11 am এ ছেড়ে গেল 75 km/hr গতিতে
Train A এগিলে গেল 2 ঘন্টায়(60×2) = 120 km
প্রতি ঘন্টায়Train Bদূরত্ব কমিয়ে আনে (75—60) km = 15 km
সুতরাং120 km দূরত্ব কমিয়ে আনতে সময় লাগবে $(\frac{120}{15})$ hr = 8 hours
সুতরাং, 11 am এ রওনা দিলে (11+8) pm = 7 pm এtrain A কে অতিক্রম করবে Train B

**3.** **(C)**পাবলিশিং কোম্পানি Kalim কে এককালীন 13,375 টাকা দিবে
অথবা, 2000 টাকা এবং বিক্রিত প্রতি বই থেকে 3.25 টাকা দিবে।
পাবলিশিং কোম্পানি থেকে আয় এককালীন 13,375 টাকা।
ধরি, Kalim 'x' টি বই বিক্রি করে যখন দুই পদ্ধতিতেই তার আয় 13,375 টাকা
সুতরাং
$13375 = 2000 + 3.25x$
Or, $3.25x = 11375$
Or, $x = \frac{11375}{3.25}$
Or, $x = 3500$

**4.** **(D)**5, 9 এবং 13 র ল.সা.গু 585. সুতরাং বলতে পারি 5, 9 এবং 13 দিয়ে ভাগ করলে 4, 8 এবং 12 ভাগশেষ থাকবে এমন সবচেয়ে ছোট সংখ্যা 584 (এতে প্রতি ক্ষেত্রেই 1 কমে যাচ্ছে নিঃশেষে বিভাজ্য সংখ্যা 585 থেকে)
সুতরাং, বলা যাই উক্ত সংখ্যা কে 585 দ্বারা ভাগ করলে ভাগশেষ থাকবে 584.

**5.** **(B)** Aএর সম্পূর্ণ ট্যাঙ্ক ভরতে সময় লাগে 30 minutes
সুতরাং, 1 minute এ A ভরে $\frac{1}{30}$ অংশ
B এর সম্পূর্ণ ট্যাঙ্ক ভরতে সময় লাগে 20 minutes
সুতরাং, 1 minute,এB ভরে $\frac{1}{20}$ অংশ
C এর সম্পূর্ণ ট্যাঙ্ক ভরতে সময় লাগে 10 minutes
সুতরাং, 1 minute এ C ভরে $\frac{1}{10}$ অংশ
A, B এবং C একসাথে 1 minute এ ভরে $(\frac{1}{30}+\frac{1}{20}+\frac{1}{10}) = \frac{11}{60}$ অংশ
3 minute এ A, B এবং C একসাথে ভরে $\frac{11}{60}\times3$ অংশ = $\frac{33}{60}$ অংশ = $\frac{11}{20}$ অংশ

C 3 minute এ chemical R দ্বারা পূর্ণ করে $\frac{1}{10}\times 3=\frac{3}{10}$ অংশ

সুতরাং, chemical এর $\frac{\frac{3}{10}}{\frac{11}{20}}$ অংশ $=\frac{6}{11}$ অংশ Chemical R দ্বারা পূর্ণ

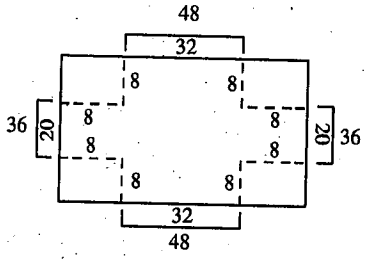
**6.** **(E)**1 to 100 এর মধ্যে 2 দ্বারা বিভাজ্য সকল সংখ্যা Set A তে। সুতরাং, এই set এ 50 টি সংখ্যা আছে।
1 to 100 এর মধ্যে 3 দ্বারা বিভাজ্য সকল সংখ্যা Set B তে। সুতরাং, এই set এ 33 টি সংখ্যা আছে।
যেসকল সংখ্যা 2 এবং 3 উভয় দ্বারা বিভাজ্য, অর্থাৎ 6 দ্বারা বিভাজ্য, তারা উভয় set এ আছে।
1 to 100 এর মধ্যে 6 দ্বারা বিভাজ্য সংখ্যা 16 টি।
সুতরাং, Set A র (50—16) = 34 টি সংখ্যা Set B তে নাই।

**7.** **(D)**Highway Bus এরmile meter প্রতি $11^{th}$ mileবাদ পড়ে যায়।
অর্থাৎ, প্রতি 10 mile পর পর একটি করে mile কম গণনা করা হয়।

সুতরাং, 1251 mile এর মধ্যে 125 mile বাদ গেছে (কারণ $\frac{1251}{10}$ 125.1 mile)

আসলে দূরত্ব অতিক্রম করা হয়েছে (1251+125) miles = 1376 miles

**8.** **(A)**একটি 48 m × 36 m metallic sheet এর চার দিক থেকে 8 m × 8 m এর বর্গাকৃতির shape কেটে নেয়া হয়েছে। এখনmetallic sheet টি একটি খোলা বক্স এর shape পেয়েছে।
যেহেতু চার দিকের প্রতি দিক থেকে 8 m করে কমে গিয়েছে, সুতরাং length and width উভয়ই কমে গেল 8×2 = 16 m
সুতরাং, নতুন length (48—16) m = 32 m
এবং নতুন width (36-16) m = 20 m
এবং height 8 m (প্রতি দিক থেকে 8 m করে কাটা হয়েছে)
So, volume = 32 × 20 × 8 = 5120$m^3$




**9.** **(C)**
ধরি, একটি জাহাজ A speed- এ যাচ্ছে এবং অপরটি B speed- এ যাচ্ছে।
নদীর প্রস্থ w
At time = $t_1$
$A(t_1) = 750$
& $B(t_1) = (w - 750)$
⇨ $B/A = (w - 750)/750$
$750B = (w - 750)A$
At time = $t_2$
$A(t_2) = w + 250$
$B(t_2) = w + (w - 250) = 2w - 250$
⇨ $B/A = (2w - 250)/(w + 250)$
$(w + 250)B = (2w - 250)A$.... Eq. [1]
$750B = (w - 750)A$
$B = [(w - 750)/750]A$
Plug into Eq. [1]
$(w + 250)[(w - 750)/750]A = (2w - 250)A$
$(w + 250)(w - 750) = 750(2w - 250)$
$W^2 - 500w - 187,500 = 1500w - 187,500$
$w^2 - 2000w = 0$
$w^2 = 2000w$
$w = 2000$ yds.

**10.** **(B)**Mr. Saif এর apartment এর সংখ্যা $20 < n < 50$
যখন তিনি apartments 5 জন এর মধ্যে ভাগ করে দেন, বাকি থাকে 2 টি apartment.
সুতরাং, 20 থেকে 50 এর মধ্যে 5 দিয়ে ভাগ করলে 2 ভাগশেষ থাকে এমন সংখ্যা আছে 22, 27, 32, 37, 42 এবং 47.যখন তিনি apartments 6 জন এর মধ্যে ভাগ করে দেন, বাকি থাকে 1 টি apartment.
সুতরাং, উপর্যুক্ত সংখ্যাগুলোর মধ্যে 6 দিয়ে ভাগ করলে 1 ভাগশেষ থাকে এমন সংখ্যা আছে শুধুমাত্র 37.
37 টি apartment 7 জন এর মধ্যে ভাগ করলে বাকি থাকবে 2 টি apartment.

**11.** **(B)**ধরি, প্রথম can এ amount আছে 100N
এবং দ্বিতীয় can এ amount আছে 100M
প্রথম can এ75% milk এবং 25% water. So, 75N milk and 25N water.
দ্বিতীয়can এ50% milk এবং 50% water. So, 50M milk and 50M water.
2 can এরmixture মিলে water to milk ratio হতে হবে 3:5
So, $\frac{25N+50M}{75N+50M}=\frac{3}{5}$
Or, $\frac{N+2M}{3N+2M}=\frac{3}{5}$
Or, $5N + 10M = 9N + 6M$
Or, $4N = 4M$
Or, $N = M$
সুতরাং, mixture এ উভয় can এর সমান amount থাকতে হবে।
So the answer is 6 liters, 6 liters

**12.** **(C)**আমরা জানি
Speed $=\frac{distance}{time}$
সুতরাং, speed distance, when time is constant
উপরে ওঠার speed এর 1.5 গুণ নিচে নামার speed
সুতরাং, একই time লাগবে উপরে ওঠার distance এর 1.5 গুণ নিচে নামার distance.
উপরে উঠতে time লাগে 2 days, 4 mile/day. i.e. total distance $(2 \times 4)$ miles = 8 miles
সুতরাং, নিচে নামতে distance $(8\times1.5)$ miles = 12 miles

**13.** **(A)**Pure Mango juice এর container থেকে সর্বমোট 4 বার 8 literamountসরানো হল এবং প্রতিবার 8 liter পানি ঢেলে দেওয়া হল। এতে water : mango juice এর ratio হল 16:81

or $\frac{16}{81}$

or $(\frac{2}{3})4$

অর্থাৎ প্রতিবার $\frac{2}{3}$ করে amount রেখে বাকিটুকু replace করা হয়েছে with water. সুতরাং সরানো হয়েছে $\frac{1}{3}$ amount.

সুতরাং, $\frac{1}{3}$ = 8 litre

so, total juice, 1 = $(8\times3)$ litre = 24 litre

**14.** **(E)**Triangle BAC তে Angle BCA একটি সমকোণ। CA = 6 এবং BA = 10
Pythagoras এর উপপাদ্য অনুযায়ী, $AC^2 + BC^2 = AB^2$
so, $6^2 + BC^2 = 10^2$
so, = 8
Again, Triangle DEB তে Angle DEB একটি সমকোণ। DE= 6 এবং DB = 10
Pythagoras এর উপপাদ্য অনুযায়ী, $DE^2 + EB^2 = DE^2$
so, $5^2 + EB^2 = 13^2$
so, = EB = 12

Trapezium DEBC তে BC এবং DE parallel এবং তাদের মধ্যে লম্ব দূরত্ব EB

Area of trapezium DEBC = $\frac{1}{2} \times (BC+ED) \times \frac{1}{2} \times (8+5) \times 12 = 78$

Area of triangle DEB = $\frac{1}{2} \times (12) \times 5 = 30$

so, area of triangle DCB = 78 − 30 = 48

**15.** **(A)**8 টি আলাদা model 2 জন Europe, 2 জন North America এবং 2 জন South America থেকে। একই মহাদেশের সবাই সবসময় একসাথে থাকবে।

Europe, North America এবং South America র 2 জন কে নিজেদের মধ্যে সাজানো যায় প্রত্যেক 2! ভাবে। এবং 3 টি মহাদেশ কে নিজেদের মাঝে সাজানো যায় 3! ভাবে।

সুতরাং, 6 জন model কে সাজানো যাবে 2! × 2! × 2! × 3! = 48 ভাবে।

**16.** **(D)**ধরি, square এর প্রতিটি বাহুর দৈর্ঘ্য$x$

সুতরাং, square টির area $x^2$

যদি square টির প্রতিটি বাহুর দৈর্ঘ্য 50% করে বাড়ানো হয় তবে প্রতিটি বাহুর দৈর্ঘ্য হবে 1.5 x, এবং তখন area হবে $(1.5x)^2 = 2.25 = X^2$

অর্থাৎ area বাড়বে 1.25 $x^2$, which is 125%

**17.** **(B)**

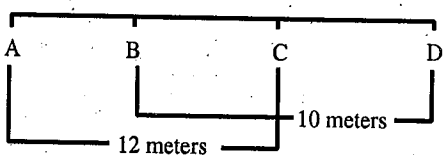
Restaurant এ বিল আসলো 35.50 taka

যদি 10% Tax হয় তবে bill amount হবে (35.50 × 10% of 35.50) taka = 39.05 taka

যদি 15% Tax হয় তবে bill amount হবে(35.50 × 15% of 35.50) taka = 40.825 taka

সুতরাং যদি 10% থেকে 15% এর মধ্যে Tax হয় তবে bill amount 39.05 taka থেকে 40.825 taka হবেযা 39 এবং 41 এর মধ্যে।

**18.** **(E)**




সুতরাং,statement A বা statement B কোনটাই যথেষ্ট নয় B এবং C এর দূরত্ব বের করার জন্য।

**19.** **(D)** StatementA থেকে আমরা পাই, 4 জন কে বের করে দিলে গিফট এর দাম এ 200 taka কম পড়বে। অর্থাৎ প্রত্যেকে50 taka করে দিচ্ছে। এখান থেকে 25 জন সর্বমোট কত taka দিচ্ছে তা বের করা সম্ভব।

Statement B থেকে আমরা পাই, গিফট এর দাম 1225 এবং 1275 taka র মধ্যে। আবার বলা যায়, যেহেতু 25 জন গিফট দিচ্ছে তাই গিফট এর দাম অবশ্যই 25 এর multiple হতে হবে। 1225 এবং 1275 taka র মধে 25 এর একমাত্র multiple1250. সুতরাং, উভয় statement থেকে উত্তর বের করা সম্ভব।

**20.** **(C)**Statement A অনুসারে triangle এর hypotenuse এ diameter. তাহলে triangleতি একটি rightangled triangle.

Statement B অনুসারেradius 2 cm এবং area 4 square cm. এই তথ্য থেকে circle এর area বের করা সম্ভব।Triangle এবং circle উভয়ের area জানা থাকার কারনে dice এর triangle এর বাইরে পড়ার সম্ভাবনা বের করা সম্ভব।Statement A এবং Statement B উভয় এর সহযোগিতা দ্বারা।

**21.** **(D)** প্রথম pancake এর diameter= 10, so radius = 5. এবং area A = $\pi r^2 = 25\pi$এ So, for 8 pancakes the area is $25\pi \times 8 = 200\pi$

দ্বিতীয় pancakeএরdiameter= 5, so radius = 2.5.এবং area A = $\pi r^2 = 6.25\pi$

সুতরাং, $200\pi$ pancake এর material দিয়েdiameter 5 এর $\frac{200\pi}{6.25\pi}$= 32 pancakes বানানো সম্ভব।

**22.** **(D)**তিন জনেরই একই সময়ে আবার startingpoint এ পৌছাবে তখন, তাদের সকলের সময়ের L.C.M.হবে। 252,308এবং 198 এরL.C.M. 2772.

অর্থাৎ2772 seconds = 46 minutes 12 seconds

**23.** **(E)**Rectangular blockএরarea $(4 \times 4 \times 10)$ cubic inch = 160 cubic inch
Cylinder এরarea = $\pi r^2 h = \pi(3)^2 10 = 90\pi$
সুতরাং area বাকি থাকবে 160-90πcubic inch

**24.** **(C)**10% বাড়লে acceleration a হয়ে যাবে, 1.1a
5% কমলে mass m হয়ে যাবে, 0.95m
So, new force, $1.1a \times 0.95m = 1.045ma$ যা আগের force এর চেয়ে 4.5% বেশি।

**25.** **(C)**3 month pass বছরে 4 বার নেওয়া হলে খরচ হবে $27 \times 4 = 108$ taka
May to March এর মধ্যে সর্বমোট 7 বার যাওয়া হয়। সুতরাং এই 3 month এ 3 month pass নিয়ে বাকী সময় এর জন্যpay per visit package নিলে খরচ হয়$27 + (5.5 \times 9) = 76.5$ taka which is less than 80 and 108 both.

**26.** **(B)** I. না ও হতে পারে. Example: 45 is an odd integer, but 90 is not odd.
II. না ও হতে পারে. Example : 90
III. 9 এবং 5 দ্বারা বিভাজ্য হলে এদের L.C.M 45 এর সকল factor দিয়ে ও বিভাজ্য হবে। সুতরাং 15 দিয়ে ও বিভাজ্য হবে।

**27.** **(E)** Let, rated C employee রা প্রত্যেকে পেয়েছে x taka
So, rated A employee রা প্রত্যেকে পেয়েছে **2**x taka
And rated B employee রা প্রত্যেকে পেয়েছে 1.5 x taka
So, total money $(100x + 225x + 300x) = 500000$
Or, $625x = 500000$
Or, $x = 625$
So, rated C employee রা প্রত্যেকে পেয়েছে $2x$ taka $= 625 \times 2 = 1250$ taka
A will get twice the amount $= 2 \times 1250 = 2500$

**28.** **(A)**6 man এবং 8 boys কাজটি করতে পারে 10 days এ। সুতরাং 6 times বেশি manpower এ, অর্থাৎ 36 men এবং 48 boys কাজটি করতে পারে $\frac{10}{6}$ days এ।

সুতরাং36 men এবং 48 boys 1 day এ কাজটি করতে পারে $\frac{10}{6}$ কাজ

আবার 26 men এব 48 boys কাজটি করতে পারে 2 days এ। সুতরাং 26 men এবং 48 boys 1 day এ কাজটি করতেপারে$\frac{1}{2}$কাজ

So, (36–26) = 10 men 1 day তে করে $(\frac{6}{10} - \frac{1}{2}) = \frac{1}{10}$ কাজ

So, 1 men 1 day তে করে $\frac{1}{100}$ কাজ

আবার, 6 men 10 days এ করে$\frac{60}{100}$ কাজ

so, 8 boys 10 days এ করে$\frac{40}{100}$ কাজ

so, 1 boy 1 day এ করে$\frac{1}{100}$ কাজ

So, 15 men 1 day তে করে $\frac{15}{100}$ কাজ এবং 20 boy 1 day তে করে $\frac{20}{200}$ কাজ. সুতরাং একসাথে করলে তারা এক দিনে করে $\frac{25}{100}$ কাজ। সুতরাং সম্পূর্ণ কাজ করে 4 দিনে।

**29.** (E)30% বেশি দাম এ বিক্রি করে। so if cost price is 100x, selling price is 130x. And store cost এর থেকে 10%কম মানে 90x
Given, 130x = 52
So, 100x = 40
So, 90x = 36

**30.** (C)প্রথম100 mile যেতে সময় লাগে $\frac{100}{30}$ hour, পরের 100 mile যেতে সময় লাগে $\frac{100}{50}$ hourএবং শেষ 100 mile যেতে সময় লাগে $\frac{100}{50}$ hour.

সুতরাং, 30 miles per hour speed এ যায় $\frac{\frac{100}{30}}{\frac{100}{30}+\frac{100}{50}+\frac{100}{60}}=\frac{10}{21}$ fraction time

## Section II: Language & Communication (Questions 31 to 60)

**Questions 31 to 35:** *Identify the sentence(s) that is/are showing the* ***correct use*** *of the underlined words.*

**31.** **(B)** The word: scathe
(i) We were advised to buy a lawn mower and get rid of this scathe once and for all!
(ii) With perseverance and hard work, you are earning quite a scathing reputation,
(iii) It was not the judgment, but his scathing remarks that had truly hurt.
A) ii only B) iii only C) both i and ii D) both ii and iii E) all three sentences
Scathe এর মানে ধ্বংস করা বা আঘাত পাওয়া।
i.এখানে scathe এর ঠিক ব্যবহার হচ্ছে না।
ii. Perseverance আর hard work দিয়ে reputation বাড়ে; কোন ভাবে আঘাত পায় না বরং আর ভাল হয়।
iii. Scathing adjective হিসেবে এখানে ঠিক ভাবে ব্যবহার করা হয়েছে। বলা হয়েছে যে remarks-মানে কথাগুলো তাকে আঘাত করেছে যেটা scathe-এর অর্থ।

**32.** **(D)** The word: ash
(i) When he returned, he was beyond recognition - with a face ashed and haggard,
(ii) It was reported that the new insecticide is taking a toll on the ash trees.
(iii) The phoenix is a mythical bird that is reborn from its ashes.
A) ii only B) both i and ii C) both i and iii D) both ii and iii E) all three sentences
Ash এর অর্থ দুইটি হতে পারে-ছাই অথবা এক প্রকার এর গাছ।
i.এখানে সঠিক ব্যাবহার হচ্ছে না ash- এর। এখানেয় বসবে ashen।
ii. এখানে শব্দটি ব্যাবহার হয়েছে এক প্রকার গাছ বুঝাতে যার নামash।
iii. এখানে ash কে ব্যাবহার করা হয়েছে ছাই বুঝাতে।

**33.** **(C)** The word: privy
(i) The parties are surely holding privy meetings with high-level representatives, with the citizens being none the wiser.
(ii) Don't point your finger at me! I was not privy to the matter of employee downsizing myself.
(iii) In our country home, the privy is not attached to our main house.
A) i only B) both i and ii C) both i and iii D) both ii and iii E) all three sentences
Privy শব্দটির অর্থ হতে পারে গোপন অথবা একটা বাথরুম যেটা ঘরের বাইরে অবস্থিত।
i. প্রথম লাইন-এ privy কে গোপন অর্থে ব্যবহার করা হয়েছে।
ii. এই লাইনে ব্যবহার ঠিক হয়েনি। এখানে শব্দের অর্থের সাথে বাক্যের কোন মিল নেই।
iii.এখানে privy ব্যবহার করা হয়েছে বুঝাতে বাথরুম।

**34.** **(E)** The word: credit
(i) You have earned a medal in every competition you have participated in. You are a credit to ourschool.
(ii) There are too many unpaid bills; I don't think we can accredit your account any further.
(iii) The bank is crediting your account for the full amount.
A) i only B) both i and ii C) both i and iii D) both ii and iii E) all three sentences
Credit ব্যবহার করা হতেয় পারে বুঝাতে একজন যে আমাদের গর্ব করার পাত্র, অথবা ব্যাংক এ লেনদেন করার জন্য।
i. এখানে বলছে যে যেহেতু ছাত্রটি সবগুলো প্রতিযোগিতাতে মেডেল পেয়েছে সেহেতু শেষ হল স্কুল এর গর্ব।
ii. Accredit অর্থ কোন কিছু অনুমদন করা, কিন্তু এটা credit এর verb form না।
iii. ব্যাংক এর লেনদেন বুঝাতে এখানে শব্দটির ব্যবহার সঠিক।

**35.** **(E)** The word: fate
(i) It is not right to leave the well-being of the destitute to fate.
(ii) We are all awaiting the fated decision,
(iii) Many choices in life must be left upon fate or chance.
A) i only B) both i and ii C) both i and iii D) both ii and iii E) all three sentences
Fate অর্থ ভাগ্য।
**Fate-**এর ব্যবহার ৩টি বাক্যেই সঠিক।

**Questions 36 to 40:** In the questions below, each passage consists of six sentences. The first and sixthsentences are given in the beginning as (S1) & (S6) respectively. The middle four sentences of eachpassage have been removed and jumbled up. These are labeled as P, Q, R and S. Find out the proper order for the four sentences.

**36.** **(B)** 51: For some time in his youth Abraham Lincoln was manager of a shop.
S6: Never before had Lincoln had so much time for reading as he had then.
P : Then a chance customer would come.
Q : Young Lincoln's way of keeping shop was entirely unlike anyone else's.
R : Lincoln would jump up and attend to his/her needs and then revert to his reading.
S : He used to lie full length on the counter of the shop eagerly reading a book.
The proper sequence should be:
A) SRQP B) QSPR C) SQRP D) QPSR E) RSPQ
প্রথমে লেখ যে লিংকন একজন ম্যানেজার ছিল। এর পর লিখবো যে সে কেমন ম্যানেজার ছিল আর (Q) তারপর কোন তাকে সেরকম বলা হয়েছে (S) তারপর একটা উদাহরণ দেওয়া হয়েছে যেটা তয় লাইনে শুরু হয়ে (P), ৪র্থ লাইনে পার করে (R) শেষ এর লাইনে শেষ হয়েছে।

**37.** **(D)** 51: Smoke oozed up between the planks.
S6: Most people bore the shock bravely.
P : Passengers were told to be ready to quit the ship.
Q : The rising gale fanned the smouldering fire.
R : Everyone now knew there was fire on board.
S : Flames broke out here and there.
The proper sequence should be:
A) SRQP B) QPSR C) RSPQ D) QSRP E) PQSR
প্রথমে দেখা গেছে ধোঁয়া, তারপর বলা হয় যে ঝড়ো হাওয়া ছাপা আগুনে বাতাস দিলে (Q) আর তখন এখানে সেখেনে আগুন দেখা গেল (S)। সবাই তখন জেনেগেল যে জাহাজে আগুন লেগেছে (R) যাত্রীদের বলা হয় জাহাজ ছেড়ে যেতে (P)।

**38.** **(D)** S1: Growing up means not only getting larger, but also using our sense and our brain to become more aware of things around us.
S6: In other words, we must develop and use our ability to reason, because the destruction or the preservation of the places in which we live depend on us.
P : Not only does he have a memory but he is also able to think and reason.

Q : In this, man differs from all other animals.
R : Before we spray our roadside plants or throw sewage into our rivers, we shouldpause to think what the results of our action are likely to be.
S : This is to say, he is able to plan what he is going to do in the light of his experiencebefore he does it.
The proper sequence should be:
A) QRSP B) SPQR C) SPRQ D) QPSR E) RPQS
বুদ্ধির দিক থেকে বলা হয়েছে যে এই ক্ষেত্রে মানুষ অন্যান্য প্রাণীর চেয়ে আলাদা (Q)। তারপর বলা হয়েছে কিভাবে মানুষ আলাদা (P & S)। তারপর শেষ এর বাক্যের সাথে মিল রেখে ৪র্থ বাক্যটি বসানো হয়েছে (R)।

**39.** **(D)** S1: In the middle of one side of the square sits the Chairman of the committee, the most important person in the room.
S6: From the moment its members meet, it begins to have a sort of nebulous life of its own.
P : For a committee is not just a mere collection of individuals.
Q : On him rests much of the responsibility for the success or failure of the committee.
R : While this is happening we have an opportunity to get the 'feel' of this committee.
S : As the meeting opens, he runs briskly through a number of formalities.
The proper sequence should be:
A) RSQP B) PQRS C) SQPR D) QSRP E) RPQS
S1-এ বলা হয়েছে কমিটির চেয়ারম্যান এর কথা। তার পরেই বলা হচ্ছে তার দায়িত্বটা কি (Q)। এর পর বলতে হবে যে কোন কাজ দিয়ে মিটিং শুরু হয় (S) আর সে মুহূর্তে কি বোঝা যায় (R)। তারপর কোন আমরা সে বুঝাতে পায়োর সময়টাকে গুরুত্ব দিচ্ছি, সেটা বলতে হবে (P)।

**40.** **(A)** S1: Since the sixties there has been an increasing interest in neurophysiology, which deals with the neural bases of mental activity and behavior.
S6: So far the journal has published the mixture of articles including reports and investigations.
P : It has format which is very similar to that of Brain and Language, a sister journal.
Q : Since then, a number of journals devoted entirely to this area of research have appeared.
R : Before the 1960's when this field was the concern of a small number of investigators, research articles were scattered in various neurological journals.
S : Brain and cognition is one such journal.
The proper sequence should be:
A) RQSP B) QRSP C) QSPR D) RSPQ E) RQPS
যেহেতু S1-এjournals-এর ব্যাপারে বলা হয়েছে, তারপর এর লাইনে বলতেয় হবে তার আগে কী হয়েছিল (R)। এর পর details দেওয়া হয়েছে (Q) আর একটা journal এর নাম বলা হয়েছে (S)। এরপর journal টির ব্যাপারে কিছু বলা হয়েছে (P)। যেটা শেষ এর লাইনের সাথে মিলে।

**41.** **(A)** Passage- এ বলা আছে যে একটি nation -এর resultingmentalityতারhistoricalexperienceএর উপর নির্ভরশীল.

**42.** **(C)**Passage-এ nation দের মাঝে understanding নিয়ে বলা হয়েছে যে এখন এর প্রয়োজনীয়তা "as never before".

**43.** **(D)**Passage-এর শেষ বাক্যে বলা হয়েছে যে nation-এর "social and political conditions" একটি nation-কে তার "present character" দিয়েছে.

**44.** **(A)**কেননা, অন্য nation এর stories না যানলে আমরা তাদের history -এর ব্যাপারে অনজ্ঞ থাকবে এবং তাদের "understand" করতে পারব না.

**45.** **(A)** Machines বহুবচন (plural) বলে (C) সঠিক নয়। (B)- তে কোন preposition নেই এবং (D) ও (E) তে "just only" ও "between only" একসাথে ব্যবহার করা অপ্রয়োজনীয়.

**46.** **(D)** কেননা also-এর পূর্বে ও also ব্যবহার করা যায় না.

**47.** **(E)**এখানে parallelism (সাদৃশ্যতায়) error. Verb-গুলোকে একই আকার বা Form-এ থাকতে হবে.

**48.** (C) আমরা জানি বাক্যে adverb থাকলে, তার ব্যবহার হবে এই আকারেঃ adverb + adjective + noun. Careful একটি noun যার adverb হল carefully. Option (C) -এই কেবল এর যথাযথ ব্যহার করা হয়েছে।.

**49.** (B) এখানে, Have-এর সাথে "checked" ব্যতীত অন্য কোন verb ব্যবহার করা সম্ভব না। "is checked", to be checked" কিংবা "checking" ব্যবহার করা যাবে না।

**50.** (E) Passage অনুযায়ী, মানুষকে চাইলেই annihilate বা নাশ করা যায় না। প্রথম লাইনের বলেছে "man is not destined to be vanished".

**51.** (C) Brink অর্থাৎ কিনারা। Passage-এ বলা আছে যে মানুষ যুদ্ধের কিনারায় গিয়েও বারংবার পিছু ফিরেছে।

**52.** (C) Irrepressible অর্থ যা দমন করা যায় না। Un-restrainable অর্থও একই।

**53.** (D) Passage -এর লেখক এর কথা অনুযায়ী, বিভিন্ন দেশের কাছে deadly weapons থাকা সত্তেও সেটি ব্যবহার করেছে না।

**54.** (B) কেননা, মানব জাতি ধ্বংসের মুখ থেকে বাঁচতে চায় বলে সে নিজেকে deadly weapons ব্যবহার করা থেকে inibit (বারণ) করছে।

**55.** (E)

**56.** (A) Chronicled অর্থ কিছু পর্যবেক্ষণ করা। অতিরিক্ত পর্যবেক্ষণের কারণেই স্বাধীনতা curtail (সঙ্কোচিত) হয়।

**57.** (C) Rendered অর্থ কোন কিছু ঘটে পাওয়া। Mighty-রা হঠাৎ করেই helpless হয়ে যেতে পারে এবং tranquility যেতে পারে turbulent.

**58.** (B) Manifestly অর্থ যা সহজেই বুঝতে পারা যায়। U.S.A যে সবচেয়ে inventive country, এই ব্যাপারটি manifestly স্পষ্ট এবং এটা backed by তাদের নতুনত্ব।

**59.** (B) দুই দেশের মধ্যে tensions আছে বিধায় investment-টি positive.

**60.** (E) Indian ও Japanese art উভয়ই sentimentalize (ভাবপ্রবণ) করতে বিধায় এরা একে অপরের supportive.

## Section III: Analytical Ability

| পজিশন | ১ম | ২য় | ৩য় | ৪র্থ | ৫ম | ৬ষ্ঠ |
|---|---|---|---|---|---|---|
| কর্মচারী | দিদার | টুটুল | মিলন | বেলাল | হেলেন | রুবি |

1st Step: হেলেন কে ৫ম স্থানে বসাই (প্রশ্নে বলা আছে)।

2nd Step: হেলেন এর দুই পাশে অধূমপায়ী বসবে অর্থাৎ বেলাল এবং রুবি |

3rd Step: মিলন এবং বেলাল পাশাপাশি থাকবে সুতরাং মিলন ৩য় এবং বেলাল ৪র্থ স্থানে বসবে ।

4th Step: যেহেতু দিদার এর নিরবতা দরকার সেহেতু সে ১ম স্থানে বসবে কারণ ২য় স্থানে থাকা মিলন তার পাশে বসা বেলাল এর সাথে কথা বলে |

5th Step: টুটুল ২য় স্থানের খালি জায়গাটি তে বসবে।

**61.** (D)

**62.** (C)

**63.** (D)

**64.** (E) টুটুল রুবির দায়িত্ব নিলে তার পাশে দিদার বসতে পারবে না কারণ তার নীরবতা প্রয়োজন।

**65.** (E)

**66.** (D) কারণ B এবং C দুই জায়গাতেই পণ্যের ভাল দিক তুলে ধরা হয়েছে।

**67.** (C) প্রতি ৫ জন পর পর আবার পুনরাই আগের মতো বিন্যাস পাওয়া যায় সুতরাং ৬৬তম থেকে আবার আগের মতো বিন্যাস পাওয়া যাবে।

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 |
| 66 | 67 | 68 | 69 | 70 |
| Red | Red | Red | Blue | Blue |

**68.** (A)F যেহেতু D এর father-in-law, এবং Z এর grand-daughter E যেহেতু A কে papa ডাকে, তাই E কে অবশ্যই D এরmother-in-law হতে হবে।

**69.** (C)I যেহেতু D এর sister-in-law, সেহেতু I কে অবশ্যই A/B এর বোন হতে হবে। যেহেতু M এর সন্তান I এবং A/B/I এরmother E, তাই E কে অবশ্যই M এর grand-mother হতে হবে।

**70.** (A) L হল B এর brother, এবং B is married to D. So,L কে D এর brother in law হতে হবে।

**71.** (B) Town T এর বেশিভাগ মানুষই Town S থেকে পত্রিকা কেনে তাই Town T এর পত্রিকা বিক্রির সংখ্যা বাস্তবের থেকে একটু কম মনে হয় এবং Town S এর ক্ষেত্রে মনে হয় একটু বেশি।

**72.** (D) অভিজ্ঞ কর্মচারীদের অনেকেই এখন কম শুনতে পাওয়ার কারনে অস্বস্তিতে ভোগে না যা নতুন কর্মচারীদের জন্য প্রযোজ্য নয়।

**73.** (C) Jogging Shoe এর অন্য ব্যবহার থাকার কারনে অনেকেই এটিকে খেলাধুলার কাজ ছাড়াও অন্যান্য কাজে ব্যাবহারের জন্য কেনেন।

**74.** (A)

**75.** (C)

## PART II: Writing Ability — 25 Marks

### SECTION I. — 10 Marks

সামাজিক মূল্যবোধ আমাদের সেই সব শিক্ষা এবং নীতিবোধ যা কল্যাণকর ও মূল্যবান। এটি সমাজের সকলের জন্য শুভ ও কল্যাণকর কাজকে নির্দেশ করে। পারস্পরিক উন্নতির জন্য আমাদের যে কর্তব্য তাও এর অন্তর্ভুক্ত।

সামাজিক মূল্যবোধ মানুষকে সমাজ জীবনের উদ্দ্যেশ্য ও আকাঙ্ক্ষা নির্দেশ করে। মূল্যবোধ সমাজের সদস্যদেরকে তাদের কাছ থেকে প্রত্যাশিত আচরণ সম্পর্কে সচেতন করে। তাই আমাদের নৈতিকতা, মৌলিক অধিকার, দেশপ্রেম, বিশ্বস্ততা, কর্মনিষ্ঠা সামাজিক মূল্যবোধ দ্বারা প্রভাবিত হয়।

### SECTION II. — 10 Marks

A. Bengali New Year or Pohela Boishakh is the first day of the Bengali calendar, celebrated in both Bangladesh and West Bengal, and in Bengali communities in Assam and Tripura. It coincides with the New Year's Day of numerous other Southern Asian calendars. Usually on Pahela Boishaka, the home is thoroughly scrubbed and cleaned; people bathe early in the morning and dress in fine clothes. They spend much of the day visiting relatives, friends, and neighbors and going to the fair. Fairs are arranged in many parts of the country. Various agricultural products, traditional handicrafts, toys, cosmetics, as well as various kinds of food and sweets are sold at these fairs. The fair also feature with singers, dancers and traditional plays and songs. Horse races, bull races, bull fights, cockfights, flying pigeons, boat racing were once popular.

Pahela Boishakh connects all ethnic Bengalis irrespective of religious and regional differences. In India, in West Bengal and Assam it is a public (state) holiday and is publicly celebrated in mid April. In Bangladesh, it is a national holiday celebrated around April 14 according to the official amended calendar designed by the Bangla Academy. The Bengali calendar is closely tied with the Hindu solar calendar. As with many other variants of the Hindu solar calendar, the Bengali calendar commences in mid-April of the Gregorian year. It goes without saying that Pahela Baishakh is an imminent part of a Bangladeshi's life. We have celebrated this day since our childhood and it has always held a significant place in our life. Thus it is our duty to protect our heritage and to ensure safe passage of this tradition to future generations.

B. When we were young we used to ponder about a number of things. We asked questions such as how buildings were made or how electricity was discovered. We would even ask absurd questions like how clouds stayed up in the air. Today, we know the answers to these questions because of science. One might ask how scientists came up with such incredible explanations or how they invented such things to baffle the mind. The answer is simple. They imagined. They dreamed and thought and turned their thoughts into reality. Artists like Da Vinci imagined humongous flying machines which later became airplanes. Men like Galileo imagined the possibility of the Earth not being the centre of the universe which led him to discover the structure of the solar system. Throughout history, great men have done things which have forever changed the fabric of nature, and they have done so solely because they had the courage to imagine. While common people were left with the miseries and banalities of this world, great men created their own utopia and from therein they brought in some gifts to our world to placate our unending needs.
To "Imagine", is to reason. Imagining is to the mind, what beating is to the heart, a cavalier, incognizant, untamable reflex. To imagine is to take a step to preserving life, it is imagination that qualifies us to imagine. People fear the feral nature of the mind, because its capacity is endless, it encompasses every feeling ever felt; every thought ever had, and yet still opens its doors to the unknown. The untrained mind is a beautiful thing, because it holds no prejudice, it is saturated with one's most sincere and candid beliefs, it is so true unto itself that one must solicit the mind to liberate the words to speak. If the makings of the mind could be projected for all to see, a whole new life would be born, broadening the spectrum from romantic to sinister idealism, with all in between having their essence crudely accentuated.

Though it is fascinating to delve into the depths of the mind, "Imagination" is to each its own, and for the absence of an oral medium, we must make our peace with the words we speak. "Imagination" in its truest, most organic form, is too innocent and naïve to feature in reality. If there is a world outside the one we live in, then let it be a creation of the mind.

# BBA (IBA)

## Admission Test Question (2014-2015) with Solution

# Part I: Multiple Choice Questions (MCQs)

## Section I: Language & Communication 30 questions, 30 Marks

**Questions 1 to 5**

**Instruction:** *Choose the most appropriate word(s)/phrase to fill in the blank in the given sentence.*

1. He thought so high of his power and capabilities that he considered himself to be _____.
   (A) omnipresent (B) omnipotent (C) ubiquitous (D) garrulous (E) credulous
2. The dog was soaked to the _____ from the _____.
   (A) skin; bone (B) skin; craven (C) skin; storm (D) hide; abyss (E) hide; storm
3. He passed himself_____ as a rich and noble fellow.
   (A) out (B) away (C) for (D) by (E) off
4. My friend just bought a new house with_____ furniture included.
   (A) few (B) several (C) plenty of (D) many (E) so much
5. Your office is so close _____ my house, why don't you drop _____ sometime?
   (A) by; to (B) to; by (C) from; by (D) from; at (E) from; in
6. He is such lazy that he sleeps almost all day long.
   (A) such lazy that (B)so lazy such that (C) so lazy that
   (D) so lazy so as to (E) as lazy as
7. The question was so confusing that he was totally at world's end.
   (A) at world's end. (B) at his fingertips. (C) on his toes.
   (D) at logger heads. (E) at his wit's end.
8. Towering well above the sea level, the memorial was a beautiful site to look at.
   (A) was a beautiful site to look at. (B) was a beautiful sight to look at.
   (C) ts a beautiful sight to look at. (D) is a beautiful site to look at.
   (E) is a beautiful site for looking.
9. I prayed that he would recover from the depression from losing his father.
   (A) prayed that he would recover from (B) prayed that he will recover from
   (C) prayed that he will have recovered from (D) prayed that he would recover off
   (E) prayed for his recovery of
10. It is my earnest request that due considerations to be given to all the proposals in equality, so that we might all have a fair chance.
    (A) that due considerations to be given to all the proposals in equality
    (B) that due consideration to be given to all the proposals equally
    (C) that due considerations be given to all the proposal equally
    (D) that due considerations to be given for all the proposals equally
    (E) that due considerations be given to all the proposals equally

**Questions 11 to 15**

**Instructions:** *Answer the Questions based on the following article.*

Much of the information we have today about chimpanzees comes from the groundbreaking, long-term research of the great conservationist, Jane Goodall. Jane Goodall was born in London, England, on April 3, 1934. From an early age, Jane was fascinated by animals and animal stories. By the age of 10, she was talking about going to Africa! At the time, in the early 1940s, this was a radical idea because women did not go to Africa by themselves. When in school, a friend invited

her to visit Kenya. She worked as a waitress until she had earned the fare to travel there by boat. She was 23 years old.

Once in Kenya, she met Dr. Louis Leakey, a famous paleontologist and anthropologist. He was impressed with her thorough knowledge of Africa and its wildlife, and hired her to assist him on a fossil-hunting expedition to Olduvai Gorge. Later, Dr. Leakey and Jane began planning a study of a group of chimpanzees who were living on the shores of Lake Tanganyika in Kenya. In July of 1960, Jane arrived at Gombe National Park in what was then called Tanganyika and is now called Tanzania.

Jane expressed her interest in the idea of studying animals by living in the wild with them, rather than studying dead animals through paleontology. She had to face many challenges as she began her work. The chimpanzees did not accept her right away, and it tooK months for them to get used to her presence in their territory. But she was very patient and remained focused on her goal. Little by little, she was able to enter their world. At first, she was able to watch the chimpanzees only from a great distance, using binoculars. As time passed, she was able to move her observation point closer to them while still using **camouflage**. Eventually, she was able to sit among them, touching, patting, and even feeding them. It was an amazing accomplishment for Jane, and a breakthrough in the study of animals in the wild. Jane named all of the chimpanzees that she studied; stating in her journals that she felt they each had a unique personality.

The study started by Jane Goodall in 1960 is now the longest field study of any animal species in their natural habitat. Research continues to this day in Gombe and is conducted by a team of trained Tanzanians.

11. Synonym for the word "camouflage" as used in line 18 is:
    (A) Entangle (B) Guerrilla (C) Concealment (D) Ambush (E) Deception
12. Jane wanted to go to Africa because:
    (A) She was basically rebellious in nature.
    (B) She thought it would be really adventurous.
    (C) She wanted to do something different from the other ladies of her time.
    (D) She was fascinated by the wildlife there.\
    (E) All of the above
13. What mainly made Jane's work different from those of others is:
    (A) She wanted to observe and live with the wild animals in their natural habitat.
    (B) She caressed and fed the animals.
    (C) She was really passionate about her work.
    (D) Animals loved her.
    (E) Jane named all the animals.
14. It took time for the chimpanzees to accept Jane because:
    (A) They did not like being disciplined by her.
    (B) Jane interfered a little too much in their lives.
    (C) They were too wild in nature to be tamed easily.
    (D) They did not like human beings much.
    (E) They were not used to having outsiders visiting and living in their habitat.
15. The main objective of the passage is to:
    (A) Describe some important events of Jane's life.
    (B) Describe the challenges she faced while conducting her study in Kenya.
    (C)Highlight the major aspects and importance of Jane's study and research on chimpanzees.
    (D) Explain how she overcame her challenges in life.
    (E) Prove how Jane was different from the other researchers of her time.

**Questions 19 to 18**

**Instruction:** *Identify the sentence(s) that is/are showing the correct use of the given word in bold.*

16. Ingratiation
    (i) The dependent was an ingrate to not acknowledge his patron's favour.
    (ii) It was infuriating to see such ingratiation just when his promotion was due.
    (iii) People promise impossible things to ingratiate themselves with voters at the time of election.
    (A) both i and ii (B) both ii and iii (C) i only (D) ii only (E) all three
17. Cower
    (i) Physical and mental abuses that make students cower are unacceptable in schools nowadays.
    (ii) You cannot cower me into agreeing with you.
    (iii) Cowards 'die' many times before their death.
    (A) both i and ii (B) both i and iii (C) both ii and iii (D) i only (E) all three
18. Skewer
    (i) There is something very warm and comforting about eating roasted marshmallows in skewers in winter.
    (ii) It is easier to get away with skewering the political characters through satirical comic strips.
    (iii) It is unfortunate that when the time came, being in power he had skewed the rules in his favour.
    (A) both i and ii (B) both i and iii (C) both ii and iii (D) i only (E) all three

**Questions 19 to 21**

**Instruction:** *Choose the most appropriate word marked (A) to (E) to fill in the blank in each sentence-All the words are given in their basic form (e.g. for the word: DELUDE, the blank may be filled with deluding, deluded; etc.) You are allowed to use a word ONL Y ONCE.*

(A) delude (B) intimate (C) impose (D) allude (E) insinuate

19. If a team fails to perform, it is unacceptable that any member would point fingers or even _____ another member for the lapse. It totally goes against team spirit!
20. When you are presenting the proposal, do not _____ to the core sales pitch, just go straight to the point!
21. I warned the players not to underestimate the strength of the opponent teams and _____ themselves into believing that the trophy would be theirs.

**Questions 22 to 25**

**Instruction:** *Select the word that best expresses the exact opposite meaning of the underlined word in each sentence.*

22. It took guts for her to disobey a blatant order!
    (A) obvious (B) deliberate (C) covert (D) unconcealed (E) manifested
23. The father was livid when he was called by the Principal as his son had been into yet another fight in school.
    (A) irate (B) worried (C) angry (D) unruffled (E) agitated
24. The institution appropriated a large sum of money for research work.
    (A) set aside (B) squandered (C) saved (D) apportioned (E) allocated
25. You have made that error many times now! I am beginning to think you are deliberately being obtuse.
    (A) slow (B) dull (C) dense (D) sharp (E) thick

**Questions 26 to 30**

**Instruction:** *Underlined parts of the following sentence may contain error(s) in grammar, diction, usage or idiom. Choose the underlined portion that is incorrect. If there is no error, select (E)*

26. You cannot keep putting of for tomorrow what you can do today. No Error
A B C D E

27. The boy who used to be my room-mate at college has called me up for the last few days.
A B C D
No Error
E

28. He was living off the paltry inheritance his father had lift behind. No Error
A B C D E

29. She is always so busy singing, dancing, and to party around, that she is hardly left with
A B C
any time for serious affairs in life. No Error
D E

30. Being seen the movie before, she was not much interested in watching it a second time.
A B C D
No Error
E

**Section II: Mathematics 30 x1 = 30 marks**

**Instructions:** DO NOT USE CALCULATOR. *Figures are not drawn to scale.*

31. One-fourth of a number is equal to two-fifth of another number. If 50 is added to the larger number, it becomes two times the second number. What is the smaller number?
(A) 75 (B)80 (C)100 (D) 125 (E) none of these

32. The average of the ages of a man and his son is 35 years. After 10 years, the ratio of their ages will be 2:1. What is the son's present age in years?
(A) 15 (B) 16 (C)20 (D) 25 (E) none of these

33. For an item the profit is 40% when the discount is 30%.What is the profit when the discount is 40%?
(A) 10% (B)20% (C) 25% (D)30% (E) none of these

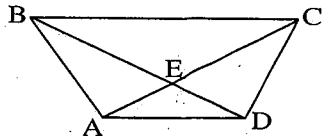
34. If x, y and z are positive integers such that when x is divided by y, the remainder is z and when x is divided by z, the remainder is (y - 2), then which of the following must be true?
(A) z = y -1 (B) x + z is divisible by y
(C) x -1 is divisible by y (D) y is even (E) none of these

35. Two containers, x and y of the same capacity, are each 4/5 full of water. If 4 litres of water from container x is added to container y, the ratio of water in the two containers becomes 2:3. What is the capacity of container x?
(A) 16 (B)20 (C)25 (D)32 (E) none of these

36. Arif contributed 2/3 of his salary to a charity, which is half the salary of Babu. Babu contributed 3/4 of his salary to the same charity, which is twice the salary of Malek. Malek contributed 1/4 of his salary to the charity. If Babu's salary is Tk. 20,000, what was the total contribution to the charity?
(A) Tk. 26875 (B) Tk. 27325 (C) Tk. 28525 (D) Tk. 29675 (E) none of these

37. Bashir bought an ordinary mobile and a cover for Tk, 2000. Malek bought a smart phone and the same cover for Tk. 2000 more than what Bashir had paid. The price of the cover was one tenth of the combined cost of the two mobiles. What was the cost of the ordinary mobile?
(A)Tk. 1000 (B)Tk. 1200 (C) Tk. 1500 (D) Tk. 1600 (E) none of these

38. In the figure, AD is parallel to BC. BC = 12 cm and AD = 3 cm. If AE = 2 cm, what is the length of EC in cm?
(A)6 (B)8
(C) 9 (D) 12
(E) none of these




39. If x and y are positive integers and 1/X+ 1/y = 1/9, what is the difference between the maximum and minimum value of x?
(A) 40 (B)60 (C) 80 (D) 100 (E) none of these

40. If | x -1 |> 2, which of the following must be true?
I. |x| > 3 II.$x^2$> 9 III. x> 3
(A) I only (B) II only (C) I and II only
(D) II and III only (E) none of these

41. If # is an operator such that (4 #2 = 14) and (2 #3 = 6), what will be the value of (5 # 2)?
(A) 11 (B) 19 (C)23 (D)25 (E) noneofthese

42. Arif can do a work in 12 hours. Arif finished two-thirds of the work and the remaining portion of the work was done by Babu, whose rate of working is just 20% of what Arif can do. How long did it take Babu to finish the remaining work in hours?
(A) 8 (B) 20 (C) 24 (D) 32 (E) none of these

43. Arif has x marbles of which 20% are black and 80% are red. Babu has y marbles of which 40% are black and 60% are green. Dipu has z marbles of which 50% are black and 50% are blue. If 25% of the total marbles they have are black, what is x?
(A) y + 3z (B) 3y + 5z (C) 4y + 5z (D) (y+5z)/2 (E) none of these

44. An integer x, when divided by 4 or 6, results in a remainder of 1. Which of the following cannot be a remainder when the same number is divided by 9?
(A) 2 (B) 3 (C) 4 (D) 7 (E) none of these

45. A club has equal number of male and female members. On a certain day, two thirds of themembers were absent. Of the members present, one third was male. What is the ratio of male and female who were not present on that day?
(A) 1/3 (B)2/3 (C) 3/5 (D) 7/5 (E) none of these

46. If x > z and y < - z, where z is a positive integer, then which of the following must be true?
(A) x/y > 1 (B) x/y < -1 (C) x/y < 0 (D) x+y> 0 (E) none of these.

47. Kalam takes 2 days more than what Zakir takes to produce x chairs. They work together for 6 days and produce 24x chairs. How many days will it take Kalam to produce 2x chairs?
(A) 2 (B)4 (C)5 (D)6 (E) none of these

48. A piece of wood measuring 3cm x 3cm x 2cm is divided into 18 square shaped cubes of identical shape. What is the total surface area of all the identical cubes (in $cm^2$)?
(A)42 (B)48 (C)96 (D)108 (E)none of these

49. If x and y are integers and - 2< x < 5 and - 5 < y < 7, what is the greatest possible value of [y - x|?
(A) 6 (B) 7 (C) 8 (D) 9 (E) none of these

50. The quantity $2^6 5^7 3^7$ will end in how many zeroes?
(A) 4 (B) 5 (C) 6 (D) 7 (E) none of these

51. If x> y > 1, which of the following must be greater than x?
(A) 7y/5x (B) x/(2y - x) (C) (x + y)/y (D) 6x/(y + 5x) (E) none of these

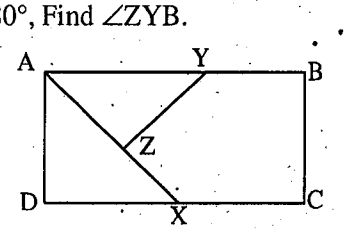
52. if x men can do a work in y days, how many days will it take (x + z) men to do the same work?
(A) xy/(x + z) (B) (x + z)/xy (C)y-z (D) (xy + zy)/x (E) none of these

53. If x is a positive even integer and y is a positive odd integer, which of the following will be even?
(A) x3 + y2 (B) 3x + y + y2 (C) (x - y)(x + y) (D) xy + y2 (E) none of these

54. In a particular course, Arif appeared in 10 quizzes. The average of his best 9 quizzes is 10% more than the average of all the quizzes he attended. The total marks obtained in best 9 quizzes is what percent of the total marks obtained in 10 courses?
(A) 80% (B) 88% (C) 90% (D) 99% (E) none of these

55. A customer came to a shop and asked the shop manager to give a 20% discount on listed price of a pen. Moreover, for every 10 pens purchased he wanted two pens free of cost. The manager agreed to the customer's demand because he could still make a profit of 20% on cost price. If the cost price of a pen is x, what was the list price of the pen?
(A)1.75x (B)1.8x (C)1.9x (D) 2x (E) none of these

56. ABCD is a rectangle. ∠ZXD = 30° and ∠AZY = 80°, Find ∠ZYB.
(A) 100° (B) 110° (C)120°
(D) 130° (E) none of these




**Questions 57 to 60**

**Instruction:***Each problem consists of a question followed by (wo statements. Decide whether the data in the statements are sufficient to answer the question. Select your answer according to whether:*

- (A) statement (1) alone is sufficient, but statement (2) alone is not sufficient to answer the question
- (B) statement (2) alone is sufficient, but statement (1) alone is not sufficient to answer the question
- (C) both statements taken together are sufficient to answer the question, but neither statement alone is sufficient
- (D) each statement alone is sufficient
- (E) statements (1) and (2) together are not sufficient, and additional data is needed to answer the question

57. If xy<yz< 0, is y > 0?
(1)x<z
(2) x< 0

58. What was the percent increase in salary of Asif from 2013 to 2014?
(1) In 2013, Asif's salary was Tk. 20,000
(2) In 2013, Asif's salary was 20% greater than it was in 2012, and in 2014, Asifs salary was 30% greater than it was in 2012.

59. If Arif, Babu and Kamal have a total of Tk. 78, how much money does Babu have?
(1) Kama! has twice as much as Babu has and 1/2 as much as Arif has.
(2) If Kamal gives all his money to Babu, then the ratio of amounts in Arif and Babu's possession will be 4:3.

60. Dipu is 15 years older than his brother Enam. How old is Dipu?
(1) Twenty years ago, Dipu's age was twice that of Enam.
(2) Ten years later, Enam's age will be % that of Dipu.

**Section III: Analytical Ability 15x1 = 15 marks**

61. The major goal of physical education programs in schools is to help all children become physically fit. But only a small proportion of children ever participate in team sports. Moreover, team sports usually do less to encourage fitness in participants than do physical education programs that focus directly on aerobic exercise.
The considerations above, if true, could be used most effectively to argue against:
(A) The use of in-school physical education programs to encourage lifelong fitness habits in students.
(B) The participation by young children in community sports teams.
(C) School's relying heavily on aerobic exercise programs to help all children become physically fit.
(D) The use of a large part of a school's physical education curriculum for team sports.
(E) The use of team sports in schools as an occasional activity for talented athletes.

62. Ergot is a fungus that can infest the seed heads of any grain crop but is common only on rye. Ergot contains chemicals poisonous to humans.
Rye was introduced in Europe in the Middle Ages as a crop for land too poor and damp for wheat to grow well. Thus, rye tended to be the staple of the poorer peasants.
Which of the following hypotheses is best supported by the information above?
(A) Ergot did not occur in Europe prior to the Middle Ages,
(B) People in the Middle Ages were well aware of the toxicity of ergot.
(C) Before the introduction of rye, no attempts had been made to cultivate the poor and damp land in Europe.
(D) in Europe during the Middle Ages, prosperous people were less at risk from ergot poisoningthan poor people were.
(E) Prior to the Middle Ages, Europe was as densely populated as dependence on a single gaincrop permitted.

63. A dog hears higher pitches than what a human hears; a cat has a greater capacity to see in dim light than a human normally has; a platypus picks up weak electric signals to which a human is normally insensitive.
Which of the following conclusions can be properly drawn from the statements above?
(A) Most animals have sensory capacities superior to those demonstrated by humans.
(B) Some animals have sensory capacities that are different from those of humans.
(C) During evolution the eyes and ears of human beings were modified to make human sense perception less acute.
(D) Researchers should not be surprised to find that ail the sensory capacities of platypuses aregreater than any of those demonstrated by humans.
(E) Any human who can see in dim light does so less well than any cat.

64. X mefts at a higher temperature than P melts.
Y melts at a lower temperature than P melts, but at a higher temperature than Q melts.
If the statements above are true, it can be concluded with certainty that S melts at a higher, temperature than Y melts, if one knows in addition that
(A) Q and P melt at a higher temperature than S melts.
(B) X melts at a higher temperature than S melts.
(C) P melts at a lower temperature than S melts.
(D) Q melts at the same temperature than S melts.
(E) S melts at a higher temperature than Q melts.

**Questions 65 to 69**

The owner of a music store is planning a window display of five products. Three are to be CDs selected from K, L, M, N and O and two are to be DVDs selected from R, S, T and U. The display items are to be selected according to the following conditions:
If K is displayed, U must be displayed.
M cannot be displayed unless both L and R are also displayed.
If N is displayed, O must be displayed, and if O is displayed, N must be displayed.
If S is displayed, neither T nor U can be displayed.

65. Which of the following is an acceptable display?
(A) K, L, M, R, U (B) K, M, N, O, R (C)L, M, O, R, S
(D)M, N, O,T, U (E)N, O, R.S.T

66. If K and T are the first two display items to be selected, how many acceptable groups of items are there that would complete the display?
(A)1 (B)2 (C)3 (D)4 (E)5

67. If T and U are displayed, which of the following must also be displayed?
(A) K (B) L (C) M (D) N (E) R

68. If N and 0 are not displayed, all of the following must be displayed EXCEPT
(A) K (8) M (C) R (D) T (E) U

69. If M is selected, the owner has the freedom to choose how many items?
(A) 1 (B) 2 (C) 3 (D) 4 (E) none of these

**Questions 70 to 75**

A man has to plant exactly four varieties of flowers in a flower bed in his garden, one variety in each of the four rows, in an ascending order of height from the first row to the fourth row. The seven varieties available to the man, in ascending order of height, are red begonias, pink petunias, orange marigolds, red geraniums, white snapdragons, yellow zinnias and pink cosmos. The following restrictions on color arrangements apply:
No two varieties of the same color can be planted.
Orange flowers cannot be planted in a row immediately adjacent to a row of yellow flowers.

70. Which of the following is a color arrangement, from first row to fourth row, that the man can select for the flower bed?
(A) Pink, red, white, pink (B) Pink, orange, white, red
(C) Red, orange, yellow, pink (D) Red, white, yellow, pink
(E) Red, pink, yeliow, white

71. If the man plants the geraniums in the third row and the snapdragons in the fourth row, then which of the following must also be planted?
(A) The begonias and the petunias (B) The begonias and the marigolds
(C) The petunias and the marigolds (D) The petunias and the zinnias
(E) The petunias and the cosmos

72. If the man plants the zinnias in the third row, then which of the following can be planted in the second row?
(A) The begonias (B) The petunias (C) The marigolds
(D) The geraniums (E) The cosmos

73. Flowers of which of the following colors CANNOT be planted in the third row?
(A) Orange (B)Pink (C) Red (D) White (E) Yellow

74. If the man plants the begonias and the petunias, then which of the following must also be planted?
(A) The marigolds (B) The geraniums (C) The snapdragons
(D) The zinnias (E) The cosmos

75. If the man does not plant any red flowers, then the total number of acceptable arrangements of the flower garden is
(A) One (B) Two (C) Three (D) Four (E) Five

**Part II: Writing Ability 3 Questions: 25 Marks**

**A.** Describe a memorable event from your childhood. (10 Marks)
*(Use the space in this page and the next to answer this question)*

**B.** Elaborate the following expression: (10 Marks)
**(Early to bed and early to rise makes a man healthy, wealthy and wise"**

**C.** বর্ণনা কর- **'শীতের সকাল"** (5 Marks)

## Answer Key

### Section I: Language & Communication

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1.B | 2.C | 3.E | 4.C | 5.B | 6.C | 7.E | 8.C | 9.B | 10.E |
| 11.C | 12.D | 13.A | 14.E | 15.C | 16.E | 17.B | 18.A | 19.E | 20.D |
| 21.A | 22.C | 23.D | 24.B | 25.D | 26.B | 27.C | 28.E | 29.B | 30.A |

### Section II: Mathematics

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.D | 32.C | 33.D | 34.E | 35.C | 36.A | 37.C | 38.B | 39.C | 40.D |
| 41.C | 42.B | 43.E | 44.A | 45.E | 46.C | 47.E | 48.D | 49.D | 50.C |
| 51.E | 52.A | 53.B | 54.D | 55.B | 56.B | 57.A | 58.B | 59.D | 60.D |

### Section III: Analytical Ability

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 61.D | 62.D | 63.E | 64.C | 65.A | 66.A | 67.D | 68.D | 69.E | 70.D |
| 71.C | 72.D | 73.B | 74.C | 75.B | - | - | - | - | - |

**Section I: Language & Communication 30 questions, 30 Marks**

1. (B) **A** and **C** both mean "present or existing in all places at the same time", **D** means "বাচাল" and **E** means "gullible" or অতি সরল। none of which go with the sentence, however, **B** is the correct option as it means "having unlimited power, authority and influence".
2. (C) Below the dog's coat of hair is the dog's skin, it is not referred to as the hide. **A** হবে না যেহেতু "from" আছে। B তে "craven" অর্থ "cowardly"এবং **D** "abyss" মানে গর্ত -both of which do not serve the purpose of the sentence. সুতরাং C হবে উত্তর।
3. (E) To "pass oneself off as" মানে হচ্ছে "to pretend something is different from what that thing really is", so, **E** is the correct answer choice.
4. (C)Options A, B and D সব সংখ্যা বোঝায়। কিন্তু যেহেতু "furniture" একটিnon-count noun, এই তিনটির মধ্যে কোনটি হবে না। বাকি C ও E এর মধ্যে C উত্তর।
5. (B)"Close + to" and "drop + by" is the only option which shows the correct usage of verb + preposition for this sentence. Thus, **B** is the correct option.
6. (C) Phrase "all day long" দিয়ে এখানে উদ্দেশ্য ছিল গুরুত্ব বোঝানো। সুতরাং "so" এর সাথে "that" দিয়ে "যাতে" বোঝানো হচ্ছে। Hence, **C**
7. (E) **A** means "a serious problem", **B** means "to be within one's mental grasp (এমন কিছু যা কার মানসিক উপলব্ধির ভেতরে), **C** means "to force somebody to give all of his/her attention on an activity" and "**D** means to be in an argument with somebody"-none of which go with the logic of the sentence. **E** means "to be at a loss due to exceeding the limit of one's mental resources" which is exactly what a confusing question would do.
8. (C) "Site" সঠিক নয় যেহেতু এর দ্বারা tructure/statue/memorial নয়, বরং এক খন্ড জমি বোঝানো হয়। এবং যেহেতু memorial টি এখনো বর্তমান, সেহেতু simple present tense "is" করা উচিত। So, **C** is the correct answer choice.
9. (B) "Will", "would" এর চাইতে বেশি definite. So, as you definitely want him to recover from the depression-**B** is the correct option.
10. (E) যেসব sentence এ requests বা commands বোঝানো হয়, সেখানে আমরা "that" এর পরে verb এর base form use করি। This leaves us with options **C** and **E**; since it is written ALL, the word "proposal" should be plural. So, **E** is the correct option.
11. (C) "Camouflage" here is being used to explain "to be hidden" thus "concealment" is the right choice.
12. (D) "From an early age, Jane was fascinated by animals and animal stories. By the age of 10, she was talking about going to Africa!": সুতরাং যদিও সে যা করেছিল তা তখন কার নারীদের তুলনায় ভিন্ন, তবুও তার স্বভাব নিয়ে ধারণা করার মত পর্যাপ্ত তথ্য নেই আমাদের কাছে। but, it is clearly written that it was her fascination which attracted her towards going to Africa.
13. (A) "Jane expressed her interest in the idea of studying animals by living in the wild with them, rather than studying dead animals through paleontology.": This indicates that the typical way to study was through paleontology and not by living amongst the chimpanzees like Jane did.
14. (E) "The chimpanzees did not accept her right away, and it took months for them to get used to her presence in their territory.":এতে বোঝাযায় যে যেহেতু সে তাদের কাছে অচেনাছিল, শিম্পাঞ্জী গুলোতাকে সাথে সাথেগ্রহণ করেনি।

15. (C) Jane এর ব্যাক্তিগত জীবন সম্পর্কে আমাদের ধারণা নেই, so option **D** is incorrect এবং যদিও passage এ options **A, B** and **E** এর কথা আছে-they are not the main idea of the passage. The main idea of the passage is **C**.
16. (E) An ingrate is an ungrateful person so (i) is correct. Ingratiation means gaining favor through deliberate efforts so (ii) and (iii) are correct too.
17. (B) Cower means to shrink away due to fear, thus, option (ii) is not correct.
18. (A) Skewer (noun) is a large pointed metal that is pushed through pieces of food to hold them in place while cooking. Skewer (verb) অর্থ কারোতীব্র সমালোচনা করা। Thus, only options (i) and (ii) are correct.
19. (E) insinuate: to say something bad or insulting in an indirect manner
20. (D) to refer to something in a disguised manner
21. (A) delude: to cause to believe something that is not true
22. (C) blatant: very obvious covert: hidden
23. (D) livid: very angry unruffled: not upset
24. (B) appropriated: to set apart for a particular purpose squandered: বেহিসাবে খরচ করা।
25. (D) obtuse: stupid or unintelligent sharp: keen in intellect
26. (B) It should be "putting OFF". It means to induce to wait.
27. (C) It should be "has BEEN calling me up" as this activity has begun in the past and has been continuing till now.
28. (E)No error
29. (B) Error is parallelism. It should be "singing, dancing and PARTYING around".
30. (A) It should be "HAVING seen the movie before". "Being" refers to a state of a person's existence so here it has been used incorrectly.

**Section II: Mathematics 30 x1 = 30 marks**

31. (D) প্রশ্ন অনুযায়ী, ধরা যাক বড় X and ছোট Number Y

    তাহলে equation হবে $\frac{1}{4}x = \frac{2}{5}y$

    এবং $x + 50 = 2Y$

    Solving the equation we get, x=200 and Y=125

    thus Answer Option D
32. (C) ধরলাম Father বয়স X and BOY er age Y

    thus, $\frac{x+y}{2} = 35$

    thus x+y=70.....equation-1

    Again,

    10 বছর পর,

    $\frac{x+10}{y+10} = 2$

    Solving we get, x=50 and y=20

    thus Answer is 20 (C)

33. (D) Let the base price be 100
So with 30 percent Discount, price = 70 and profit = $70 \times 40\% = 28$, cost=42
Now with 40 percent discount price = 60, thus profit = 60–42= 18
thus percentage required = $(\frac{18}{60}) \times 100\% = 30\%$ (D)

34. (E) When X is divided by Y and reminder is Z, we can write $(\frac{x-z}{y})$
Again When X Is divided by Z and reminder is y-2, we can write $(\frac{x-y+2}{z})$
No definite conclusion thus Option E

35. (C) From the question,
if we Back Calculate, we see using Option C it means at $4/5^{th}$ capacity they are 20 litres
Transfer of 4 litres will make it 16:24 = 2:3 litres
Thus Option C

36. (A) Babu's Salary = 20,000
Babu Contributed= $3/4^{th}$ of 20000+ 15000
Malek Contributed – $1/4^{th}$ of half of Babu's donation -= $(1/4) \times 7500 = 1875$
Arif Contributed = Half of Babu's salary= 10,000
Total = 26875
So Option A

37. (C) BACK CALCULATE করে Tk.1500 ধরে করলে উত্তর সঠিক হয়।
Thus Answer Option C

38. (B) সমবাহু Triangle use করলে we get
$\frac{AD}{BC} = \frac{AE}{EC}$
So, $\frac{3}{12} = \frac{2}{EC}$
So EC=8
Answer is Option B

39. (C) $\frac{1}{x} + \frac{1}{y} = \frac{1}{9}$
for this , x and y value can be either 90 and 10 interchangeably
So difference is = 90-10 = 80 Option (C)

40. (D) According to question,
as this is a modulus, by solving twice
first,
x-1>2
so x>3
again
−x+1>2
thus x<-1
So closest answer X^2>9, because after solving we get X>+3 or-3 which satisfies the above equation
So Option D

41. (C) The system is such that (4^2) −2 = 14 and (2^3) −2= 6
Therefore (5#2) = (5^2) −2= 23 Ans (C)

42. (B) It takes Arif 12 hours to complete a work.
Work done by Arif= 2/3
Work left = 1/3
Time required for Arif to finish $1/3^{rd}$ = 12 ×1/3= 4
Rate of Babu = 5 × rate of Arif
since rate is $1/5^{th}$ that of Arif
= 5 × 4 = 20 (B)

43. (E) Arif= x marbles and 20% Black, So 0.2x black marbles
Babu = y marbles and40% black, so 0.4y black marbles
Dipu = z marbles and 50% black, so 0.5z
Now, according to question
25%of total is black

SO, $\frac{x+y+z}{4} = 0.2x + 0.4Y + 0.5Z$

X+y+z = 0.8x +1.6y+2z
0.2X = 0.6y+0.2Z
X=3Y+Z
So answer option E

44. (A) one more than a number which is both a multiple of 4 and 6.
When $\frac{25}{9}$ = remainder 7

When $\frac{49}{9}$ = remainder 4

Since answer is 2 Thus Option A

45. (E) Let Male members be 150 and female members be 150
When $2/3^{rd}$ is absent, present= 300 ×$1/3^{rd}$ = 100
If $1/3^{rd}$ of 100 is male therefore. $2/3^{rd}$ of 100 is female.
So the ratio of male and female is 1:2 (E)

46. (C)
x>z , y>−z, z=positive integer
ধরি, x = 4
y = −100
z = 100
x/y = 100/−100 = −1 (>1 হচ্ছে না)
x/y = 100/−100 = −1 (>1 হচ্ছে না)
x/y = 100/−100 = −1(>0 হচ্ছে)
x+y = 100−100= 0(>0 হচ্ছে)

47. (E) None of these
They have to work together for 6 days to produce 24x chairs
So, they have to work together for 1 day to produce 4x chair (unitary method) ...(1)
Kalam take 2 more days to produce x chairs than Zakir
So, if Zakir produces x chair in y days, Kalam produces X chair in (y+2) days

In y days, Zakir produces x chair, so, in 1 day, Zakir produces $\frac{x}{y}$ chair

In y+2 days, Kalam produces x chair, so, in 1 day, Zakir produces $\frac{x}{y+2}$ chair

So, together in 1 day they produce $\frac{x}{y}+\frac{x}{y+2}$ chair ... (2)

So, combining (1) and (2),

$\frac{x}{y}+\frac{x}{y+2}=4x$

Solving the equation with quadratic formula $x=\frac{-b\pm\sqrt{b^2-4ac}}{2a}$, we get,

$y=\frac{-3\pm\sqrt{18}}{4}$

By taking only the positive values, we get the value of y to be an irrational number. So, the number of days Kalam needs to produce 2x chair is a irrational figure too, which is not in the option. Hence, none of these

48. (D)
3 X 3 X 2 = 18 $cm^3$
ছোট cube আছে18 টা
তাহলে একেক Cube এর ভলিউম 1$cm^3$ করে হবে।
তাহলে একেক cube এর side1cm. করে হবে কারণ1 X 1 X 1 = 1$cm^3$
Cube Surface area = $6a^2 = 6 \text{ X } 1^2 = 6$
Since, 18 cubes, 6 X 18 = 108r

49. (D)
$-2 < x < 5$ and $-5 < y < 7$
[y−x]
যখন এরকম Range এ (y−x) বা similar কিছু বের করতে বলবে, সব ক্ষেত্রে
Extreme values/ Corner values গুল নিয়ে calculation করতে হবে।
y = 7 , x = 5 , (y−x) = 2
y = 7 , x = −2 , (y−x) = 9
y = −5 , x = 5 , (y−x) = -10
y = −5 , x = −2 , (y−x) = -3
Highest value = 9

50. (C)
$2^6 5^7 3^7$ = 10935000000
The number will end in 6 zeros.

51. (E)
x>y>1
ধরি, x = 100 and y =2
তাহলে,
7y/5x= 14/500 (<x)

$\frac{x}{2y-x}=\frac{100}{4-100}=\frac{100}{-96}(<x)$

$\frac{x+y}{y}=\frac{102}{2}=51(<x)$

$\frac{6x}{y+5x}=\frac{600}{502}(<x)$

52. (A)
x men ---------- y days
(x+z) men ---------- (y) X $\frac{x}{x+z}$

$\frac{xy}{x+z}$

53. (B)
x = positive even
y = positive odd
ধরি, x=2 and y=3
$x^3+y^2=2^3+3^2=17$ (odd)
$3x+y+y^2= 3(2)+3+3^2= 18$ (even)
$(x-y)(x+y)=x^2-y^2=2^2-3^2=-5$ (odd)
$xy+y^2=(2)(3)+(3)^2=15$ (odd)

54. (D)
ধরি, in 10 tests, he received an average = 10x

$10x = \frac{total}{10}$

Total = 100x
10% of 10 = 1
Therefore, 10+1 = 11

$11x = \frac{total}{9}$

Total = 99x

$\% = \frac{99x}{100x} \times 100\%$

$= 99\%$

55. (B)
ধরি, List price হচ্ছে= a
12 টা পেন কিনতে Original খরচ 10a (কারন 12 পেন পাচ্ছে 10 টা পেন এর দাম এ)
এবং এই price এর উপর পাচ্ছে 20% discount
তাহলে, কিনতে লাগছে, 8a
Cost of 12 pens = 8a
Cost of 1 pen = 2/3 a
এখন, 2/3a = 1.2x (কারণ এই দাম এ Seller এর 20% profit হচ্ছে)
a = 1.8x

56. (B)
যেহেতু, AZY = 80°, YZX = 100° (angles in a straight line)
Angle B and Angle C are 90° (since rectangle corners)
AXC=150° as AXD = 30° (angles in a straight line)
এখন, XZYBC একটি Pentagon
Total angles of a pentagon = 540°
Therefore, 540°– Angle B –Angle C – Angle AXC – Angle YZX = Angle ZYB
540° – 90° – 90° – 150° – 100° – 110°

57. (A)
xy<yz<0
তাহলে, লেখা যাই, xy<yz অথবা xy<0 অথবা yz<0
ধরি, x=5, y = −1, z=10
(5)( −1) < (10)( −1)
−5 <−10 ------ (সঠিক নয়)
তাহলে, y এর value negative অথবা 0 হলে xy<yz হওয়া সম্ভব নয়। শুধুমাত্র yএর value positive হলেই xy<yx হবে। এ কথা যেহেতু নির্ণয় করা যাচ্ছে, তাই Statement 1দিয়ে বের করা সম্ভব।
X<0 নিয়ে ধরি x= −5 , y=−5 and z=2
(−5)( −5) < (−5) (2)
−25 <−10 (সঠিক)
আবার, ধরি, x=5, y=2, z=10
(−5)(2) < (2)(10)
−10<20 (সঠিক)
তাহলে, আমরা বলতে পারছি না sure হয়ে যে x<0 বললে আমাদের y ki<0 হবেই কিনা। কারণ example অনুসারে y<0 আসবে।
অতএব Statement 1দিয়ে বের করা সম্ভব y>0 হবে।

58. (B)
Statement 1 এ আমাদের বলা আছে 2013 সালে Asif এর salary কত, কিন্তু শুধু এতটুকু information দিয়ে salary increase বের করা সম্ভব নই।
কিন্তু Statement 2 তে যা বলা আছে, তা অনুসারে 2012 সালে যদি Asif এর salary ধরা হয় 100%,তাহলে 2013 সালে হবে 120% এবং 2014 সালে 130%।
তাহলে এখান থেকে percentage increase বেরকরা সম্ভব। 2013 থেকে 2014 সালে salary 10% (130%-120%) বেড়েছে। Statement 2 দিয়েই percentage increase বেরকরা সম্ভব।
যেহেতু Statement 2 দ্বারা answer পাওয়া যাচ্ছে, আমাদের answer হবে B. r

59. (D)
A+B+K = 78
Statement 1 অনুযায়ে K = 2B, K= 0.5A
এখান থেকে K লেখাযায় 2B, এবংA কে 4B.
তাহলে, 2B+B+4B=78
যেখান থেকে B এর value বেরকরা সম্ভব
Statement 2 অনুযায়ে A:B = 4:3.তাহলে total অংশ 7x.
এখান থেকে B এর অংশ বেরকরা সম্ভব হবে, $\frac{3x}{7x}$ X 78
যেহেতু, দুইটা Statement দিয়েই আলাদা করে সম্ভব calculation করা।

60. (D)
Statement 1অনুযায়ে D−20 = 2 (E−20). এখান থেকে D এর age বেরকরা সম্ভব কারণ আমরা E = D −15 লেখতে পারি।
Statement 2 অনুযায়ে লেখা যায় x% (D+10) = (E−10). এখান থেকেও বেরকরা সম্ভব D এর age, কারণ এখানেও E=D−15 লেখা যাবে।
যেহেতু দুইটা Statement দারাই answerটা বেরকরা সম্ভব হচ্ছে, answer হবে D.

## Section III: Analytical Ability

**Questions 61-64**

61. (D) Team sports would not have the desired effect it was suppose to have as stated in the first line of the question. So Team sports can be argued against best.
62. (D) As it was more eaten by people who were poor, thus they were more at risk
63. (E) Given from the last line of question
64. (C) we can derive that Q<Y<P<R .thus if we know that P<S thus S would be greater than Y.

**Questions 65-69**

5 products

from from

K, L, M, N, O R, S, T, U

Conditions:

(1) যদি K display করা হয়, U কেও display করতে হবে (K ⟶ U)

(2) L এবং R দুইটাই থাকলে M থাকবে ( L & R ⟶ M)

(3) O যদি হয়, N হবে. N যদি হয়, O হবে (O ⟶ N) and (N ⟶ O)

(4) যদি S হয়, তাহলে T এবং U কোনটাই হবেনা (S ⟶ T/U)

65. (A) Option (b) condition 1 মানেনা. Option (c) condition 3 মানেনা. Option (d) condition 2মানেনা. Option (e) condition 4 মানেনা. একমাত্র condition fulfilling option হচ্ছে option (a)

66. **(A)**

KTUNO or KTUON

K এবং T যদি select করা হয়, তাহলে:

K থাকলে U থাকবে (Condition 1). DVD দুইটা নিউ হয়ে গেছে. আর নিলে CD থেকে নিতে হবে. যেহেতু DVD থেকে আর নেওয়া যাবে না, R নেওয়া যাচ্ছে না, তাই CD থেকে M নেওয়া যাবে না. L নেওয়া যাবেনা কারণ L নিলে শুধু একটি spot বাকি থাকে, আর আমরা জানি N নিলে O নিতে হবে. আর O নিলে N নিতে হবে. So L নেওয়া যাবে না. So, either N or O নিতে হবে এবং পরেরটা হবে O or N respectively. Possible শুধু একটাই combination.

67. **(D)**

TUKNO

T ও U হওয়াতে DVD complete. বাকি 3 টা CD থেকে আসবে. যেহেতু U আছে, তাহলে K থাকবে, কারণ K না থাকলে U হবেনা। M হবেনা কারণ L & R দুইটাই লাগত, আর যেহেতু DVD sequence complete, M নেওয়া যাচ্ছেনা। CD থেকে বাকি থাকে L, N এবং O. কিন্তু L নিলে আর একটি জায়গা বাকি থাকে, আর আমরা জানি যে N নিলে O নিতে হবে কিংবাO নিলে N নিতে হবে। So L নেওয়া যাবেনা। Last দুইটা spot হচ্ছে Nএবং O

68. **(D)**

KLMUR

যেহেতু N এবং O নাই K L M থাকবেই CD থেকে। K থাকলে থাকবে। যেহেতু M আছে, L & R লাগবে। তাই R বসবে। T থাকছেনা CD গুলা থেকে।

69. (E)

MLRKU

M হবে L & R হওয়ার পর, so L & R নেয়া লাগবে।

N কিংবা O নেওয়া যাবেনা কারণ নিলে CD 4টা নেয়া হয়ে যাবে । DVD দুইটা নেওয়া যাবেনা।

So K নিতে হবে কারণ CD এর option থেকে K নিতে হবে। K নিলে U নিতে হবে। Sequence complete, as shown above.

**Questions 70-75**

Four varieties needed

Height in ascending order (ছোট থেকে বড়)

RB , PP , OM , RG , WS , YZ , PC

Conditions:

(1) Same color হতে পারবে না। (if RB, then RG থাকবে না– vice versa), (if PP, then PC থাকবে না– vice versa)

OM

(2) OM and YZ পাশাপাশি থাকবে না

70. (D)

For condition no. 1 option A is not applicable

For condition no. 2 option C is not applicable

Option B & E is not in ascending order

71. (C)

1-

2-

3-RG

4-WS

RB can't be used because of condition 1 & ascending order e সাজানোর জন্য YZ & PC হইতে পারবে না।

72. (D)

if yz is in 3rd position, then in ascending order PC have to be in 4th . আবার PC থাকার কারণে PP ও থাকতে পারবে না এবং OM, YZ –এর পাশে 2nd position এ বসতে পারবে না। last এ ascending order এর কারণে RB & RG এর মধ্যে RG 2nd position এ বসবে।

73. (B)

If PP is in 3rd position then there'll be only one option (RB) to fill up the 1st& 2nd position which is not possible.

If PC is in 3rd position then there'll be no option to fill up the 4th position

74. (C)If he plants RB & PP, then he must plant them in 1st and 2nd position because of the ascending order. In that situation RG & PC can't be used by condition 1 & by condition 2, either OM or YZ can be used here. So to fill up the quota he must use WS.

75. (B)Leaving the red flowers, there are only 5 options. Among them, there are two pink flowers PP &PC, which can't be used together. So ensuring the ascending order only two arrangement is possible: PP, OM, WS, YZ or OM,WS, YZ, PC

# BBA (IBA)

## Admission Test Question (2015-2016) with Solution

## PART I: Multiple Choice Questions (MCQs)

### Section I: English Language — 30 Questions: 30 Marks

**Questions 1 to 4**

**Instructions:** Read the following sentences and selection that corrects the underlined sections. If the underlined sections are correct as written, choose option A.

1. The gas-filled balloon rose in the air.
   A. rose in the air B. was rising in the air C. was in the air
   D. rose into the air E. would rise in the air
2. Do you know that these gloves have lay on the bureau all week?
   A. have lay on B. have laid on C. would lie on
   D. had laid on E. have lain on
3. If the books have been cataloged last week.
   A. have been cataloged B. would have been cataloged C. was cataloged
   D. were cataloged E. had been cataloged
4. Someone gives the school gerbils every year.
   A. Someone gives the school gerbils B. Someone give the school gerbils
   C. Some one gives the school gerbils D. There is a person that gives the school gerbils
   E. An individual give gerbils

**Questions 5 to 9**

**Instructions:** A related pair of words in capital letters is followed by five pairs of words. Select the pair of words that best **expresses a relationship similar to** that expressed in the original pair of words.

5. FLU : MALADY
   A. Finale : Overture B. Felony : Misdemeanor C. Fun : Farce
   D. Flea : Parasite E. Fire : Hearth
6. BASKETBALL : HOOP
   A. Pool : Cue B. Croquet : Wicket C. Hockey : Puck
   D. Tennis : Net E. Baseball : Bat
7. LETHARGIC : ENERGY
   A. Despondent : Melancholy B. Leisurely : Relaxation C. Notorious : Infamy
   D. Mellow : Wrath E. Lavish : Extravagance
8. DIALOGUE : PLAYWRIGHT
   A. Farce : Buffoon B. Narrative : Character C. Overture : Composer
   D. Pact : Humorist E. Clarification : Beneficiary
9. BELLOW : FURY
   A. Snicker : Hatred B. Hiss : Joy C. Giggle : Dread
   D. Yawn : Excitement E. Gasp : Surprise

**Questions 10 to 13**

**Instructions:** For each question, select the word(s)/phrase(s) that appropriately fill(s) in the gap(s).

10. The investors were not fooled by the manager's – proposal; his plan was obviously – .
    A. specious – untenable B. cogent – brilliant C. dubious – infallible
    D. lucid – intelligible E. none of these
11. A comedian's biggest – is that his anecdotes will become – .
    A. achievement – banal B. fear – fabled C. anxiety – hackneyed
    D. apprehension – intelligible E. none of these
12. The – of the committee must reflect the purpose – created.
    A. structure – which it is for B. organization – for which its C. dynamics – intended and
    D. composition – for which it is E. none of these
13. The management's – from fiscal – has led the company to bankruptcy.
    A. avoidance – propensity B. dislike – debt C. retreat – responsibility
    D. devotion – prudence E. none of these

**Questions 14 to 17**

**Instructions:** In each of the following questions, choose the option where the suffix or prefix has been INCORRECTLY used.

14. A. Equilateral B. Equivocal C. Equilibrate D. Equidivision E. No Error
15. A. Venation B. Attrition C. Doctination D. Diminution E. No Error
16. A. Equilateral B. Equidistant C. Equilibrate D. Equidistribute E. No Error
17. A. Disenthrall B. Disaccordant C. Discolored D. Discrete E. No Error

**Questions 18 to 21**

**Instructions:** In each of the following sentences, there is one word missing. Identify the missing word from the given choices.

18. A number of clinical trials shown regular exercise to be strongly linked to heightened immunity.
    A. have B. for C. has D. and E. No word is missing
19. You need to hear both sides of the story before making your mind.
    A. carefully B. up C. deciding D. in E. No word is missing
20. The spy managed to pass on the message though the police were watchful.
    A. if B. their C. even D. for E. No word is missing
21. Due to an accident on the flyover, traffic was delayed nearly an hour.
    A. because B. the C. only D. for E. No word is missing

**Questions 22 to 23**

**Instructions:** Choose the most appropriate **SYNONYM** to the word in capital letters.

22. **UNRAVEL**
    A. Loosen B. Entangle C. Twist D. Knot E. Wonder
23. **FULMINATE**
    A. Approve B. Denounce C. Praise D. Defend E. Laud

**Questions 24 to 25**

**Instructions:** Choose the most appropriate **ANTONYM** to the word in capital letters.

24. **SMOTHER**

A. Cork B. Control C. Scatter D. Shroud E. Quench

25. **DEFIANCE**

A. Insolence B. Dare C. Contumacy D. Lip E. Humility

**Questions 26 to 30**

**Instructions:** Read the following passage and select the best answer for each of the questions that follow.

Most educated people of the eighteenth century, such as the Founding Fathers, subscribed to Natural Rights Theory, the idea that every human being has a considerable number of innate rights, simply by virtue of being a human being when the US Constitution was sent to the states for ratification, many at that time felt that the federal government outlined by the constitution would be too strong, and that rights of individual citizens against the government had to be clarified. This led to the Bill of Right, the first ten amendments, which were ratified at he same time as the Constitution. The first eight of these amendments list specific rights of citizens. Some leaders feared that listing some rights could be interpreted to mean that citizens didn't have other, unlisted rights. Toward this end, James Madison and others produced the Ninth Amendment, which states; the fact that certain rights are listed in the Constitution shall not be construed to imply that other rights of the people are denied.

Constitutional traditionalists interpret the Ninth Amendment as a rule for reading the rest of the constitution. They would argue that "Ninth Amendment rights" are a misconceived notion: the amendment does not, by itself, create federally enforceable rights. In particular, this strict reasoning would be opposed to the creation of any new rights based on the amendment. Rather, according to this view, the amendment merely protects those rights that citizens already have, whether they are explicitly listed in the Constitution or simply implicit in people's lives and in American tradition.

More liberal interpreters of the US Constitution have a much more expansive view of the Ninth Amendment. In their view, the Ninth Amendment guarantees to American citizens a vast universe of potential rights, some of which we have enjoyed for two centuries, and others that the Founding Fathers could not possibly have conceived. These scholars point out that some rights, such as voting rights of women or minorities, were not necessarily viewed as rights by the majority of citizens in late eighteenth century America, but are taken as fundamental and unquestionable in modern America. While those rights cited are protected specifically by other amendments and laws, the argument asserts that other unlisted rights also could evolve from unthinkable to perfectly acceptable, and the Ninth Amendment would protect these as-yet-undefined rights.

26. The author cites the scholars referring to "voting rights of women or minorities" in order to –

A. cite unquestionably justified Ninth Amendment rights

B. demonstrate how changing priorities can alter perspectives on fundamental human rights

C. argue for the modern extension of Natural Rights Theory

D. refute the traditionalist interpretation of the Ninth Amendment

E. champion the rights of all citizens in the democratic process

27. Constitutional scholars of both the traditionalist and liberal views would agree that 'Ninth Amendment rights".....
    A. accommodate shifts in cultural values with respect to issues affecting human rights
    B. cannot serve as the basis of legal decisions
    C. are directly reflected in our understanding of who can and can't vote
    D. are not stated explicitly in the Bill of Rights
    E. extend the idea of Natural Rights Theory
28. According to the passage, what would the Ninth Amendment imply about a right to "a trial by jury", guaranteed in the Seventh Amendment of the US Constitution?
    A. The Ninth Amendment would provide direct support for this right.
    B. The Ninth Amendment would not support this right directly, but would support all the logistics that would allow citizens to exercise this right.
    C. The Ninth Amendment would apply to trials that fall outside the jurisdiction of Federal Courts.
    D. The Ninth Amendment would apply to all trials that do not involve Constitutional Law
    E. The Ninth Amendment is irrelevant to any right mentioned explicitly in the Bill of Rights.
29. In the view of James Madison and the other Founding Fathers, the Ninth Amendment limits the power of the central Federal government by .....
    A. preventing constitutionally listed rights from being viewed as exhaustive
    B. giving the citizens rights in every area not explicitly addressed by the law
    C. codifying a vast universe of federally enforceable rights
    D. guaranteeing, in the text of US Constitution, all rights held by Natural Rights Theory
    E. ensuring all citizens are able to vote and thus, choose the democratic leaders
30. The primary purpose of the passage is to .....
    A. clarify the most proper interpretation of an amendment
    B. argue for a broader perspective on human rights and their legal protection
    C. contrast historical perspectives of an amendment to its modern legal reading
    D. explain the motivation for an amendment and the ambiguity this amendment presents
    E. demonstrate how the Founding Fathers' intentions have been distorted by subsequent legal

**Section II: Mathematics** **30 Questions: 30 Marks**

31. Rahat can complete a task in 30 minutes, working together with his brother Mominul, he can complete the same task in 20 minutes. How long would it take for Muminul working along to complete the task?
    A. 30 minutes B. 40 minutes C. 50 minutes D. 60 minutes E. none of these
32. A teacher has 3 hours to grade all the papers submitted by the 35 students in her class. She gets through the first 5 papers in 30 minutes. How much faster does she have to work to grade the remaining papers in the allotted time?
    A. 10% B. 15% C. 20% D. 25% E. none of these
33. The probability of rolling any number on a weighted 6-sided die, with faces numbered 1 through 6, is directly proportional to the number rolled. What is the probability of getting 5, if the die is rolled only once?
    A. 1/6 B. 5/6 C. 5/16 D. 5/21 E. none of these

34. If x is a positive integer, what is the units digit of $(24)^{5+2x}(36)^6(17)^3$?
A. 2 B. 3 C. 4 D. 6 E. none of these

35. The sum of all solutions for x in the equation $x^2-8x+21=[x-4]+5$ is equal to:
A. -7 B. 7 C. 10 D. 12 E. none of these

36. The length of one edge of a cube equals 4. What is the distance between the center of the cube and one of its vertices?
A. 2 B. $2\sqrt{2}$ C. $2\sqrt{3}$ D. $4\sqrt{2}$ E. none of these

37. The expression $\sqrt{(2+\sqrt{(2+\sqrt{(2+\sqrt{(2+\sqrt{(2+}}}}}$ ..... ))))) extends to an infinite number of roots. Which of the following choices most closely approximates the value of this expression?
A. $\sqrt{3}$ B. 2 C. $1+\sqrt{2}$ D. $1+\sqrt{3}$ E. none of these

38. When x is divided by 13, the answer is y with a remainder of 3. When x is divided by 7, the answer is z with a remainder of 3. If x, y, and z are all possible integers, what is the remainder of yz/13?
A. 0 B. 3 C. 4 D. 7 E. none of these

39. What is the next-highest prime number after 67?
A. 68 B. 69 C. 71 D. 73 E. 76

40. Which one of the following is the minimum value of the sum of two integers whose product is 36?
A. 37 B. 20 C. 15 D. 12 E. none of these

41. 2pq5 is a four digit number divisible by 25. If the number formed from the two digits pq is a multiple of 13. Then pq =
A. 10 B. 25 C. 52 D. 65 E. none of these

42. The total income of Mr. Teng in the years 2003, 2004, and 2005 was BDT 36,400. His income had increased by 20% each year. What was his income (BDT) in 2005?
A. 5,600 B. 8,800 C. 12,000 D. 14,000 E. none of these

43. In the sequence $a_n$, the n-th term is defined as $(a_{n-1}-1)^2$. If $a_3=64$, then what is the vale of $a_1$?
A. 1 B. 3 C. 4 D. 9 E. none of these

44. An equilateral triangle is inscribed in a circle. If the radius of the circle is 2, what is the area of the triangle?
A. $\sqrt{2}/2$ B. $\sqrt{2}$ C. $\sqrt{3}$ D. $3\sqrt{3}$ E. none of these

45. There are 4 women and 4 men sitting in a waiting room for a job interview. If two of the applicants are selected at random, what is the probability that both will be women?
A. 1/2 B. 3/7 C. 3/4 D. 3/14 E. none of these

46. If n is an integer divisible by 6 but not by 4, then which of the following CANNOT be an integer?
A. n/2 B. n/3 C. n/12 D. n/10 E. none of these

47. Ishtiaque completes a journey in 10 hours. He travels first half of the journey at the rate of 21 km/hr and second half at the rate of 24 km/hr. Find the total journey in km.
A. 121 km B. 242 km C. 112 km D. 224 km E. none of these

48. If the isosceles triangle ABC has two sides with lengths 3 cm and 9 cm, then what is the possible length of the third side?
A. 3 cm B. 6 cm C. 9 cm D. 12 cm E. none of these

49. In a certain used-car lot, there are 4 times as many blue cars as green cars and 1/3 as many green cars as red cars. If there are 4q red cars in the lot, how many blue cars are in the lot?
A. 12q B. 3q C. 4q/3 D. 16q/3 E. none of these

50. A bicycle has two wheels (one large and one small) of 120 cm and 40 cm in diameter respectively. When the large wheel makes 10 revolutions, how many revolutions does the small wheel make in that time?
A. 15 B. 20 C. 30 D. 40 E. none of these

51. An ambulance travels 10 miles at a speed of 75 miles per hour. How fast must the ambulance travel on the return trip if the round-trip travel time is to be 20 minutes?
A. 50 mph B. 55 mph C. 60 mph D. 65 mph E. none of these

52. If (a + a + a) = ( b + b + b + b) and (a + b) = 7, then what is the value of $(a^2 - b^2)$?
A. 0 B. 3 C. 4 D. 7 E. none of these

53. A drink contains 20% cranberry juice, 20% raspberry juice and the rest is apple juice. You added 250 ml of water to 750 ml of the drink. Now, what is the ratio of water to apple juice in the drink?
A. 6 : 5 B. 9 : 5 C. 5 : 12 D. 5 : 9 E. none of these

54. If a and b are integers greater than 100 such that a + b = 300, which of the following could be the exact ratio of a to b?
A. 9 to 1 B. 5 to 2 C. 5 to 3 D. 4 to 1 E. 3 to 2

55. Asif buys 100 shares of stock at Tk. 100 per share. The price goes up by 10% and he sells 50 shares. Then, price drops by 10% and he sells his remaining 50 shares. How much did he get for the last 50 shares?
A. Tk. 5000 B. Tk. 5500 C. Tk. 4900 D. Tk. 5050 E. Tk. 4950

56. The smallest of three consecutive even integers is 8 less than three times the largest. What is the largest of these integers?
A. 18 B. 10 C. 15 D. 14 E. none of these

57. What percentage of numbers from 11 to 90 has 0 or 5 in the unit's digit?
A. 10% B. 15% C. 20% D. 21% E. none of these

**Questions 58 to 60**

**Instructions:** Each question consists of a problem followed by two statements. Decide whether the data in the statements are sufficient to answer the question.

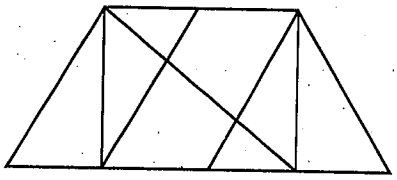
58. At least 100 students in a school study Spanish, 15% of the students who study French also study Spanish. Do more students study French than Spanish?
(1) 6 students study both French and Spanish.
(2) 5% of the students who study Spanish also study French.
A. Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.
B. Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.
C. BOTH statement TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.
D. EACH statement ALONE is sufficient.
E. Statement (1) and (2) TOGETHER are NOT sufficient to answer the question asked, and additional data are needed.

59. If x, y and z are different integers, is x divisible by 11?
(1) xyz is divisible by 22 and 33.
(2) yz is divisible by 72
A. Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.
B. Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.
C. BOTH statement TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.
D. EACH statement ALONE is sufficient.
E. Statement (1) and (2) TOGETHER are NOT sufficient to answer the question asked, and additional data are needed.

60. Eshan and Arnob have the same birthday. Arnob's age now is the same as Ehsan's age was when Arnob was half as old as Ehsan is now. What is Ehsan's age now?
(1) Ehsan is currently four times as old as he was when Arnob was born.
(2) Ehsan was six years old when Arnob was born.
A. Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.
B. Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.
C. BOTH statement TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.
D. EACH statement ALONE is sufficient.
E. Statement (1) and (2) TOGETHER are NOT sufficient to answer the question asked, and additional data are needed.

## Section III: Analytical Ability — 15 Questions: 15 Marks

61. Find the number of triangles in the given figure.



A. 8 B. 10 C. 14 D. 16 E. none of these

62. What is the missing letter in the following box?

| | | |
|---|---|---|
| E | C | O |
| B | A | B |
| G | B | N |
| D | B | ? |

A. P B. L C. J D. H E. none of these

63. The day before the day before yesterday is three days after Saturday. What day is it today?
A. Saturday B. Monday C. Wednesday D. Thursday E. Friday

**Questions 64 to 68**

A group of six friends – Jack, Kimberly, Lee, Melissa, Nick Olivia – go out to eat at a restaurant. They are seated evenly around a circular table based on the following conditions:

- Melissa does not sit next to Jack.
- Jack sits next to Olivia or Nick, but not both of them.
- Kimberly sits next to Nick.
- If Olivia sits next to Jack, then she doesn't sit next to Lee.

64. If Jack sits next to Kimberly, then which one of the following pairs of people must be seated next to each other?

A. Lee and Nick B. Melissa and Nick C. Jack and Nick
D. Melissa and Melissa E. Olivia and Kimberly

65. If Jack and Olivia sit next to each other, then Lee CANNOT sit next to both:

A. Jack and Nick B. Jack and Kimberly C. Nick and Melissa
D. Jack and Melissa E. Kimberly and Nick

66. If Jack sits next to Olivia, then which of the following is a complete and accurate list of the people who could also sit next to Jack?

A. Lee B. Nick, Melissa C. Lee, Melissa
D. Lee, Kimberly E. Lee, Nick, Kimberly

67. Which of the following must be false if Jack sits next to Nick?

I. Kimberly sits next to Lee.
II. Nick sits directly opposite Melissa.
III. Lee sits next to Jack and Olivia.

A. I only B. III only C. I and II only D. II and III only E. I, II and III

68. If Olivia sits next to Nick, then which of the following must be true:

A. Melissa sits next to Nick and Lee. B. Nick sits next to Kimberly and Lee.
C. Olivia sits next to Nick and Jack. D. Lee sits next to Olivia and Jack.
E. Melissa sits next to Jack and Lee

69. Samuel is obviously a bad fisherman. During the past season, in which he and the five members of his team spent four months on a boat together off Dutch Harbor, he caught fewer fish than any of his teammates.

Which of the following, if true, most weakens the argument above?

A. Two seasons ago, Samuel fished on another boat off Dutch Harbor and caught more fish than any other member of that boat.
B. Before becoming a fisherman, Samuel piloted a fishing boat whose members regularly caught record numbers of fish.
C. While fishing this past season, Samuel fell sick for a week and did not catch any fish during this time.
D. Unlike the other fishermen on his boat, at the order of the captain, Samuel fished this past season with experimental bait.
E. Amongst the fishing community in Dutch Harbor, Samuel has a reputation for being an especially bad fisherman.

70. As a result of implementing an experimental farming system that combined aggressive new fertilization, deep irrigation, and speculative pesticides, the yield on crops at a farm in central California grew consistently and considerably over the past six years. However, yields this year unexpectedly plummeted, causing the farm's owners considerable financial difficulties. Which of the following statements, if true best explains the unexpected drop in yield.
    A. As a result of a serious and recent economic recession, the market for the products the farm produced shrank in size during the past year.
    B. Other farms that began using the experimental system at about he same time also reported an unexpected plummet in yields this year.
    C. The central California region where the farm in question is located experienced a drought 9 years ago, 3 years ago, and this past year.
    D. A different experimental system, used on a different crop, failed after two years at a farm in lowa. Scientists later discovered that chemicals involved in this different system slowly poisoned the soil.
    E. Significant and sustained increases in agricultural productivity eventually lead to an exhaustion of important nutrients in land.

**Questions 71 to 75**

There are five people – Sarah, Bill, Eric, Molly, Nick – scheduled for appointments at a doctor's office on a specific morning, plus a walk-in, Katie. There are five appointment slots: 9:30, 10:00, 11:00, and 11:30. The following conditions apply.

- Katie will only get a slot if one of the five people with an appointment does not show up.
- Sarah is not scheduled for 10:00 or 11:00.
- Eric is scheduled for 11:30.
- Molly's appointment is immediately before Nick's.

71. Which one of the following is a possible sequence of the 5 people's appointments?
    A. Sarah, Molly, Nick, Eric, BillB. Bill, Sarah, Molly, Nick, Eric C. Sarah, Molly, Bill, Nick, Eric
    D. Molly, Nick, Bill, Sarah, EricE. Sarah, Molly, Nick, Bill, Eric
72. If Sarah's appointment is at 10:30, which one of the following must be false?
    A. Bill's appointment is at 10:00 B. Sarah's appointment is before Nick's
    C. Nick's appointment is before Sarah's D. Bill's appointment is after Sarah's
    E. Molly's appointment is at 9:30
73. If Bill does not show up for his appointment, which possible appointment slot has opened up for Katie to take?
    A. 9:30 or 11:00 B. 10:00 or 10:30 C. 10:00 or 11:00 D. 10:30 or 11:00 E. 10:00 or 11:30
74. If Molly's appointment is at 10:00, then Bill's appointment must be at:
    A. 9:30 B. 10:00 C. 10:30 D. 11:00 E. 11:30
75. If Eric switches appointment times so that his appointment is now at 11:00, if none of the other conditions change, who now has the 11:30 appointment slot?
    A. Bill or Molly B. Katie or Sarah C. Molly or Nick D. Nick or Bill E. Sarah or Bill

**PART II: Writing Ability** **25 Marks**

**A. Critical Writing** **[10 Marks]**

"Some consider that keeping our localities clean is the responsibility of the Government; which others consider it to be the responsibility of the individual citizens." ..... Discuss.

**B. Write a paragraph on the following topic.** **[10 Marks]**

**"Happiness"**

**C. নিচের বিষয়টির উপর বাংলায় একটি অনুচ্ছেদ লিখুনঃ** **[৫ নম্বর]**

**"আড্ডা"**

## Answer Key

### Section I : Language and Communication

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1.D | 2.E | 3.E | 4.A | 5.D | 6.B | 7.D | 8.C | 9.E | 10.A |
| 11 | 12.D | 13.C | 14.D | 15.C | 16.D | 17.D | 18.A | 19.B | 20.C |
| 21.D | 22.A | 23.B | 24.C | 25.E | 26.C | 27.D | 28.B | 29.D | 30.C |

### Section II : Mathematics

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.D | 32.E | 33.D | 34.A | 35.E | 36.C | 37.B | 38.D | 39.C | 40.D |
| 41.C | 42.E | 43.C | 44.D | 45.D | 46.C | 47.D | 48.C | 49.D | 50.C |
| 51.A | 52.D | 53.D | 54.E | 55.E | 56.E | 57.C | 58.A | 59.E | 60.B |

### Section III : Analytical Ability

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 61.B | 62.D | 63.E | 64.A | 65.E | 66.D | 67.A | 68.C | 69.D | 70.E |
| 71.E | 72.B | 73.C | 74.D | 75.E | | | | | |

## Section I: English Language

1. (D) Balloon- টি air- এর মধ্য দিয়ে চরে গিয়েছে বলে preposition 'into' ব্যবহার করা হয়েছে।
2. (E) Sentence past perfect tense- এ তাই have- এর পর verb- এর past participle form ব্যবহার করা হয়েছে।
3. (E) Conditional sentence তাই প্রথম অংশে perfect tense use করতে হবে। Have- এর পরিবর্তে had হবে কেননা sentence past perfect tense- এ।
4. (A) Sentence is correct as it is.
5. (D) Flu এক প্রকার malady (অসুস্থতা) এবং Flea এক প্রকার parasite (পোকা)।
6. (B) Basketball খেলাটিতে Hoop ব্যবহার করা হয় এবং Croquet খেলাটিতে Wicket ব্যবহার করা হয়।
7. (D) এখানে antonyms bridge ব্যবহার করা হয়।
8. (C) Playwright একটি নাটকের অংশ হিসেবে dialogue লিখে থাকেন এবং Composer একটি গান এর অংশ হিসেবে Overture লিখে থাকেন।
9. (E) মানুষ fury (angry) feel করলে bellow (shout) করে এবং surprise feel করলে gasp করে।
10. (A) Specious অর্থ misleading এবং untenable অর্থাৎ unjustified বা weak.
11. Anxiety অর্থাৎ ভয়, hackneyed অর্থাৎ stale.
12. (D) Composition অর্থাৎ গঠন।
13. (C) Retreat অর্থাৎ ত্যাগ এবং responsibility অর্থাৎ দায়িত্ব।

### Questions 14 to 17

**Instructions:** In each of the following questions, choose the option where the suffix or prefix has been INCORRECTLY used.

14. (D) Equidivision শব্দটি English Grammar এর Suffix Rule অনুযায়ী exist করে না। সমার্থক হিসেবে "equal division" অথবা "equally divide" বলা যেতে পরে।
15. (C) Doctination শব্দটি English Vocabulary তে exist করে না। এর সঠিক উত্তর হতে পারে Doctrination অথবা Indoctrination (suffix rule অনুযায়ী)।
16. (D) Equidistribute শব্দটি English Grammar এর Suffix Rule অনুযায়ী exist করে না। সমার্থক হিসেবে বলা যেতে পারে "equally distributed" অথবা "equidistribut-ED".
17. (D) Disaccordant শব্দটি English Vocabulary তে exist করে না। সঠিক উত্তর হবে "Discordant".

### Questions 18 to 21

**Instructions:** In each of the following sentences, there is one word missing. Identify the missing word from the given choices.

18. (A) এখানে Subject-verb agreement এর নিয়ম অনুযায়ী, "A number of clinical trials **HAVE** shown..." হবে। Clinical trials এর পর একটি Auxiliary Verb (have) missing আছে।
19. (B) আমরা জানি "making **UP** one's mind" অর্থাৎ কোনো সিদ্ধান্ত নেওয়া বা মনস্থির করা। এই sentence টি তে, "making" এর পর "UP" preposition টি missing আছে।
20. (C) এই sentence টির অর্থ দাঁড়ায় যে, পুলিশ সতর্ক থাকা সত্তেও গুপ্তচর বা spy টি বার্তা হস্তান্তর করতে সক্ষম হলো। যেখানে "সত্তেও"-এর meaning হিসেবে "**EVEN** though" হওয়া উচিত, সেখানে "even" শব্দটি missing.
21. (D) এই sentence টির "traffic was delayed nearly an hour" portion টি তে delayed শব্দটির পর একটি appropriate preposition missing আছে। সুতরাং, সঠিক উত্তর টি হবে "delayed **FOR**".

**Questions 22 to 23**

**Instructions:** Choose the most appropriate **SYNONYM** to the word in capital letters.

**22.** **(A)** Unravel শব্দটির অর্থ হচ্ছে untangle হওয়া কিংবা unwind করা-যা কিনা জটিলতা কমানো বা স্পষ্ট করা কে বোঝায়। Loosen শব্দটির অর্থ যেহেতু relax কিংবা পাক ছাড়ানো, সেহেতু Unravel শব্দটির অর্থের সাথে সামঞ্জস্য বা মিল রেখে Synonym হিসেবে Loosen শব্দটি select করা হয়েছে।

**23.** **(B)** Fulminate অর্থাৎ protest কিংবা declaim করা-যা স্পষ্ট বা ক্ষিপ্রভাবে প্রতিবাদ করা বোঝায়। আমরা জানি, Denounce শব্দটির অর্থ যেহেতু criticize/condemn কিংবা সমালোচনা করা। সুতরাং Fulminate শব্দটির অর্থের সাথে সামঞ্জস্য বা মিল রেখে Synonym শব্দটি Denounce হিসেবে select করা হয়েছে।

**Questions 24 to 25**

**Instructions:** Choose the most appropriate **ANTONYM** to the word in capital letters.

**24.** **(C)** "Smother" শব্দটি এখানে Consolidation বা "Dense" হয়ে যাওয়ার অর্থে ব্যবহার করা হয়েছে। এখানে "Scatter" শব্দটির অর্থ যেহেতু "ছড়িয়ে পড়া", কিংবা dispersed হয়ে যাওয়া-সুতরাং Smother শব্দটির Antonym বা বিপরীত হিসেবে এই উত্তরটি select করা হয়েছে।

**25.** **(E)** Defiance অর্থাৎ Disobedience অথবা opposition, যা কিনা অবাধ্যতা বোঝায় Humilty শব্দটির অর্থ যেহেতু Modesty, Humbleness কিংবা বিনয়/ভদ্রতা বোঝায়-সেহেতু Defiance শব্দটির Antonym বিপরীত শব্দার্থ হিসেবে এই উত্তরটি select করা হয়েছে।

**26.** **(C)** যেহেতু "voting rights of women or minority" Natural Rights Theory-এর একটি extension তাই answer C হবে।

**27.** **(D)** Third paragraph-এ বলা হয়েছে যে citizens- দের এই rights-গুলো already আছে এবং $9^{th}$ Amendment সেগুলোকে কেবল protect করে।

**28.** **(B)** Last paragraph-এ বলা হয়েছে যে "...unlisted rights could evolve from unthinkable to perfectly acceptable.."

**29.** **(D)** যেহেতু US Constitution-এর basis Natural Rights Theory এবং $9^{th}$ Amendment-এ US Constitution-এর চেয়েও Natural Rights Theory-এর অধিক প্রাধান্য, তাই।

**30.** **(C)** Passage-এ অথীতের তথ্য কীভাবে বর্তমানের উপর প্রভাব ফেলে তা নিয়ে আলাপ করা হয়েছে।

**Section II : Mathematics**

**31.** **(D)** Rahat এবং Mominul একত্রে 1 মিনিটে করে 1/30 অংশ কাজ। অর্থাৎ Rahat একা 1 মিনিটে করে (1/30 -1/20) = 1/60 অংশ কাজ। অতএব সম্পূর্ণ কাজ করতে 60 মিনিট।

**32.** **(E)** প্রথম 5 টি copy এর প্রত্যেকটি দেখতে সময় লাগে (30/5) = 6 মিনিট। পরের 30 টি copy এর প্রত্যেকটি দেখতে সময় লাগবে (150/30) = 5 মিনিট। অতএব, (1/6 x 100) = 16.67% faster হতে হবে।

**33.** **(D)** Probability = individual probability/ Total probability = 5/(1+2+3+4+5+6) = 5/ 21

**34.** **(A)** 5+2x একটি odd number, তাই $(24)^{5+2x}$ এর unit digit হবে 4। আবার $(36)^6$ এর unit digit 6 এবং $(17)^3$ এর unit digit 3। অতএব, (4x6x3)= 72; $(24)^{5+2x}(36)^6(17)^3$ এর unit digit হবে 2।

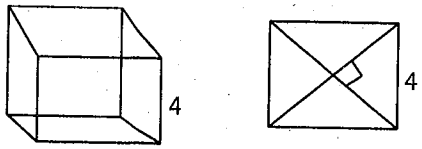
**35.** **(E)** $x^2-8x+21=[x-4]+5$

$\Rightarrow x^2-9x+20=0$

$\Rightarrow x = 4,5$

অতএব, x এর সকল solutions এর যোগফল = 4+5 = 9

**36.** **(C)** প্রত্যেক্য edge 4 হলে প্রত্যেক side 4 হবে।




difference between the center and one of its vertices

$= \frac{\text{side} \times \sqrt{3}}{2}$

$= \frac{4 \times \sqrt{3}}{2} s$

$= 2\sqrt{3}$

**37.** **(B)** $x = \sqrt{(2+(\sqrt{(2}$

Bold করা portion টি equal to x, আমরা পাই

$x = \sqrt{(2+x)}$

$x^2 = 2 + x$

$x^2 - x - 2 = 0$

$x^2 - 2x + x - 2 = 0$

$x(x-2) + 1(x-2) = 0$

$(x-2)(x+1) = 0$

$x = 2, -1$

Since x negative হতে পারবে না, $x = 2$

**38.** **(D)** $13y + 3 = x$

$7z + 3 = x$

$13y + 3 = 7z + 3$

$13y = 7z$

যেহেতু 13 এবং 7 দুইটায় prime number y হবে 7 এবং z হবে 13

$\frac{yz}{13} = \frac{7 \times 13}{13} = 7$

**39.** (C) 67 এর পরের মৌলিক সংখ্যা 71।

**40.** (D) 36 এর factors হতে পারে 6 x 6, 4 x 9, 18 x 2 এবং 36 x 1। এই factors গুলোর যোগফলের minimum value হল (6+6) = 12.

**41.** (C) Option গুলোর মধ্যে 52 ও 65 হল 13 এর multiple । কিন্তু 2655 সংখ্যাটি 25 divisible নয়। অতএব উত্তর হবে 52, যেহেতু 2525 সংখ্যাটি 25 দ্বারা divisible।

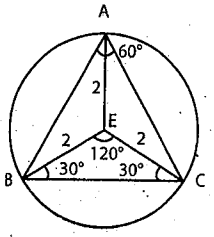
**42.** **(E)** ধরি, 2003 সালে income ছিল x, 2004 সালে 1.2x এবং 2005 সালে 1.44x টাকা। তাহলে total income হল (1+1.2+1.44) = 3.64x টাকা।

দেয়া আছে, total income 36400 টাকা। অতএব, 2005 সালে income ছিল = (1.44x/3.64x) x 36400 = 14,400 টাকা।

**43.** **(C)** $a_3 = (a_2 - 1)^2 \quad \Rightarrow 64 = a_2 - 1 \quad \Rightarrow a_2 = 9$

একইভাবে, $a_2 = (a_1 - 1)^2 \quad \Rightarrow 9 = (a_1 - 1)^2 \quad \Rightarrow a_1 = 4$

**44.** **(D)** যেহেতু Equilateral triangle, সব গুলো angle 60° হবে।




center এ 120° হবে (angle in a segment)

তাহলে EB = EC = 2 (radius)

30:30:120 ratio অনুযায়ী side হবে 2, 2 , $2\sqrt{3}$

BC হবে $2\sqrt{3}$

তাহলে area of an equilateral triangle $\frac{\sqrt{3}}{4}a^2 = \frac{\sqrt{3}}{4}(2\sqrt{3})^2 = 3\sqrt{3}$

**45.** **(D)** Randomly দুইজনকে select করা হবে দুইজনেরই woman হওয়ার probability 4/8 x 3/7 =3/14।

**46.** (C) n সংখ্যাটি 6 এর গুণিতক, কিন্তু 4 এর গুণিতক নয়। তাই n সংখ্যাটি কখনোই 12 দ্বারা divisible নয়।

**47.** (D) ধরি, Total journey = x km.
(1/2)x/21 + (1/2)x/24 = 10
x = 224

**48.** (C) Isosceles বলে triangle টির third side এর দৈর্ঘ্য 3 বা 9 হবে। যেহেতু triangle এর দুটি বাহুর সমষ্টি তৃতীয় বাহু অপেক্ষা বৃহত্তর হতে হয় তাই third side টি হবে 9 (because 3+9>9) ।

**49.** (D) Green cars আছে = 1/3 x 4q = 4q/3 টি। সুতরাং Blue cars আছে = 4 x 4q/3 = 16q/3

**50.** (C) বড় wheel 10 revolutions এ অতিক্রম করে = 10 x 2$\pi$ x 60 = 600 x 2$\pi$। অর্থাৎ ছোট টির সমান দূরত্ব অতিক্রম করতে লাগবে = ( 600 x 2$\pi$ / 20 x 2$\pi$) = 30 revolutions.

**51.** (A) 75 mph বেগে 10 miles যেতে সময় লাগে (60/75 x 10) = 8 মিনিট। return trip এ বাকি 12 মিটিনে 10 miles যেতে হলে গতিবেগ হবে =(10/12 x 60) = 50 mph।

**52.** (D) 3a = 4b এবং a+b=7 থেকে পাই a= 4 ও b=3। অতএব, (a2 – b2) = (42 – 32) = 7।

**53.** (D) Apple juice (100-20-20) = 60% অর্থাৎ (750x60%) = 450 ml। অতএব Water এবং Apple juice এর ratio= 250:450 = 5:9 ।

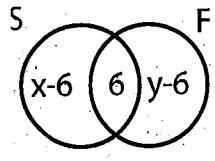
**54.** (E) a= 180 ও b=120 হলে a এবং b এর ratio হয় a:b= 180:120 বা 3:2।

**55.** (E) Price 10% বৃদ্ধি হলে হয় 110 টাকা। এরপর আবার price 10% কমলে দাড়ায় 110- (110x10%) = 99 টাকা। অতএব শেষ 50 টি share থেকে পেয়েছে (99x50) = 4950 টাকা।

**56.** (E) 3 টি consecutive even integer হবে 2x, 2x + 2, 2x + 4.
অতএব 2x = 3 (2x + 4) - 8. solve করলে আসে x = -2
তাহলে, largest integer, 2x + 4 = 2(-2)+4 = 2

**57.** (C) 11 থেকে 90 এর মধ্যে Unit digit এ 0 or 5 আছে 16 সংখ্যায়। অর্থাৎ শতকরা = (16/80) x 100 = 20%।

**58.** (A)
15% of y = 6
y = 40
French is 40
We know Spanish is atleast 100
তাহলে Spanish বেশী হবে French থেকে।




**59.** (E) (1) xyz is divisible by 22 and 33. Given that xyz is a multiple of 22=2*11 and 33=3*11, thus xyz is a multiple of 2*3*11=66. Now, if x=1 and yz=66, the answer is NO but if x=11 and yz=66, the answer is YES. Not sufficient.
(2) yz is divisible by 72. Nothing about x. Not sufficient.
(1)+(2) Still insufficient, for example if x=1 and yz=66*72, the answer is NO but if x=11 and yz=66*72, the answer is YES. Not sufficient.

**60.** (B) Statement 2 দিয়ে possible
Ehsan = x
Arnob = y
x = y + 6 (from Statement 2)
Arnob is now same age as Ehsan was when Arnob was half as old as Ehsan

$$\text{Arnob} = \frac{x}{2}$$

$$\text{Ehsan} = \frac{x}{2} + 6$$

Arnob's age now $y = \frac{x}{2} + 6$

$x = y + 6$

$y = \frac{x}{2} + 6$

$y = 18$

$x = 24$

Statement 1 দিয়ে ওদের age বের করা সম্ভব না।

## Section III : Analytical Ability

**61.** **(B)** আমরা চিত্রে দেখতে পারি মোট 10 টি ত্রিভুজ আছে। অতএব উত্তর B.

**62.** **(D)** (H) এইটা বের করার জন্য আমরা Letter Value assign করি। যেমন A = 1, B = 2, C = 3, D = 4, E = 5 etc. এখানে প্রথম Column এর Letter Value এর সাথে দ্বিতীয় column এর letter value গুন করে তৃতীয় column এর letter value পাওয়া যায়।

D = 4, B = 2

So, D*B = 4*2 = 8 = H

So, answer is (D) H

**63.** **(E)** Friday. Three days after saturday is Tuesday. So the day before the "day before yesterday is Tuesday". So day before yesterday is Wednesday. Yesterday is Thursday and today is Friday

**Question 64 to 68:**

শর্ত দেওয়াঃ

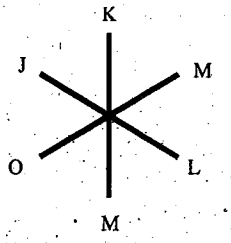
Melissa ও Jack পাশাপাশি বসবে না।

Jack বসবে Nick অথবা Olivia এর পাশে। কিন্তু দুজনের পাশে না।

Kimberly Nick এর পাশে বসে।

Olivia যদি Jack এর পাশে বসে তাহলে সে Lee এর পাশে বসে না।

**64.** **(A)**

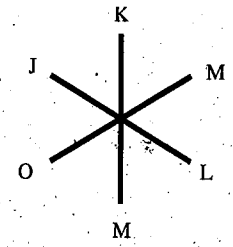



Start off by placing Jack and Kimberly into their spots at the table, the specific spots don't matter as long as they are next to each other. Next place Nick next to Kimberly to satisfy third condition. Since condition #2, requires that either Olivia or Nick sits next to Jack and Nick is already placed at the table two seats away from Jack, place Olivia next to Jack. Condition #4, prevents Lee from sitting next to Olivia since she is already sitting next to Jack, so place Lee next to Nick to leave a space between Olivia and Lee. And finally place Melissa in the only remaining empty space.

So, answer is (A) Lee and Nick

**65.** **(E)** Kimberly and Nick দুজন পাশাপাশি বসবে। সুতরাং এইটা সম্ভব না যে দুজন Lee এর দুইপাশে বসবে। তাই উত্তর হবে (E)

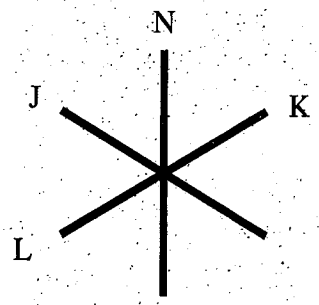
**66. (D)**




প্রথম condition টি Option B and C কে eliminate করে। দ্বিতীয় condition টি Option E কে eliminate করে। উপরের চিত্রে আমরা দেখি যে Melissa সঠিক হবে। এবং Lee ও সঠিক।

সুতরাং, উত্তর (D)

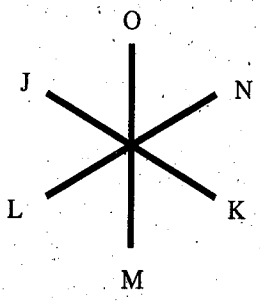
**67. (A)**




Condition মেনে উপরের চিত্রটি বানানো হয়েছে। দেখা যাচ্ছে Kimberly ও Lee উল্টো বসবে।

অতএব (A) সঠিক উত্তর।

**68. (C) )**




Condition মেনে উপরের চিত্র এঁকে আমরা দেখি Olivia বসে Jack ও Nick এর মাঝে। অতএব, সঠিক উত্তর (C)

**69. (D)** Premise: Samuel caught fewer fish than any of his teammates during the past season.
Conclusion : Samuel is a bad fisherman.

প্রশ্নে বলা হয়েছে যেহেতু Samuel তার সঙ্গীদের থেকে কম মাছ ধরেছে তাই সে খারাপ। D তে বলা হয়েছে যে Samuel একটি পরীক্ষামূলক টোপ ব্যাবহার করেছে। এইটা বুঝায় যে Samuel এর কম মাছ ধরার কারণ হতে পারে পরীক্ষামূলক টোপ ব্যাবহার করা এবং কাতে খারাপ fisherman বলা যাবে না। অতএব Option D সবচেয়ে ভালোভাবে প্রশ্নের যুক্তিকে দুর্বল করে।

**70. (E)** সবচেয়ে কাছের উত্তর D ও E । Option D তে একটি অন্য পরীক্ষামূলক ব্যাবস্থার কথা বলা হয়েছে যা প্রশ্নের সাথে প্রাসঙ্গিক না। Option E তে একটি যুক্তি দেখানো হয়েছে যা প্রশ্নের পরীক্ষামূলক ব্যাবস্থার সাথে ফসল কমার সম্পর্ক স্থাপন করে।

**Question 71 to 75:**

According to the conditions we can construct 3 diagrams:

**Diagram #1**

| 9:30 | 10:00 | 10:30 | 11:00 | 11:30 |
|---|---|---|---|---|
| Molly | Nick | Sarah | Bill | Eric |

**Diagram #2**

| 9:30 | 10:00 | 10:30 | 11:00 | 11:30 |
|---|---|---|---|---|
| Sarah | Molly | Nick | Bill | Eric |

**Diagram #3**

| 9:30 | 10:00 | 10:30 | 11:00 | 11:30 |
|---|---|---|---|---|
| Sarah | Bill | Molly | Nick | Eric |

**71.** **(E)** Sarah odd position এ বসবে as she can't be scheduled for 10.00 or 11.00

**72.** **(B)** Since the question specifies that Sarah's appointment is at 10:30, the first diagram is the one to use. While each answer could be compared the diagram until one that doesn't match is found, the easier way is to notice that B and C are exact opposites and so one of them must be the correct answer. Looking at the first diagram, Nick's appointment comes before Sarah's making B false and thus the correct answer.

**73.** **(C)** Condition #1 states that Katie only gets an appointment if one of the others cancels, so since Bill has canceled this means that is slot is open. Looking at the diagrams for where Bill's appointment is, this means that either 10:00 or 11:00 has opened up and that C is the correct answer.

**74.** **(D)** Look at each of the three diagrams and find the one where Molly's appointment is at 10:00, which is the second diagram. In the second diagram Bill's appointment is at 11:00 making D the correct answer.

**75.** Eric's appointment is moved from 11:30 to 11:00.

| 9:30 | 10:00 | 10:30 | 11:00 | 11:30 |
|---|---|---|---|---|
| | | | Eric | |

Condition #4 requires Molly and Nick's appointments to be back to back meaning that neither of them can fill that time slot. This leaves Sarah and Bill as possibilities and E as the correct answer.

## PART II: Writing Ability

**A)** The beneficiaries of a clean locality are both the government and the citizens of a nation. The government can govern with ease and the citizens can live in a hygienic and fresh environment. Thus, both parties have equal stake while we are on the issue of cleanliness. However, we must understand that any government is bound by the wants and needs of the people. As such, the responsibility of the individual citizens takes precedence in this regard.

In a democratic system of government, the voters are free to chose their local representatives. If they can choose a representative who is willing to keep the streets clean then they can make the government involved in the process of maintaining hygiene as the chosen representatives are bound to uphold the will of the people.

The locals can also promote keeping localities clean by hosting various charity events and creating awareness on the harmful sides of having an unclean locality. They can also ask the local businesses to take initiatives to stop dumping waste here and there but make a collective effort to use bins and litter boxes to dispose of wastes.

Finally, every individual citizen can make a conscious effort to not make it a point of littering on the streets. This can involve not doing a many number of things starting from not throwing waste food to refraining from even spitting on the streets.

Thus in these ways, individual citizens can ensure that they themselves are keeping the streets clean and they can also make sure that the government is assisting them in doing the same.

**B)** In many countries, the pursuit of happiness is considered a fundamental right for the Americans and has deeply preoccupied their minds. However, not every person understands what happiness is all about. Can it be studied or were people born with it? Is there a way people can be happier? It is not easy to define happiness because it is very elusive to attain it. People experience moments of happiness and can also say when they don't feel happy. Positive psychology is a science that focuses on the virtues and strengths that make it possible for people to thrive. Happiness comes with the discovery of individual strengths and reinforcing them in life. It is a psychological wellbeing that brings internal satisfaction and not necessarily with the presence of material things. Happiness is pleasurable but most importantly, it involves engagement and finding meaning in life. People can choose to be happy even when all does not seem to work materially.

C) আড্ডা বা সোজা ভাষায় গল্প করা আমাদের সমাজিক জীবনের এক অভিচ্ছেদ্য। যদিও বা আড্ডা যে কারো সাথেই করা যায়, আমরা আড্ডা বলতে মূলত বন্ধুদের সাথে সময় কাটানো বুঝি। আড্ডা দেয়ার কোন নির্বাচিত জাগায়া থাকতে হবে বা সময় থাকতে হবে এমন নয়। আড্ডা যেকোনো স্থানে বা সময়ে হতে পারে। আড্ডার সবচেয়ে বড় গুন হল তা আমাদেরকে একে অপরকে জানতে সাহায্য করে। অনেক বন্ধুত্বের বা সম্পর্কের সবচেয়ে সুন্দর মূহুর্তগুলো এই আড্ডা থেকেই আসে। এর কারণেই বর্তমান সময়ে আড্ডার অনুপ্রেরণা অনেক বেশী। ক্লান্ত বা অবসাদগ্রস্ত দিনের শেষে আড্ডাই পারে আমাদেরকে চাঙ্গা করতে। কিন্তু আড্ডা ব্যাপারটায় সীমাহীনতা এসে পড়লে তা মোটেই সুখবর নয়। তবে অধিকাংশ সময় আড্ডার সাথে থাকলে আড্ডার কৌতুহল হারিয়ে যায়। পরিক্ষিত আড্ডা অপর পক্ষে জীবনের চলার পথে অত্যন্ত প্রয়োজনীয়।

# BBA (IBA)

## Admission Test Question (2016-2017) with Solution

## PART I: Multiple Choice Questions (MCQs)

**Section I: English Language** — **30 Questions: 30 Marks**

**Questions 1 to 6:**

**Instructions:** *Select the correct word(s) for filling up the blank.*

1. It's getting cold in the northern region. If you're going to travel to the region, you _____ a few warm clothes with you.
   (A) got to take (B) have got to take (C) may take
   (D) better take (E) had better take
2. By and large, the Minister has _____ the kind of domain experts who are needed to frame complex reforms of this sort. Instead, he has relied extensively on bureaucrats.
   (A) shut out (B) supported (C) not apprehended
   (D) debated with (E) criticized
3. Emergency measures are an absolute necessity right now because the level of human right violations that we are seeing is too_____.
   (A) obvious (B) dire (C) methodical
   (D) medieval (E) horrendous
4. Fearing a complete sell-out, we went to the movie theatre so early that we found none ____ the ticket counter.
   (A) on (B) under (C) at
   (D) next to (E) near
5. If you _____. your work before I returned, I would have let you play.
   (A) had completed (B) have complete (C) completed
   (D) were completing (E) are completing
6. If would be difficult for one so _____ to be led to believe that all men are equal and that we must disregard race, color and creed.
   (A) judicious (B) jealous (C) brilliant
   (D) admirable (E) intolerant

**Questions 7 to 9:**

**Instructions:** *Find the odd word from the alternatives.*

7. (A) admonition (B) castigation (C) rebuke
   (D) amputation (E) censure
8. (A) Customary (B) aberrant (C) deviant
   (D) singular (E) atypical
9. (A) deafening silence (B) morbid joke (C) liquid gas
   (D) selfless marty- (E) open secret

**Questions 10 to 15**

**Instructions:** *Underlined parts of the following sentences may contain error(s). Choose the underlined portion that contains such error(s). If there is no error, select (E).*

10. At a very crucial time in our company, the head laid of a few key employees on flimsy
    A B C D
    grounds. No Error.
    E
11. Please do not blame me! have repeated the information again for his benefit. No Error
    A B C D E
12. We have to be on time for this program; so I suggested that he be ready 30 minutes before
    A B C D
    5 pm. No Error.
    E
13. I don't care who you invite as long as you do it on time! No Error.
    A B C D E
14. A panel of students choose the representatives they wish to send to the employers' forum.
    A B C D
    No Error.
    E
15. I fail to understand why you are seeking my council after you had ignored my advice last
    A B C D
    week. No Error.
    E

**Questions 16-17:**

**Instructions:** *From the following list, identify the incorrect set of words. If there is none, choose (E).*

16. (A) hard: harder (B) tame; tamer (C) fur; further
    (D) shrewd; shrewder (E) none of these
17. (A) sink; sunk (B) lie; laid (C) forgo; ground
    (D) grind; ground (E) none of these

**Questions 18-21:**

**Instructions:** Fill in the blank with the most appropriate word (from A to E). You are allowed to use each word ONLY ONCE

| (A) senile | (B) endear | (C) perfunctory | (D) candor | (E) insinuate |
|---|---|---|---|---|

18. We do have a dichotomous attitude towards the elderly; if their advice suits us, we value their experience that comes with age; if it doesn't, we accuse them of a _____ mind!
19. From my experience of working abroad, I have seen that most Asians are taken aback at western _____ in stating their opinions.

20. She must have been in a hurry for she left me the most unclear _____ message on a post-it!
21. If a team fails to perform, it is unacceptable that any member would point fingers or even _____ another member for the lapse. It totally goes against team spirit.

**Questions 22-24**

**Instructions:** *Identify the sentence(s) that is/are showing the correct use of the word in questions.*

22. The word: SIMMER
    i. The model's sequined dress simmered in the bright lights of the studio.
    ii. I cook a fantastic beef stew by simmering the beef and vegetables for more than 2 hours.
    iii. Communication is the key to solving problems. Allowing conflicts to simmer for long only aggravates the situation.

    (A) both i and ii (B) both ii and iii (C) both i and iii
    (D) i, ii and iii (E) ii only
23. The word: ADMONISH
    i. Babu know better than to admonish him for his threat.
    ii. He was admonishing each one of you with tears.
    iii. Rima was admonished by the teacher for her presumptuous attitude in class

    (A) both i and ii (B) both ii and iii (C) both i and iii
    (D) i, ii and iii (E) i only
24. The word: PRIOR
    i. We're sorry to reject your candidature. You do have prior experience; it's just not relevant to the job!
    ii. I can clearly discern your personal preference for the first alternative, but if you look objectively, you'd see there's no a priori reason to favour one alternative over the other.
    iii. The patient, priorly known for his delusional tendencies, was admitted right away.

    (A) both i and ii (B) both ii and iii (C) both i and iii
    (D) i, ii and iii (E) i only

**Questions 25-26**

**Instructions:** *Choose the word that is the exact opposite of the underlined word in each sentence*

25. You have given me a roundabout preamble It's about time you come clean with me!

    (A) circuitous (B) lengthy (C) extensive
    (D) precise (E) vague
26. After an initial participatory discussion, employees were amenable to the control measures that were being proposed for implementation.

    (A) deferent (B) disinclined (C) acquiescent
    (D) open (E) agreeable

**Questions 27-30**

**Instruction:** *Answer the questions based on the following passage.*

Since modern Homo sapiens first appeared around 50,000 (B) (C), an estimated total of 108 billion people have lived on earth - which means that about 6.5% of all humans ever born are alive today. That's a lot of bodies to feed, clothe and shelter, and economists, demographers, scientists, and politicians have long fretted over our world's ability to sustain humanity as it multiplies.

The good news, as we approach the 7 billion mark, is that we likely have the resources to sustain a population of that size The bad news is that those resources aren't always where the people are Populations are booming mostly in the poorer regions of the planet—the least equipped to accommodate additional life - while in other areas, low fertility rates and increased life spans have governments concerned about maintaining productive economies and providing for the rising numbers of elderly people

The challenges of the expanding human population lie not so much in curbing growth as in addressing inequity around the globe: finding ways to promote sustainability, support aging generations and adapt to migration patterns, all while keeping our footprint on the planet in check. "Generally speaking, countries do have enough food", says a senior demographer at the Population Reference Bureau. "It's just that many people don't have access to it because of poverty". That's something to work on in the 14 years between now and when we reach the 8 billion mark.

27. An apt title for the passage would be:
    (A) Strategies to curb inequity around the globe
    (B) Problems of increased life spans of humans.
    (C) Challenges of the expanding human population.
    (D) Woes of economists.
    (E) Homo Sapiens and the world
28. The word "fretted" in the first paragraph is closest in meaning to:
    (A) delved (B) explored (C) ruminated
    (D) agonized (E) mollified
29. 29. According to the passage, which of the following needs least attention?
    (A) Combat inequity of resources around the globe
    (B) Monitor and acclimatize to migration patterns around the world
    (C) Suppress population boom.
    (D) Explore ways to promote sustainability.
    (E) Create better policies for rising numbers of elderly people
30. Which of the following inferences based on this passage is **INCORRECT?**
    (A) Populations are expanding mostly in the poorer regions of the world
    (B) Aging population is a significant issue for some countries.

(C) Low fertility rates are a matter of concern for countries struggling to ensure productive economies.

(D) We do not have enough resources to sustain humanity as it multiplies.

(E) Inequitable distribution of resources is prevalent.

## Section II: Mathematics — 30 Questions: 30 Marks

31. If x, y and z are consecutive negative integers and if x>y>z, which of the following must be a positive odd integer?

(A) xyz (B) (x-y)(y-z) (C) x-yz (D) x(y+z) (E) none of these

32. if (2x2+3x+y) is an even integer, which of the following must be true?

(A) x is even (B) y is odd (C) (x+y) is even (D) (x+y) is odd (E) none of these

33. After 2 quizzes, Apu had an average of 15 marks per quiz. In order to increase the average by n marks, what should be his score in the 3rd quiz?

(A) $3n$ (B) $30+3n$ (C) $15n$ (D) $15 + 3n$ (E) none of these

34. If x<10 and 5y-2x =0, which of the following must be true?

(A) y> -2 (B) y<4 (C) y> (D) y>4 (E) none of these

35. If 20 men or 24 women or 40 boys can do a job in 12 days, how many men working with 6 women and 2 boys can complete the same work in 32 days?

(A) 4 (B)5 (C) 10 (D) 12 (E) none of these

36. A 60 litre mixture of sugar and water contains sugar and water in the ratio 2:3. How many litres of the mixture should be replaced by sugar so that the ratio of sugar and water becomes 1:1?

(A) 6 (B) 10 (C) 15 (D) 20 (E) none of these

37. When x is divided by 7, the remainder is 6. Which of the following must be an even number?

(A) x+ 6 (B) x3 + x2 + x (C) x2 + x (D) x - 4 (E) none of these

38. In a class, 120 students are male and 100 students are female. 25% of the male students and 20% of the female students are engineering students, 20% of the male engineering students and 25% of the female engineering students passed the final exam. What percentage of engineering students passed the exam?

(A) 5% (B) 10% (C) 16% (D) 22% (E) none of these

39. If x and y are integers, 13<x<25 and -2<y<-13, what is the greatest possible value of (x - y)?

(A) 13 (B) 24 (C) 25 (D) 36 (E) none of these

40. The sale of TV increased by 30% when the price was reduced by 10%. What will be the percentage change in revenue?

(A) +14% (B) +15% (C) +17% (D) +18% (E) none of these

41. Arif bought 17 pens of three colors - black, green and red which cost Tk 5, Tk 10 and Tk 25 each. The total amount that Arif paid was Tk 205. If Arif bought twice as many green pens as red pens, how many black pens did he buy?

(A) 4 (B) 5 (C) 7 (D) 8 (E) none of these

42. Alam starts working on a job and works on it for 12 days and completes 40% of the work. Then Babu joins Alam and together they complete the rest of the work in 12 days. How long will it take Babu to complete the job if he works alone?
(A) 24 days (B) 30 days (C) 45 days (D) 60 days (E) none of these

43. Asif, riding his bike at 24 km/h reaches his office 5 minutes late. If he would have reached the office 4 minutes earlier than the scheduled time by traveling 25% faster, how fat is his office from his house in kms?
(A) 18 (B) 24 (C) 36 (D) 40 (E) none of these

44. Sixty percent members of a club are female. Fifty percent of the female members are doctors. The number of female doctors is twice the number of male non-doctors. What percent of the members are doctors?
(A) 45% (B) 55% (C) 57.5% (D) 60% (E) none of these

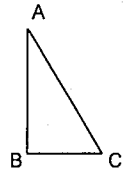
45. A, B and C can complete a job individually in 6, 8 and 12 hours respectively. If all three of them work together to complete a job and earn Tk. 3600, what will be C's share of the earnings?
(A) 800 (B) 820 (C) 875 (D) 950 (E) none of these

46. The average salary of Arif and Babu is Tk. 10,000 and that of Sabbir and Babu is Tk. 12,000. What is the difference between Sabbir's salary and Arif's salary?
(A) 4000 (B) 5000 (C) 6000 (D) 6250 (E) none of these

47. A total of x feet of fencing is to form three sides of a rectangular yard. What is the maximum possible area of the yard in terms of x?
(A) $x^2/9$ (B) $x^2/8$ (C) $x^2/4$ (D) $x^2$ (E) none of these

48. If x/z is more than y/z, then y =?
(A) x-1 (B) zx-1 (C) x-z (D) (x-1)/z (E) none of these

49. In the figure, BC equals one half of AB. The area of the right angle triangle ABC equals 125 square meters. Find the hypotenuse AC in Meters.
(A) 225 (B) 25 (C) 30
(D) 32.5 (E) none of these




50. Nipu sold 100 pens, of which 50 are red and 50 are black, at Tk. 48 per pen. He made a profit of 20% on the black pens and made a loss of 20% on the red pens. What was the net gain or net loss on this sale?
(A) 0 (B) Gain of Tk. 200 (C) Loss of Tk. 200
(D) Gain of Tk. 400 (E) none of these

51. There is 50% chance that Rafiq will go to a fast food restaurant for lunch and 50% chance that he will skip lunch. If he goes to a fast food restaurant there is 60% chance that he will take only a sandwich and nothing else. If he decides not to take a sandwich he will take a burger of a chicken pie. What is the probability that he will take a burger?
(A) 5% (B) 1% (C) 2% (D) 25% (E) none of these

52. If $(ax)^{16}(by)^{12}(cxy)^{17}(dxy)^{11}>0$, and all the variables are non zero numbers, which of the following must be true?

(A) $ab > 0$ (B) $ab < 0$ (C) $cd > 0$ (D) $cd < 0$ (E) none of these

53. A certain bag contains 6 marbles, of which 4 are red and 2 are white in color. If Babu is to pick out 2 marbles from the bag simultaneously and at random, what is the probability that one is red and the other is white?

(A) 1/5 (B) 1/3 (C) 1/15 (D) 8/15 (E) none of these

54. A TV and a computer have the same price. If the price of the TV goes up by 20% and that of the computer goes down by 10%, how much more will it cost be buy 4 TVs and 4 computer?

(A) 5% (B) 1% (C) 15% (D) 20% (E) none of these

55. The members of an association decided to contribute equally to create a fund of Tk. 45,000. Five members refused to contribute, so each of the other members had to contribute additional tk. 15 for that fund. How many members were there in the association?

(A) 120 (B) 125 (C) 130 (D) 135 (E) none of these

**Questions 56-60**

Each questions is followed by two statements. Decide whether the data in the statements are sufficient to answer the question. Select your answer according to whether:

- (A) Statement (1) alone is sufficient, but statement (2) alone is not sufficient to answer the question.
- (B) Statement (2) alone is sufficient, but statement (1) alone is not sufficient to answer the question.
- (C) Both statements taken together are sufficient to answer the questions, but neither statement alone is sufficient.
- (D) Each statement alone is sufficient.
- (E) Statements (1) and (2) together are not sufficient, and additional data is needed to answer the question.

56. Is the product of x and y positive?

(1) $x - y = 1/3$

(2) $(x + y)/(x-y) > 1$

57. If x and y are integer, is $y > 0$?

(1) $x + 1 > 0$

(2) $xy > 0$

58. Is 98 a factor of $z^2$?

(1) $z>0$

(2) z is divisible by 154.

59. If x and y are integers, is y even?

(1) $6x + 3y$ is even

(2) $3x + 6y$ is even

60. A TV was listed at a price that would have given the store a profit of 20% of the purchase cost. What is the purchase cost of the TV?
(1) After reducing cost of the TV
(2) The TV was sold for Tk. 50,000

## Section II: Analytical Ability — 15 Questions: 15 Marks

### Questions 61-65

Suppose this is 2030. In Dhaka city the public transportation system consists of one metro rail line and one bus line.

- The metro goes from station T to R to S to G to H to I, stopping at each station, and then returns, making the same stops in the reverse order.
- The bus goes from station R to W to L to G to F, stopping at each station and then returns, making the same stops in the reverse order.
- On each line, there are frequent buses or trains that make stop at each station along the route.
- During rush hour, there is an express bus on the bus line that stops only at R, L and F and returns, making the same three stops in the reverse order.
- A passenger can transfer from the metro line or bus line to the other line wherever the bus and metro both stop at a station with the same name.
- It is not possible to transfer from an express bus to a non-express bus.
- There is no other means of transportation available on the public transportation system.

61. To make a trip on public transportation from S to I, a passenger must pass through which of the following additional stops?
(A) G and H only (B) F, G and H only (C) H, L and W only
(D) F, H, L and W only (E) G, H, L and R only

62. Using buses only, a passenger CANNOT go on public transportation from
(A) F to W. (B) G to R. (C) L to H. (D) L to R. (E) W to L.

63. To make a trip on public transportation from I to W during rush hour, a passenger must do which of the following?
(A) Transfer to a bus at G (B) Ride the metro rail only
(C) Board a non-express bus (D) Ride a bus past L
(E) Go through S on the metro line

64. To go on public transportation from F to T, a passenger must
(A) transfer at G. (B) take a vehicle to or through R.
(C) transfer at R. (D) take a vehicle to or through S.
(E) take a vehicle to or through W.

65. If a fire temporarily closes the metro line at R to metro trains but the metro still runs from I to Sand the bus still stops at R, it will be IMPOSSIBLE for any passenger to use public transportation to go to
(A) F. (B) I. (C) L (D) R. (E) T.

**Questions 66-70**

The editors of a journal publish three issues in a year. They will devote the upcoming January, April and October issues in that order- exclusively to articles written by seven authors: A, B, C, D, E, F and G. Each of the seven authors will have at least one article published, but some may have more than one article published. The following restrictions apply to the publication of articles:

- If an article by A appears in an issue, then an article by B must also appear in the same issue.
- If an article by D appears in an issue, then an article by F must also appear in the immediately preceding issue.
- An article by F cannot be published in an issue that contains an article by G.
- No author may publish in each of the two consecutively published issues or twice in the same issue.
- Each of the issues being prepared must contain at least two articles.

66. The January issue of the journal can consist exclusively of articles by which of the following groups of authors?
(A) A and C (B) D and F (C) A, F and G (D) C, E and F (E) C, F and G

67. If the January issue consists exclusively of articles by A and B, then the April issue can consist exclusively of articles by which of the following groups of authors?
(A) C and E (B) C and F (C) D and G (D) A, B and G (E) C, F and G

68. If the January issue consists exclusively of articles by B, C and G, then the October issue must contain an article by which of the following authors?
(A) B (B) C (C) E (D) F (E) G

69. If the October issue consists exclusively of articles by B, C and D, then the April issue must contain articles by which of the following groups of authors?
(A) A and E (B) A and G (C) B and F (D) E and F (E) E and G

70. Which of the following authors CAN NOT contribute to the January issue of the journal?
(A) C (B) D (C) E (D) F (E) G

**Questions 71-75**

Each of six flags - I, J, K, L, M, and N - is placed in a different one of seven flag holders numbered consecutively 1 through 7 from left to right. The flag holders are evenly spaced and arranged in a straight line. The placement of the flags is subject to the following conditions:

- The distance separating I from J must be the same as the distance separating K from L.
- M must be in a flag holder immediately adjacent to the flag holder that N is in.
- The left-most flag holder cannot be empty.

71. If N is in flag holder 2, which of the following must be true?
(A) I is in flag holder 3. (B) J is in flag holder 4.
(C) K is in flag holder 5. (D) L is in flag holder 7.
(E) M is in flag holder 1.

72. If I and K are in flag holders 1 and 3 respectively, then the empty flag holder must be
(A) either 2 or 4. (B) either 2 or 6. (C) either 2 or 5.
(D) either 5 or 7. (E) either 6 or 7.

73. If I and J are in flag holders 2 and 4 respectively, which of the following must be true?
(A) K is in flag holder 3. (B) K is in flag holders. (C) L is in flag holder 6.
(D) N is in flag holder 1. (E) Flag holder 6 is empty.

74. If N, I and K are in flag holders 5, 6 and 7 respectively, which of the following must be true?
(A) L is in flag holder 1. (B) L is in flag holder 2. (C) J is in flag holder 2.
(D) J is in flag holder 3, (E) Flag holder 2 is empty.

75. Of the following, which is a flag holder that could be left empty?
(A) 1 (B) 2 (C) 3 (D) 4 (E) 6

**Section IV: Written Test** **25 Marks**

A. Write as Essay on **"The Role of Youth in Community Development".** [10 marks]
[Write your answer in the designated space.]

B. Comment on the merits and demerits of **"Competition".** [10 marks]
[Use the space in this page and the next to answer this question.]

C. বাংলায় রচনা লিখুনঃ "বই পড়ার অভ্যাস" [5 marks]
[উত্তরের জন্য শুধুমাত্র এই পৃষ্ঠাটি ব্যবহার করুন]

## Answer Key

### Section I: Language and Communication

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1.E | 2.A | 3.E | 4.C | 5.A | 6.E | 7.D | 8.A | 9.D | 10.C |
| 11.D | 12.A | 13.B | 14.E | 15.D | 16.C | 17.C | 18.A | 19.D | 20.C |
| 21.E | 22.B | 23.C | 24.E | 25.D | 26.B | 27.C | 28.A | 29.C | 30.B |

### Section II: Mathematics

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.B | 32.C | 33.D | 34.B | 35.E | 36.B | 37.C | 38.E | 39.D | 40.C |
| 41.B | 42.D | 43.A | 44.B | 45.A | 46.A | 47.A | 48.E | 49.B | 50.E |
| 51.E | 52.A | 53.A | 54.A | 55.B | 56.C | 57.C | 58.E | 59.A | 60.B |

### Section III: Analytical Ability

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 61.A | 62.C | 63.A | 64.B | 65.E | 66.D | 67.B | 68.A | 69.D | 70.B |
| 71.E | 72.D | 73.A | 74.B | 75.C | | | | | |

**Section I: English Language** **30 Questions: 30 Marks**

01. (E) কোনকিছু করা উচিত বুঝাতে had better use করা হয়।
02. (A) second sentence অনুসারে এখানে shut out হবে।
03. (E) emergency measures extremely necessary দিয়ে তীব্রতা বুঝানো হয়েছে। তাই horrendous হবে।
04. (C) ticket counter এ কারো থাকা বুঝাতে preposition 'at' হয়।
05. (A) third conditionals এর rule অনুযায়ী if যুক্ত অংশের সাথে have+$v_3$ বসে।
06. (E) intolerant এখানে most appropriate word.
07. (D) amputation অর্থ শরীরের অঙ্গচ্ছেদ করা। বাকিগুলোর অর্থ বকা দেয়া।
08. (A) customary অর্থ গতানুগতিক। বাকিগুলো দ্বারা ব্যাতিক্রম বুঝানো হয়।
09. (D) selfless martyr দ্বারা যেই seriousness বুঝানো হয় তা বাকিগুলো তে নেই।
10. (C) a few এর আগে preposition বসে না।
11. (D) পূর্বে repeated থাকায় again এর ব্যবহার redundancy.
12. (A) program এ attend করা বাধ্যতামূলক না। এখানে 'should be' most appropriate.
13. (B) who এর পরিবর্তে whom বসবে।
14. (E) no error.
15. (D) Had ignored এর পরিবর্তে ignored হবে।
16. (C) fur অর্থ পশম, further অর্থ অধিকতর।
17. (C) forgo অর্থ ত্যাগ করা; ground অর্থ ভূমি।
18. (A) বড়দের advice suit না করলে আমরা ভেবে নেই তাদের mind senile যার অর্থ Showing a loss of mental ability
19. (D) Candor অর্থ The quality of being open, sincere যা Asians দের opinion এ প্রতিফলিত হয়।
20. (C) Perfunctory (Lacking in interest) message দেয়া হয় when someone is in a hurry
21. (E) Insinuate অর্থ 'to say something bad/ blame someone' যা team spirit এর against এ
22. (B) (ii) option - এ 'simmer' শব্দটি to cook so that it is almost boiling for a certain of time অর্থে এবং option iii) তে to be felt strongly by someone without being noticed অর্থে ব্যবহৃত হয়েছে।
23. (C) admonish অর্থ warn করা। যেটা (ii) এর সাথে মিলে না।
24. (E) ii is wrong because using "prior" before reason is redundant in this case. Thus, in this I and III is correct, "priorly" is correct as it is an adverb form of "prior"
25. (D) roundabout অর্থ অস্পষ্ট বা indirect. Precise দ্বারা স্পষ্টতা বুঝানো হয়।
26. (B) amenable means obedient. Disinclined is opposite in meaning.
27. (C) 1st এবং 3rd passage পড়ে আমরা বুঝতে পারি যে correct answer (C) হবে।
28. (A) 'Fret' & 'Delve' synonymous তাই correct answer (A) হবে।
29. (C) 3rd paragraph - এ option (C) ছাড়া বাকিগুলোর উপর attention দেয়ার কথা বলা আছে।
30. (B) Aging generation কে support দিতে বলা হয়েছে তবে some countries - এর জন্য significant issue হিসেবে তুলে ধরা হয় নি।

**Section II: Mathematics** **30 Questions: 30 Marks**

31. (B) x,y,z consecutive negative integers এবং x>y>z। তিনটি number ই negative হওয়ায় xyz negative. তাই option (A) ভুল।
(x-y) একটি positive odd number কারণ x>y এবং (y-z) positive odd number কারণ y>z. তাই (x-y) *(y-z) positive odd number. Option (B) সঠিক।
y,z এর product positive তাই x-yz negwative. তাই option (C) ভুল।
x even number হলে x(y+z) positive even number হয়। তাই option (D) ভুল।
সুতরাং Answer (B).

32. (C) $2x^2+3x+y$ একটি even integer.
এখন, $2x^2+3x+y= 2x^2+2x+x+y$
$= 2(x^2+x)+(x+y)$
এখানে $x^2+x$ এর সাথে 2 multiply হওয়ায় $2(x^2+x)$ even. তাই, $2x^2+3x+y$ even হতে হলে (x+y) ও অবশ্যই even হবে।
সঠিক Answer (C).

33. (D) 1st 2 quiz এ average 15.
Average n বাড়ালে 3 quiz এর average হবে 15+n..
অর্থাৎ total number হবে 3*(15+n)=45+3n
১ম 2 quiz এ total number =2*15=30
Third quiz এ score করতে হবে =45+3n-30
=15+3n
সঠিক Answer (D)

34. (B) 5y-2x=0
Or, 5y=2x
Or, $x=\frac{5}{2}y$
Again,
x<10
or, $\frac{5}{2}y<10$
or,5y<20
or, y<4
সঠিক Answer (B)

35. (E) 20m = 24w = 40b
1b = 20/40 m = ½ m
1w = 20/24 m = 5/6 m
12 DAYS = 20 m
1 day = 20 x 12 m
32 days = (20x12)/32 = 7.5 m
X + 6w + 2b = 7.5m
X + 5m + 1m = 7.5m
X = 1.5m
As 1.5 is not in the option , the answer would be E (None of these)

36. (B) ধরি, mixture এর x পরিমাণকে sugar দ্বারা replace করতে হবে।
অর্থাৎ, $\frac{sugar}{water}=\frac{\frac{2}{5}(60-x)+x}{\frac{3}{5}(60-x)}=\frac{1}{1}$
Or, $\frac{120-2x+5x}{5}=\frac{180-3x}{5}$
Or, 120+3x=180-3x

Or, 6x=60
Or, x=10
সঠিক Answer (B)

37. (C) আমাদের condition অনুযায়ী x can be both odd and even.
x odd হলে, (A) (B) (D) options invalid হয়।
(C) এর জন্য x odd/even যেকোনোটি হতে পারে।
সঠিক Answer (C)

38. (E)120 জন male student এর 25%=30 জন
100 জন female student এর 20%=20 জন
30 জনের 20%=6 জন male student passed
20 জনের 25%=4 জন female student passed
Total engineering students =30+20=50 জন
Total number of engineering passed student =6+4=10 জন
Percentage of passed student = (10/50)*100
=20
সঠিক Answer (E)

39. (D) (x-y) এর greatest possible value পেতে হলে x এর greatest এবং y এর lowest value নিতে হবে।
$13<x<25$
$-13<y<-2$
সুতরাং x-y = 24-(-12)
=36
সঠিক Answer (D)

40. (C) ধরি, পূর্বে cost price 100 টাকা
এবং sale = 10
Cost price 10% reduce করার পর,
Cost price = 90 টাকা
এবং sale =13 টাকা
Revenue = (13*90-100*10)
= 170
1000 টাকায় revenue 170 টাকা
1oo টাকায় revenue 17 টাকা
সুতরাং percentage increase=17%
সঠিক Answer (C)

41. (B) ধরি, red pen কিনে x টি
এবং black pen কিনে y টি
সুতরাং green pen কিনে 2x টি
x+y+2x=17
or, 3x+y=17...(i)
এবং 5y+20x+25x=205
Or, 5y+45x=205...(ii)
(ii)-(i)*5 →
30x=120
Or, x=4
3*4+y=17
Or,y=5
সঠিক Answer (B)

42. (D) আলম 40% complete করে 12 দিনে
100% complete করে $\frac{12*100}{40}$ দিনে
= 30 দিনে
সুতরাং একদিনে করে 1/30 অংশ
দুইজনে 60% complete করে 12 দিনে
100% complete করে $\frac{12*100}{60}$ দিনে
=20 দিনে
সুতরাং একদিনে করে 1/20 অংশ
বাবু একদিনে করে (1/20-1/30) = 1/60 অংশ
সুতরাং বাবু 60 দিনে কাজ complete করে
সঠিক Answer (D)

43. (A) ধরি, house থেকে office এর distance = x km এবং office যেতে t hour সময় লাগে।
তাহলে, $\frac{x}{24}$= (t+$\frac{5}{60}$)
Or, t=$\frac{x}{24}$ - $\frac{5}{60}$...(i)
আবার, $\frac{x}{30}$=t - $\frac{4}{60}$
Or, $\frac{x}{30}$= $\frac{x}{24}$ - $\frac{5}{60}$ - $\frac{4}{60}$
Or, $\frac{2x+5+4}{60}$= $\frac{x}{24}$
Or, 2*(2x+9)=5x
Or, 4x+18=5x
Or, x=18
সঠিক Answer (A)

44. (B) 60% members are female তাহলে female doctor হলো 30%.
Female doctor এর number twice হওয়ায় male non-doctor হলো 15%.
তাহলে male doctor হলো (40-15)%
=25%
Total percentage of doctors = (25+30)%
= 55%
সঠিক Answer (B)

45. (A) তিনজন মিলে 1 hour এ করে =1/6+1/8+1/12
= (4+3+2)/12
=9/24 অংশ
C's share of earning = $\frac{1/12}{9/24}$*3600
= 800 টাকা
সঠিক Answer A

46. (A)Average of Arif & Babu's salary=10,000 Taka
So, total salary = 2*10000 taka
= 20,000 taka
Again, Sabbir and babu's total salary= 24,000 taka
The difference between sabbir's salary and Arif's salary = sabbir's salary- arif's salary
= (Sabbir and Babu's salary) - (Arif and babu's salary)
= 24000-20000
= 4000 Taka
Answer (A)

47. (A) rectangle এর maximum possible area পেতে হলে square হতে হয়।
এখানে square এর sides x/3
So, the area is= $(x/3)^2=x^2/9$
সঠিক Answer (A)

48. (E) এখানে, x,y,z positive বা negative বলা নেই। তাই বের করা সম্ভব নয়।
Answer (E)

49. (B) ধরি, BC=x so, AB=2x
তাহলে, $0.5*2x^2=125$
Or, $x^2=125$
Or, $x=5\sqrt{5}$
$BC=5\sqrt{5}$ $AB=10\sqrt{5}$
So, $AC^2=125+500$
AC=25
Answer (B)

50. (E)50 টি bnack pen এ profit 20%
Black pen এর cost price x হলে x+20% of x=48
x=40 টাকা
profit per pen=8 টাকা
profit for 50 pen =400 টাকা
50 টি red pen এ loss 20%
Redpen এর cost price x হলে, x-x এর 20%= 48 Or, x=57.6
loss per pen=9.6
loss for 50 pen=480 টাকা
net loss= 80 টাকা
Answer (E)

51. (E) fast food restaurant এ খাওয়ার probability=1/2
Restaurant এ গিলে sandwich না নেয়ার probability =1/2 * 2/5 =1/5
Restaurant এ গিলে sandwich না নিয়ে burger নেয়ার probability=1/5 * 1/2
=1/10 =10%
Correct Answer (E)

52. (A) $(ax)^{16}(by)^{12}(cxy)^{17}(dxy)^{11}>0$
Or, $a^{16}b^{12}c^{17}d^{11}x^{44}y^{40}>0$
এখানে a ও b উভয়ের exponents positive. তাই ab এর product always positive হবে।
Correct Answer (A)

53. (E) একটি red এবং একটি white marble পাওয়ার probability = 4/6 * 2/5
= 4/15
Correct Answer (E)

54. (A) ধরি, price x টাকা।
TV এর price বাড়ার পর = x + x এর 20%
= 1.2x
Computer এর price কমার পর = x-x এর 10%
= 0.9x
পূর্বে 4 টি TV এবং 4 টি computer এর price =8x
এখন 4 টি TV এবং 4 টি computer এর price = 4.8x+3.6x
= 8.4x
So, percentage increase=.4/8 * 100
=5% Answer (A)

55. (B) Let the number of members be x, and the original amount contributed by each member be y.
Therefore,
$45000/x = y$
Hence, $(x-5)(y+15) = 45000$
$(x-5)[(45000/x) + 15] = 45000$
$45000 + 15x - 225000/x - 75 = 45000$
$15x^2 - 225000 - 75x = 0$
$x^2 - 5x - 15000 = 0$
$x = 125$
Ans: 125 members in association.

56. (C) $\frac{x+y}{x-y} > 1$
Or, $x+y>1/3$
অর্থাৎ x, y উভয়েই positive.
Correct Answer (C)

57. (C) $xy > 0$ And $x>-1$
So, x is a non-negative integer.
$y>0$
Answer (C)

58. (E)These statements are not sufficient to slove this problem.

59. (A) 6x অবশ্যই even. 6x+3y even হলে y even.
3x+6y তে y even বা odd বের করার way নেই।
Answer (A)

60. (B) ধরি, purchase cost=x
x+x এর 20%=50,000
এভাবে solve করা সম্ভব
Correct Answer (B)

## Section III: Analytical Ability — 15 Questions: 15 Marks

**61-65**

*metro rail: T→R→S→G→H→I
*bus: R→W→L→G→F
*express bus: R→L→F
*same stop এ কেবল bus থেকে train এ switch করা যাবে।
*express bus থেকে non-express bus এ যাওয়া যাবে না।

61. (A) S থেকে I তে যাওয়ার way হলো metro rail দিয়ে। এখানে S ও I এর মাঝে 2 টি stop থাকে যা হলো G ও H.
Answer (A)

62. (C) bus এ করে L থেকে H এ যাওয়া যাবে না। কারণ bus H stop এ থামে না।
Answer (C)

63. (A) I থেকে W তে যেতে হলে G পর্যন্ত metro rail এ এসে G থেকে W বাসে যেতে হবে।
Answer (A)

64. (B) R,G যেকোনো stop এ transfer হওয়া যায়। কিন্তু R এর উপর দিয়েই যেতে হবে।
Answer (B)

65. E) R এ metro rail বন্ধ হলে T তে যাওয়ার কোনো পথ থাকবে না।
Answer (E)

**66-70**

*Author 7 জন। issue 3 টি।

*A এর article publish হলে একই issue তে B এর article publish হবে।

*D এর article publish হলে পূর্বের issue তে F এর article publish হবে।

* একই issue তে F এবং G এর article publish হবে না।

* পরপর দুই issue তে একই author publish করতে পারবে না।

66. (D) A,B একসাথে না থাকায় (A) (C) ভুল। আবার F,G এবং D,F একসাথে থাকায় (E),(B) ভুল।
সঠিক Answer (D)
67. (B) January তে A,B থাকরে April এ অবশ্যই F থাকতে হবে।
সঠিক Answer (B)
68. (A) January তে B থাকায় April এ A,B আসবে না। তাই October এ অবশ্যই A,B থাকবে।
সঠিক Answer (A)
69. (D) October এ D থাকায় preceding issue তে April এ F থাকবে।
সঠিক Answer (D)
70. (B) D এর পূর্বে F থাকবে। তাই শুরুর issue তে D থাকবে না।
সঠিক Answer (B)

**71-75**

* I, J, K, L, M, N 6 টি flag বসানোর জন্য 7 টি holder আছে।

* I থেকে J এর দূরত্ব এবং K থেকে L. এর দূরত্ব সমান হতে হবে।

* M, N পাশাপাশি হতে হবে।

* সবার বামের holder empty থাকবে না।

71. (E) N flag holder 2 এ থাকলে M 1 বা 3 এ থাকবে। M 3 এ বসালে সবগুলো flag বসানো যায় না। তাই M 1 এ থাকবে। সঠিক Answer (E)
72. (D) 1, 2, 3, 4 এ I, J, K, L বসালে 5, 6, 7 এর দুইটিতে M, N বসে।
সঠিক Answer (D)
73. (A) I, J 2, 4 এ বসলে K, L এর যেকোনো একটি 3 এ বসবে।
সঠিক Answer (A)
74. (B) $4^{th}$ holder এ M সবে। 1 number খালি রাখা যায় না। তাই 1 এ J এবং 2 এ L বসে।
সঠিক Answer (B)
75. (C) $3^{rd}$ holder খলি রাখলেও সব Condition fill হয়।
সঠিক Answer (C)

**Section IV: Written Test** **25 Marks**

**A. Importance of the youth in nation's development**

It may sound clichéd but one can't certainly deny the significance of the youth of a nation in shaping its future. Not only does the youth bring in the positive energy required for socio-economic progress, it also brings a completely different mindset that catalyzes change and innovation. The prime factor in major development is the courage to take necessary risks and the youth of the country usually has the audacity to take them. Furthermore, the constant dedication and perseverance that is required to achieve important milestones can be seen in the youth of a nation, and that more or less determines the nation's future.

What must be kept in mind is the fact that the youth has a major influence over national development also implies that the youth alone can bring catastrophic outcomes for the country if misguided to follow immoral ethics. So the ones who are currently leading the country must always leave model examples to the youth of a nation in terms of ambitions, vision and integrity. Similarly, the youth must always be ready to grasp all the positive ideologies present in front of them and avoid the negative mindset prevailing in the depths of society.

**B. Merits and demerits of Competition**

When it comes to continuous self-development, competition indeed is a vital element. Without the competition, one might not grow the urge to develop or get better every single day. Furthermore, by looking into the factors that make one's competitors better in certain fields, one gets to know the places in which s/he can develop or the necessary traits s/he lacks. Only through rigorous competition does one know that the sky isn't the limit and that development is a perpetual process.

But everything has its demerits and competition is no exception. A competitive mentality if ingrained in a mindset in excess proportions can lead to the growth of various negative traits like jealousy or hatred. Furthermore, it can push a person to a limit when s/he is no longer content with the work s/he is doing rather exhausted by the amount of people s/he has to defeat in the race of skills development. This can be detrimental to one's mental health and can lead to major problems in the long run. Despite the danger competition possesses, its existence is a major necessity for progress and innovation in all spheres of society.

**B. বই পড়ার গুরুত্ব**

বই পড়া অত্যন্ত গুরুত্বপূর্ণ কেননা, বই আমাদের আশে পাশের জগৎক চিনতে শেখায়। বই পড়ে আমরা প্রতিনিয়ত নতুন জিনিস জানতে পারি,বিভিন্ন দেশের, বিভিন্ন সময়ের, বিভিন্ন মানুষের জীবনের ব্যপারে ধারণা লাভ করতে পারি। বই পড়ে আমরা আমাদের ইতিহাস, পৃথিবী বিভিন্ন দেশ, জাতি, ধর্ম সম্পর্কে জানতে পারি তা থেকে শিক্ষা গ্রহণ করতে পারি। বই পড়ার অন্যতম সুবিধা হল, বই আমাদের অন্যদের সাথে কথা বলতে, তাদের কথা বুঝতে সাহায্য করে। বই মানুষকে চিন্তা করতে শেখায়, অন্যদের বুঝতে শেখায়, এবং নিজেকে আলোকিত মানুষ হিসেবে গড়ে তুলতে সাহায্য করে।

# Real Interviews

## VIVA BBA

## Special Tips for IBA Admission Interview

Those who pass IBA admission test, both in BBA and MBA, have to appear before an interview board consisting of 5-6 IBA teachers, headed by a senior teacher. The interview is generally 10-15 minutes long and often coercive in nature. Teachers question the interviewee one after another where candidate has to defend himself.

**Before the Interview:** If you have been selected for the interview, you will be asked to appear before the interview board in 3-4 days. Take a quick look into your core area of studies or at least the subject(s) you are good at. Be prepared for some questions commonly asked i.e. introduce yourself or why do you want to do MBA/BBA and so on.

**On the Interview Day:** Have a good night's sleep and don't get up drowsy or tensed in the morning. Carry your ID and all transcripts and certificates in original.

**Dress up: Men** should dress regular formal dress; ideally a light-color shirt tucked in a dark color trouser, pair of shoes on. You can wear a tie on, preferred by many. Wear a jacket/Blazer on if it is a cold December morning. For **girls**, wear regular formal dresses (not a fancy party dress) that you would like to wear in an office. No need to over dress. Try to avoid excessive make-up.

**Entering the room:** Enter the room as your turn comes, greet the teachers humbly (Assalamu Alaikum...) and walk ahead towards your seat in front of the table. Allow them to ask you to take your seat or ask for permission.

**Answering the questions:** The Chairman of the Interview Board is likely to start the proceedings of the interview. Talk clearly and precisely. Your answers should show that you know what you are talking about. Be yourself and answer the questions with confidence. Don't ever answer in a way that shows your interpersonal skills are not good; don't show any audacity or arrogance in your speech or body language. If you do not know an answer, tell that smartly. For example, "Sorry sir, I do not know the answer."

One last note, over many years we have hardly seen interviewees coming out happy and answering all questions to their own satisfaction. However you are getting a very important 10-15 minutes to make an impression, try to make it as better as possible. Sometimes teachers can be harsh, but you don't have to reflect that your future is doomed.

**Good luck.**

## Real Interviews

## Interview -1

**Name - Adrito Bari**
**Batch - 25th**
**School - Cherry Blossoms International School**
**College - Cherry Blossoms International School**

There were 6 members in the interview board at the start.

Adrito : May I come in?
Teacher 1 : Come in, please have a seat.
Adrito : Thank you ma'am. Good afternoon (addressing each teacher).
Teacher 2 : Odrito Bari, is it?
Adrito : It's Adrito sir.
Teacher 3 : Adrita?
Adrito : No sir, it's Adrito. (emphasizing "A"and "o" )
Teacher 2 : Your name seems to be formed from different sources.
Adrito : Yes sir, my mother put quite some effort in choosing my name I've been told. The first part of my name is from Sanskrit origin, it means "beloved".
Teacher 2 : And the second part?
Adrito : That is my father's surname, I inherited it. It means "shresto" in bangla if I recall correctly.
Teacher 4 : Tell us about your academic background.
Adrito : I've completed my O and A levels from Cherry Blossoms International School; I have got 10 A*s in my O levels and 3 As in my A levels.
Teacher 4 : What subjects did you have in your A levels?
Adrito : Sir I had physics, chemistry and mathematics in my A levels.
Teacher 4 : They are all science subjects.
Adrito : Yes sir.
Teacher 1 : Then why have you come to IBA to study business?
Adrito : Ma'am during my O levels I had both science and business subjects because I was interested in many things and unsure of what I wanted to study later on. At the beginning of my A levels I still couldn't quite figure out what I wanted to do but it would be impractical to take 5,6 subjects. I chose the science subjects because they would give me the flexibility to move into both the science side and business side. And now that A Levels are done, I'm certain I won't enjoy science at a higher level and I especially won't like engineering. (Teacher 6 casually got up and left the room at this point without saying a word)
Teacher 4 : Did you sit for exams at other universities such as BUET?
Adrito : Yes sir, I did give the exam at BUET, not because I wanted to study engineering but because my mother wanted me to study there and I registered

for the exam. But I did not prepare for it because I didn't like engineering and rather was targeting the IBA.

Teacher 3 : How do you know you don't enjoy engineering if you haven't even studied it?

Adrito : Even though I haven't studied engineering per se, I have done HSC level physics, chemistry and mathematics at an engineering coaching; I enrolled into one right after my A levels and I absolutely hated it. What I disliked the most was the emphasis on memorization on much of the material, even mathematics.

Teacher 3 : So you have done engineering classes at BUET?

Adrito : No, sir. I've done just a few engineering university admission classes.

Teacher 2 : *smiling* If you dislike memorization so much, shouldn't you take your brain out and put it away?

Adrito : *smiling* I apologize sir, that is not what I meant to convey. I do not think however, that memorization is the only thing our brains are good for.

Teacher 2 : *Reading essay* In your essay you seem to disagree with some of the greatest thinkers of all time, can you tell me why?

Adrito : In the essay I have mentioned quite a few philosophers, Nietzsche, Schopenhauer and Kierkegaard (Teacher nods). However I do not recall explicitly disagreeing with what they have said sir.

Teacher 2 : But that is something you have hinted at and were generally working towards?

Adrito : Yes sir, you could say that. In the context of the essay, the view that those great thinkers held was not a very good way of going about life. I think the philosophy of Albert Camus, a French-Algerian philosopher (Teacher smiles and nods), whose ideology celebrated the sadness inherent in life, is a better way of going about things. He saw the meaninglessness and angst a part of the human condition and rather than feel disempowered he said we should make life a celebration of the little things in spite of the sadness and, that because our days are numbered, we should live life to the fullest and enjoy each moment instead of complaining and pitying ourselves.

(Teachers 1 and 3 were completely indifferent and shifting around and this broke my train of thought)

*slight stuttering and pause, I even said "he thought je (bangla)" *

*Smiling (almost laughing) and shaking my head* I apologize for that sir, let me rephrase what I mean.

*Teacher smiles*

Camus thought that we should use life's absurdity as a means of liberation of sorts to be grateful and enjoy our time alive instead of moping and complaining about everything that's wrong.

Teacher 2 : I think that's about it, *asks the other teachers* anymore questions?

Other Teachers : No.

Teacher 5 : Okay thank you, you may leave. Results will be out after 5 pm on Monday.

Adrito : Thank you sir.

## Interview -2

**Name** : **Md. Monwar Hossain Rokon**

**Batch** : **25**

**SSC** : **Rajuk Uttara Model College**

**HSC** : **Notre Dame College**

Rokon : Good Evening Sir. May I come in?

Teacher 1 : Yes, come in. Take a seat.

Teacher 2 : You are from Rajuk College. Is it run by armed forces?

Rokon : No sir. The principal is a member of the governing body and he is chosen from the armed forces.

Teacher 1 : Why did you shift to Notre Dame College? Why is it better?

Rokon : From my experience I deduced that more students from Notre Dame College usually get chance in public universities than students from Rajuk College.

Teacher 3 : Did you like the Army discipline or the Missionary discipline?

Rokon : I liked the army discipline. To develop a person's punctuality and other qualities strict discipline is more effective.

Teacher 2 : But if you look at the multinational companies like Facebook, Google etc. people are not bound to be disciplined. Then how come they are prospering?

Rokon : These companies actually seek for creativity rather than discipline.

Teacher 1 : How can you sort out the difference between discipline and creativity?

Rokon : Discipline can be taught but creativity comes as an innate quality.

Teacher 2 : Good. Are you creative or are you disciplined?

Teacher 1 : I think he is disciplined creative.

(Everyone laughs)

Teacher 3 : I think that is all for today. Result will be published day after tomorrow. Good luck.

Rokon : Thank you sir. Good bye.

## Interview -3

**Name** : **Muniyat Munzireen Khandker**
**Roll** : **17**
**School** : **Sunbeams**
**College** : **Sunbeams**

There were 4 teachers in the room

Muniyat : As Salamu Alaykum! May I come in?
Teacher 1 : Muniyat Munzireen, right? Please sit down
Muniyat : Thank you, Sir!
Teacher 1 : So, tell us Education.
Muniyat : Education is an important aspect...

*The whole room bursts out laughing*

Teacher 4 : No, tell us your educational background
Muniyat : Sorry, Sir! I have done my O Levels from Sunbeams in 2014 and A levels from Sunbeams in 2016. My O level results were 6A*, 1A and 1B. But my A level results are not very good. I have 1A, 1B and 2Cs.
Teacher 1 : So, where else did you give exams?
Muniyat : Sir, I appeared for an exam at BUP and I sat for exams in Dhaka University "Kha" unit and "Gha" unit.
Teacher 1 : What were the results?
Muniyat : Sir, I did not get chance in "Gha" unit, but I got chance in "Kha" unit.
Teacher 1 : Which subject?
Muniyat : Sir, English Department
Teacher 1 : Then study there, and do MBA from here.
Muniyat : I don't want to study English. If I had gotten Economics, then I would have studied there. Plus, it has been my dream to study BBA at IBA from since I know what business means.
Teacher 1 : What subjects did you have in you're a levels?
Muniyat : Sir, I had a mixture of subjects, Physics, Chemistry, Math and Economics.
Teacher 2 : What is your goal?
Muniyat : Sir, I want to be an entrepreneur, but I have a plan of opening my own magazine where people aged 12-30 will write articles on whatever they want to.
Teacher 3 : Are you affiliated with writing?

| | | |
|---|---|---|
| Muniyat | : | Yes, Ma'am. I write during my free time. I participated in a writing competition called "WriteFights 2016" and stood 13th there. |
| Teacher 1 | : | What is the capital of USA? |
| Muniyat | : | Sir, Washington DC |
| Teacher 1 | : | What does DC stand for? |
| Muniyat | : | Sir, I'm sorry, I don't know |
| Teacher 2 | : | Who is the president Elect of USA? |
| Muniyat | : | Sir, Donald Trump |
| Teacher 1 | : | Tell us what you know about him. |
| Muniyat | : | Sir, he is not very popular? |
| Teacher 1 | : | What? He got 50% votes! |
| Muniyat | : | Yes sir, he won by electoral votes. |
| Teacher 1 | : | Yes, he had only a small difference with Hillary. What else do you know? |
| Muniyat | : | Sir, there was a huge uproar when he got elected. It was probably the first time. |
| Teacher 1 | : | What, no! There were uproars regarding previous presidents too! Check the news |
| Muniyat | : | Sorry, sir, I didn't know. |
| Teacher 2 | : | Any final remarks? |
| Muniyat | : | Ma'am, a lot of previous presidents had made a lot of claims that they later didn't fulfill, so we will see what he does when he comes to office in January. |
| Teacher 1 | : | So tell us some economic indicators of Bangladesh |
| Muniyat | : | Sir, GDP, inflation |
| Teacher1 | : | What is the GDP of Bangladesh? |
| Muniyat | : | Sorry, Sir, I can't recall it at the moment |
| Teacher 1 | : | What about inflation? |
| Muniyat | : | Sir, It is a little more than 7% |
| Teacher 1 | : | Are you sure? |
| Muniyat | : | Sir, as far as I remember, it is true. |
| Teacher 1 | : | Any other demographic indicators of Bangladesh? |
| Muniyat | : | Sir, Bangladesh has more youth population than elderly, as is true with any other developing nation. It became a middle income country very recently. |
| Teacher 1 | : | Thank you Muniyat! Results will be published on Monday. |
| Muniyat | : | Thank you, Sir! |

## Interview-4

**Name** : **Saim Ahmed Shifat**
**Roll** : **35**
**School** : **Sylhet Cadet College**
**College** : **Sylhet Cadet College**

**There were 5 teachers in the room.**

Saim : May I come in, sir?
Teacher 1 : Yes, come in.
Saim : Good morning.
The Teachers : Good morning.
Teacher 1 : Please have a sit.
Saim : Thank you, sir.
Teacher 1 : What's your name?
Saim : My name is Saim Ahmed Shifat.
Teacher 1 : Ok. Start by telling something about yourself.
Saim : I am from Kishoreganj. My father is a businessman and my mother is a housewife. I completed both my SSC and HSC from Sylhet Cadet College.
Teacher 2 : So, you are from cadet college, right? Why do you want to study BBA after leading a regimented life for a long time?
Saim : Actually I have always liked working with ideas. I believe in that way I can do something for the community as well.
Teacher 2 : What type of responsibilities did you play in your school days and what did you do for the community?
Saim : The first thing that cadet college taught me is the way to take care of myself. Besides, I discharged my duties and responsibilities as the college prefect in class 12. There I had to take the responsibility of all the cadets and the other prefects working under me.
Teacher 2 : Ok. Where have you got the chance to be enrolled into so far?
Saim : I passed the admission test for D unit of Dhaka University.
Teacher 2 : What was your place there?
Saim : 177. I got the scope to study Economics.

***The whole board gets astonished and starts laughing***

| | | |
|---|---|---|
| Teacher 1 | : | You see. Economics is a far better choice for you if contributing for the community is what you want. Besides, Nobel Prize is given on this category. You can take people like Dr. Yunus as your inspiration. Why do you want to study in IBA? |
| Saim | : | Sir, I am well aware of the facts that you mentioned. But I want to do something in the field of technology. I think this field is full of possibilities and the study of Economics won't be a primary necessity for this. |
| Teacher 2 | : | Do you have any specific plans which you want to implement in the coming days? |
| Saim | : | I have some goals and am motivated to reach them, sir. But I don't know the exact ways to accomplish them. |
| Teacher 2 | : | Well! That is not going to be enough to take you anywhere. |
| Saim | : | That is the exact reason I need these 4 years in IBA, sir. |
| Teacher 3 | : | Ok. Now tell me something about your favorite actress. |
| Saim | : | My favorite actress is Anne Hathaway. |
| Teacher 3 | : | What makes her your favorite actress? |
| Saim | : | She has reflected diversity in the roles she has played in different movies so far. She has come out of her comfort zones at times. I find that commendable about her. |
| Teacher 3 | : | Can you name some movies of her? |
| Saim | : | The Dark Knight Rises, Alice in Wonderland, Les Miserables and many more. |
| Teacher 1 | : | Have you read the book Les Miserables? |
| Saim | : | No, sir. |
| Teacher 1 | : | Ok. So you don't read books? |
| Saim | : | Not much. |
| Teacher 4 | : | What do you do at your free time, Saim? |
| Saim | : | I usually play Basketball or Cricket, ma'am. |
| Teacher 4 | : | What do you know about the basketball team of Dhaka University? |
| Saim | : | Nothing significant, sir. |
| Teacher 4 | : | Basketball team of IBA? |
| Saim | : | I know that they are very good at it. But IBA lost the last inter department tournament after winning some years at a stretch. |
| Teacher 1 | : | Have you heard the name Thimphu? |
| Saim | : | Yes, sir. It is the capital city of Bhutan. |
| Teacher 1 | : | Ok. We don't have anything more to ask you. Thank you and all the best! |
| Teacher 5 | : | The results will be published on Monday. |
| Saim | : | Thank you. |

# Chapter 8

# Bangladesh University of Professionals

# BUP

# Bangladesh University of Professionals 2012-2013

# Bangladesh University of Professionals (2012-2013)

## English

The name of Florence Nightingale lives in the memory of the world by virtue of the heroic adventure of the Crimea. Had she died - as she nearly did - upon her return to England, her reputation would hardly have been different; her legend would have come down to us almost as we know it today - that gentle vision of female virtue which first took shape before the adoring eyes of the sick soldiers at Scutari. Yet, as a matter of fact, she lived for more than half a century after the Crimean War; and during the greater part of that long period all the energy and all the devotion of her extraordinary nature were working at their highest pitch. What she accomplished in those years of unknown labor could, indeed, hardly have been more glorious than her Crimean triumphs; but it was certainly more important. The true history was far stranger even than the myth. In Miss Nightingale's own eyes the adventure of the Crimea was a mere incident - scarcely more than a useful stepping-stone in her career. It was the fulcrum with which she hoped to move the world; but it was only the fulcrum. For more than a generation she was to sit in secret, working her lever: and her real life began at the very moment when, in popular imagination, it had ended.

She arrived in England in a shattered state of health. The hardships and the ceaseless efforts of the last two years had undermined her nervous system; her heart was affected; she suffered constantly from fainting-fits and terrible attacks of utter physical prostration. The doctors declared that one thing alone would save her - a complete and prolonged rest. But that was also the one thing with which she would have nothing to do. She had never been in the habit of resting; why should she begin now? Now, when her opportunity had come at last; now, when the iron was hot, and it was time to strike? No; she had work to do; and, come what might, she would do it. The doctors protested in vain; in vain her family lamented and entreated, in vain her friends pointed out to her the madness of such a course. Madness? Mad - possessed - perhaps she was. A frenzy had seized upon her. As she lay upon her sofa, gasping, she devoured blue-books, dictated letters, and, in the intervals of her palpitations, cracked jokes. For months at a stretch she never left her bed. But she would not rest. At this rate, the doctors assured her, even if she did not die, she would become an invalid for life. She could not help that; there was work to be done; and, as for rest, very likely she might rest ... when she had done it.

Wherever she went, to London or in the country, in the hills of Derbyshire, or among the rhododendrons at Embley, she was haunted by a ghost. It was the specter of Scutari - the hideous vision of the organization of a military hospital. She would lay that phantom, or she would perish. The whole system of the Army Medical Department, the education of the Medical Officer, the regulations of hospital procedure ... rest? How could she rest while these things were as they were, while, if the like necessity were to arise again, the like results would follow? And, even in peace and at home, what was the sanitary condition of the Army? The mortality in the barracks, was, she found, nearly double the mortality in civil life. 'You might as well take 1, 100 men every year out upon Salisbury Plain and shoot them,' she said. After inspecting the hospitals at Chatham, she smiled grimly. 'Yes, this is one more symptom of the system which, in the Crimea,

put to death 16,000 men.' Scutari had given her knowledge; and it had given her power too: her enormous reputation was at her back - an incalculable force. Other work, other duties, might lie before her; but the most urgent, the most obvious, of all was to look to the health of the Army.

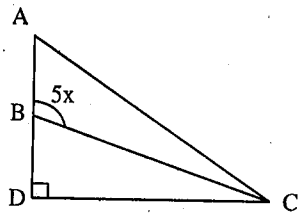
1. According to the author, the work done during the last fifty years of Florence Nightingale's life was, when compared with her work in the Crimea, all of the following except
   A. less dramatic B. less demanding C. less well-known to the public
   D. more important E. more rewarding to Miss Nightingale herself.
2. The 'fulcrum' (line 17) refers to her
   A. reputation B. mental energy C. physical energy
   D. overseas contacts E. commitment to a cause
3. Paragraph two paints a picture of a woman who is
   A. an incapacitated invalid B. mentally shattered C. stubborn and querulous
   D. physically weak but mentally indomitable E. purposeful yet tiresome
4. The primary purpose of paragraph 3 is to
   A. account for conditions in the army
   B. show the need for hospital reform
   C. explain Miss Nightingale's main concerns
   D. argue that peacetime conditions were worse than wartime conditions
   E. delineate Miss Nightingale's plan for reform
5. The series of questions in paragraphs 2 and 3 are
   A. the author's attempt to show the thoughts running through Miss Nightingale's mind
   B. Miss Nightingale questioning her own conscience
   C. Miss Nightingale's response to an actual questioner
   D. Responses to the doctors who advised rest
   E. The author's device to highlight the reactions to Miss Nightingale's plans
6. Today Wegener's theory is ____; however, he died an outsider treated with ____ by the scientific establishment.
   A. unsupported - approval B. dismissed - contempt C. accepted - approbation
   D. unchallenged - disdain E. unrivalled - reverence
7. The revolution in art has not lost its steam; it ____ on as fiercely as ever.
   A. trudges B. meanders C. edges D. ambles E. rages
8. Each occupation has its own ____ ; bankers, lawyers and computer professionals, for example, all use among themselves language which outsiders have difficulty following.
   A. merits B. disadvantages C. rewards D. jargon E. problems
9. ____ by nature, Jones spoke very little even to his own family members.
   A. garrulous B. equivocal C. taciturn D. arrogant E. gregarious
10. Biological clocks are of such ____ adaptive value to living organisms, that we would expect most organisms to ____ them.
   A. clear - avoid B. meager - evolve C. significant - eschew
   D. obvious - possess E. ambivalent - develop
11. **Subservient** is most nearly **opposite** in meaning to
   A. Raucous B. Onerous C. Commanding
   D. Illustrious E. Destitute

12. **Morose** is most nearly **opposite** in meaning to
    A. Peripheral B. Parochial C. Equivocal
    D. Sanguine E. Sane
13. **Intrepid** is most nearly **opposite** in meaning to
    A. Cowardly B. Sedentary C. Unprepossessing
    D. Jaundiced E. Wanton
14. **Zealous** is most nearly **opposite** in meaning to
    A. Motley B. Irrevocable C. Nonchalant
    D. Trenchant E. Prudent
15. **Estrange** is most nearly **opposite** in meaning to
    A. Make calm B. Grow close C. Turn away
    D. Be normal E. Go back
16. A conjunction is used to connect words and sentences together.
    A. words and sentences together. B. words or sentences together.
    C. words and sentences. D. words or sentences.
    E. words to sentences.
17. Antony, coming alongside Cleopatra's ship, climbed aboard without seeing or being seen by her.
    A. climbed aboard without seeing or being seen by her.
    B. climbed aboard without seeing Cleopatra or being seen by her.
    C. climbs aboard without Cleopatra seeing him.
    D. boarded without being seen by her.
    E. boarded without seeing Cleopatra.
18. Bombast is when high sounding words for effect, not suitability, are used.
    A. is when high sounding words for effect, not suitability, are used.
    B. is the use of high-sounding words for effect rather than for suitability.
    C. is where high-sounding words are used for effect not suitability.
    D. is the using of high-sounding words for effect only.
    E. is when you use high-sounding words for effect rather than for suitability.
19. I would like to thank whoever it was that wrote that piece of music: it has given me so much pleasure.
    A. I would like to thank whoever it was that wrote that piece of music:
    B. I would like to thank whomever it was that has written that piece of music:
    C. I would like to thank whomever it might be that wrote that piece of music:
    D. Whoever it was that wrote that piece of music, I would like to thank because
    E. I would like to thank whoever it was that wrote that piece of music,
20. Your taking a loan to buy a car annoyed Father.
    A. Your taking a loan to buy a car annoyed Father.
    B. Your taking a loan to buy a car aggravated Father.
    C. You taking a loan to buy a car irritated Father.
    D. You taking a loan to buy a car annoyed Father.
    E. Father was annoyed by you taking a loan to buy a car.

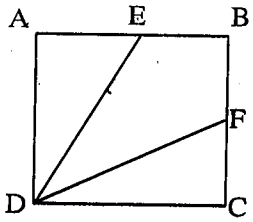
21. In the initial stages of learning a new language we learn more through listening and attempting to copy speech patterns and not through reading grammar books.
    A. and attempting to copy speech patterns and not through reading grammar books
    B. and attempting to copy speech patterns than through reading grammar books.
    C. and attempts to copy speech patterns than through reading grammar books.
    D. and attempts at copying speech patterns than through reading grammar books.
    E. and attempts at copying speech patterns and not grammar books.
22. Between you and I, I doubt that he will come.
    A. and I, I doubt that he will come.
    B. and I, I doubt that he would come.
    C. and me, I doubt that he will come.
    D. and me, I doubt that he would come.
    E. and me, I doubt whether he will be coming.
23. Work that is not finished is not work at all, it is merely a botch, a failure.
    A. all, it is merely a botch, a failure.
    B. all, it is a botch merely, and a failure.
    C. all; it is merely a botch, a failure.
    D. all; the work merely is a botch and a failure.
    E. all; the work being merely a botch, a failure.
24. Pollution and degradation of the environment is, according to the commission's report, a matter of universal concern.
    A. is, according to the commission's report, a matter of universal concern.
    B. is, according to the report by the commission, a matter of universal concern.
    C. is, according to the report of the commission, matters of universal concern.
    D. are, according to the commission's report, universally a matter of concern.
    E. are, according to the commission's report, a matter of universal concern.
25. Denim jeans were originally worn not so much as a fashion statement as for their being practical work clothes.
    A. Denim jeans were originally worn not so much as a fashion statement as for their being practical work clothes.
    B. Denim jeans were originally worn not so much as a fashion statement but for their being practical work clothes.
    C. Denim jeans were originally worn not so much as a fashion statement but for being practical work clothes
    D. Denim jeans were originally worn not as a fashion statement as for them being practical work clothes.
    E. Denim jeans were originally worn not as a fashion statement but as for them being practical work clothes.
26. **Nefarious** is most **similar** in meaning to
    A. Indomitable B. Furtive C. Infamous D. Staunch E. Haughty
27. **Plausible** is most **similar** in meaning to
    A. Simpering B. Pastoral C. Comely D. Credible E. Didactic
28. **Churlish** is most **similar** in meaning to
    A. Reactionary B. Festive C. Inscrutable D. Inane E. Ill-mannered

29. **Bolster** is most **similar** in meaning to
A. Infer B. Strengthen C. Discount D. Confer E. Enervate
30. **Stringent** is most **similar** in meaning to
A. Demonic B. Tough C. Tenuous D. Lax E. Furious

## Mathematics

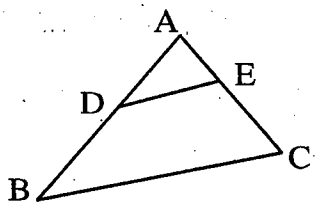



1. Which of the following could be a value of x, in the diagram above?
A. 10 B. 20 C. 40 D. 50 E. any of the above
2. Helpers are needed to prepare for the fete. Each helper can make either 2 large cakes per hour, or 35 small cakes per hour. The kitchen is available for 3 hours and 20 large cakes and 700 small cakes are needed. How many helpers are required?
A. 10 B. 15 C. 20 D. 25 E. 30
3. Jo's collection contains US, Indian and British stamps. If the ratio of US to Indian stamps is 5 to 2 and the ratio of Indian to British stamps is 5 to 1, what is the ratio of US to British stamps?
A. 5 : 1 B. 10 : 5 C. 15 : 2 D. 20 : 2 E. 25 : 2
4. A 3 by 4 rectangle is inscribed in circle. What is the circumference of the circle?
A. $2.5\pi$ B. $3\pi$ C. $5\pi$ D. $4\pi$ E. $10\pi$
5. Two sets of 4 consecutive positive integers have exactly one integer in common. The sum of the integers in the set with greater numbers is how much greater than the sum of the integers in the other set?
A. 4 B. 7 C. 8 D. 12
E. it cannot be determined from the information given.
6. If $f(x) = (x + 2) / (x-2)$ for all integers except $x=2$, which of the following has the greatest value?
A. f(-1) B. f(0) C. f(1) D. f(3) E. f(4)

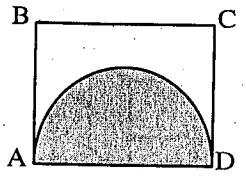



7. ABCD is a square of side 3, and E and F are the mid points of sides AB and BC respectively. What is the area of the quadrilateral EBFD?
A. 2.25 B. 3 C.4 D. 4.5 E. 6
8. If $n \neq 0$, which of the following must be greater than n?
I 2n II $n^2$ III 2 - n
A. I only B. II only C. I and II only D. II and III only E. None

9. After being dropped a certain ball always bounces back to 2/5 of the height of its previous bounce. After the first bounce it reaches a height of 125 inches. How high (in inches) will it reach after its fourth bounce?
   A. 20 B. 15 C. 8 D. 5 E. 3.2
10. n and p are integers greater than 1
    5n is the square of a number
    75np is the cube of a number.
    The smallest value for n + p is
    A. 14 B. 18 C. 20 D. 30 E. 50
11. $(3 \times 104) + (2 \times 10^2) + (4 \times 10) =$
    A. 302400 B. 32400 C. 30240 D. 3240 E. 324
12. Andy solves problems 74 to 125 inclusive in a Math exercise. How many problems does he solve?
    A. 53 B. 52 C. 51 D. 50 E. 49
13. If x and y are integers, and $3x + 2y = 13$, which of the following could be the value of y?
    A. 0 B. 1 C. 2 D. 3 E. 1



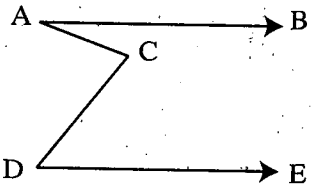

14. In triangle ABC, AD = DB, DE is parallel to BC, and the area of triangle ABC is 40. What is the area of triangle ADE?
    A. 10 B. 15 C. 20 D. 30
    E. it cannot be determined from the information given
15. If $n > 0$, which of the following must be true?
    I $n^2 > 1$
    II $n - n^2 < 0$
    III $2n - 1 > 0$
    A. I only B. II only C. III only D. I and II only E. none
16. If the slope of a line is ½ and the y-intercept is 3, what is the x-intercept of the same line?
    A. 6 B. 3/2 C. 0 D. -2/3 E. -6
17. 6 people meet for a business lunch. Each person shakes hands once with each other person present. How many handshakes take place?
    A. 30 B. 32 C. 18 D. 15 E. 10
18. If $x^2 - y^2 = 55$, and $x - y = 11$, then y =
    A. 8 B. 5 C. 3 D. -8 E. -3
19. In a sports club with 30 members, 17 play badminton and 19 play tennis and 2 do not play either. How many members play both badminton and tennis?
    A. 7 B. 8 C. 9 D. 10 E. 11




(figure not to scale)

20. Rectangle ABCD has a perimeter of 26. The half circle with diameter AD has an area of $8\pi$. What is the perimeter of the part of the figure that is not shaded?
A. $26 + 4\pi$ B. $18 + 8\pi$ C. $18 + 4\pi$ D. $14 + 4\pi$ E. $14 + 2\pi$

21. Courier charges for packages to a certain destination are 65 cents for the first 250 grams and 10 cents for each additional 100 grams or part thereof. What could be the weight in grams of a package for which the charge is $1.55?
A. 1155 B. 1145 C. 1040 D. 950 E. 259




(figure not to scale)

22. AB and DE are parallel. Angle BAC = 30, angle CDE = 50. What is the measure of angle ACD?
A. 100 B. 90 C. 82 D. 70
E. cannot be determined from the information

23. If x / y is an integer, which of the following statements must be true?
A. both x and y are integers B. x is an integer
C. either x or y is negative D. y / x is an integer
E. x = ny where n is an integer

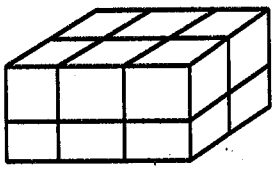
24. What is the average of four tenths and five thousandths?
A. 25002 B. 2502 C. 0.225 D. 0.2025 E. 0.02025

25. What is the simplified result of following the steps below in order?
(1) add 5y to 2x
(2) multiply the sum by 3
(3) subtract x + y from the product
A. 5x + 14y B. 5x + 16y C. 5x + 5y D. 6x + 4y E. 3x + 12y

26. If the equation of a line p in the coordinate plane is y = 3x + 2, what is the equation of line q which is a reflection of line p in the x-axis?
A. y = -3x + 2 B. y = -3x - 2 C. y = 3x - 2 D. y = -1/3x - 5 E. y = -1/3x + 5

27. If y ¤ x = y2x for all positive integers, then (3 ¤ 4) ¤ 2 =
A. 38 B. 312 C. 316 D. 324 E. 332

28. The first term in a sequence is 1 and the second term is 5. From the third term on each term is the average (arithmetic mean) of all preceding terms. What is the 25th term in the sequence?
A. 2.5 B. 3 C. 5 D. 25 E. 50



29. The solid brick shown is made of small bricks of side 1. When the large brick is disassembled into its component small bricks, the total surface area of all the small bricks is how much greater than the surface area of the large brick?

A. 23 B. 40 C. 60 D. 72 E. 80

30. $(3x + 2)(2x - 5) = ax^2 + kx + n$.
What is the value of $a - n + k$?

A. 5 B. 8 C. 9 D. 10 E. 11

31. In Township *K* each property is taxed at 8 percent of its assessed value. If the assessed value of a property in Township *K* is increased from \$20,000 to \$24,000, by how much will the property tax increase?

A. \$32 B. \$50 C. \$320 D. \$400 E. \$500

32. One night 18 percent of the female officers on a police force were on duty. If 180 officers were on duty that night and half of these were female officers, how many female officers were on the police force?

A. 90 B. 180 C. 270 D. 500 E. 1,000

33. If an integer *n* is divisible by both 6 and 8, then it must also be divisible by which of the following?

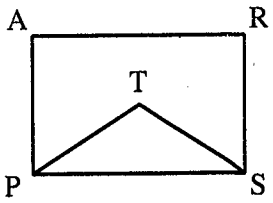
A. 10 B. 12 C. 14 D. 16 E. 18

34. On the number line, if *x* is halfway between -5 and 3, and if *y* is halfway between -2 and 6, what number is halfway between *x* and *y* ?

A. -1 B. $-\frac{1}{2}$ C. 0 D. $\frac{1}{2}$ E. 1

35. In a certain company, the total monthly payroll for the 12 production workers is \$18,000 and the total monthly payroll for the 36 office workers is \$63,000. By how much does the average (arithmetic mean) monthly salary of an office worker exceed that of a production worker in this company?

A. \$62.50 B. \$187.50 C. \$250.00 D. \$375.00 E. \$500.00




Note: Not drawn to scale.

36. In the figure above, if the area of the rectangular region *PQRS* is 40, and if *PT* = *TS*, what is the area of the pentagonal region *PQRST*?

A. 15 B. 20 C. 25 D. 30

E. It cannot be determined from the information given.

37. $\dfrac{\dfrac{1}{100}-\dfrac{2}{1{,}000}}{\dfrac{1}{1{,}000}-\dfrac{2}{10{,}000}} =$

A. $\frac{1}{10}$ B. $\frac{1}{8}$ C. 1 D. 8 E. 10

38. Which of the following is the prime factorization of 2,520?

A. $2^2\times3^2\times5^2$ B. $2^2\times3\times5^2\times7$ C. $2^3\times3\times5\times7^2$

D. $2^3\times3^2\times5\times7$ E. $2^3\times3^2\times5^2\times7$

39. If $\frac{2x}{3}=x-1, then \frac{x}{6}=$

A. $\frac{1}{2}$ B. $\frac{1}{3}$ C. $\frac{1}{4}$ D. $\frac{1}{10}$ E. $\frac{1}{18}$

40. Out of their annual net income, a couple spent 25 percent for food, 13.5 percent for entertainment, 20 percent for housing, 8 percent for car expenses, 15 percent for clothing, and saved the rest. What was the ratio of the amount saved to the amount spent for entertainment?

A. $\frac{19}{27}$ B. $\frac{6}{5}$ C. $\frac{37}{27}$ D. $\frac{19}{9}$ E. $\frac{7}{3}$

## Critical Reasoning

1. Sue: Commercial flights currently contribute more carbon dioxide to the atmosphere in one year than does the whole of Africa. If we want to reduce global warming we need to restrict the number of flights we take.

Dave: Did you know that by taking one inter-continental flight you cause more pollution than you would in twelve months of car travel?

Dave's response to Sue's comment serves to

A. reinforce Sue's contention that flights are a major contributor to increased carbon dioxide levels
B. add more weight to her contention that we should reduce the number of flights we take
C. mitigate the force of her argument by suggesting that there is an alternative approach
D. suggest an alternative that will reduce the effect of pollution
E. question whether she really understands the severity of global warming

2. It is not unusual to see the ball fall into a black slot on a roulette wheel four times in a row. But for it to fall five or six times in a row into the same color is very unusual. Therefore you can win money by waiting for a run of five of the same color and then betting against that color.

If the roulette wheel in question is a fair wheel, which of the following observations or facts, if it were true, would best reveal a fallacy in the logic?

A. If there were a reliable way to win at roulette it would be well-known by now.
B. It is hard for a player to keep track of what went before for the time required.
C. The probability of getting a particular color decreases with the number of times the color has appeared.

D. The probability of getting a particular color is always the same no matter what has gone before.
E. A person who makes money this way once or twice, will carry on to lose that money after a few more times.

3. On the basis of the Big Bang theory **scientists predicted levels of Helium-3 in the universe that are ten times greater than the levels actually observed**. According to the original model, Helium-3 is produced when low-mass stars burn up hydrogen and become 'red giants', as well as being produced in the Big Bang itself. Researchers have now produced a new model in which the Helium-3 produced by a red giant is pushed to the star's interior and burnt up. **Hence the Big Bang theory is no longer undermined by Helium-3 data.**
The two portions in bold-face are related to each other in which of the following ways?
A. The first highlights an observation that tends to undermine a particular theory. The second is that theory.
B. The first is a fact that undermines a theory. The second is context for accepting that theory.
C. The first points to an inconsistency in a particular model; the second is the author's main conclusion.
D. The first is a challenge to a classic theory; the second resolves that challenge.
E. The first is a position that the author does not accept; the second is the author's position.

4. The committee on sexual discrimination in the workplace has highlighted Supremo Company as a chief offender. Of the twenty senior executives in the firm, only one is a woman. And of the forty junior executives, only five are female.
Supremo could best defend itself against the charges by showing that
A. male and female executives at the same level have the same qualifications
B. they pay the same salary to senior men and senior women
C. ten times more men than women apply for jobs with the company
D. the work pressures and long hours make jobs with the company unattractive to married women
E. all job applicants who were rejected had fewer qualifications than those accepted

5. Josh has twenty years of typing experience behind him; therefore, if you are looking for an efficient typist to enter your data into the new system, you need look no further.
The speaker assumes that
A. Twenty years of practice ensures typing efficiency
B. B. The type of typing required for the new system is identical to what Josh has been doing
C. Josh's job profile is the best that the new employer is going to get
D. Josh is an outstandingly fast and accurate typist
E. Josh will fit well into the new office

## DATA SUFFICIENCY

For each question:

A. statement 1 alone is sufficient, but statement 2 alone is not sufficient to answer the question

B. statement 2 alone is sufficient, but statement 1 alone is not sufficient to answer the question

C. both statements taken together are sufficient to answer the question, but neither statement alone is sufficient

D. each statement alone is sufficient

E. statements 1 and 2 together are not sufficient, and additional data is needed to answer the question]

6. How many ewes (female sheep) in a flock of 50 sheep are black?
   1. There are 10 rams (male sheep) in the flock.
   2. Forty percent of the animals are black.
7. Is the length of a side of equilateral triangle E less than the length of a side of square F?
   1. The perimeter of E and the perimeter of F are equal.
   2. The ratio of the height of triangle E to the diagonal of square F is $2\sqrt{3} : 3\sqrt{2}$.
8. A wheel of radius 2 meters is turning at a constant speed. How many revolutions does it make in time T?
   1. T = 20 minutes.
   2. The speed at which a point on the circumference of the wheel is moving is 3 meters per minute
9. Are the integers x, y and z consecutive?
   1. The arithmetic mean (average) of x, y and z is y.
   2. y-x = z-y
10. A bucket was placed under a dripping tap which was dripping at a uniform rate. At what time was the bucket full?
    1. The bucket was put in place at 2pm.
    2. The bucket was half full at 6pm and three-quarters full at 8pm on the same day.

## 1. Analysis of an Issue ( 10 marks )

Directions: In this question, you need to analyze the issue presented and explain your views on it. There is no correct answer. Instead, you should consider various perspectives as you develop your own position on the issue.

When someone achieves greatness in any field - such as the arts, science, politics, or business - that person's achievements are more important than any of his or her personal faults.

Discuss the extent to which you agree or disagree with the opinion stated above. Support your views with reasons and/or examples from your own experience, observations or reading.

## 2. Analysis of an argument (10 marks)

**Direction: In this question, you are asked to write a critique of the argument presented below.**

The producers of the forthcoming movie *3003* will be most likely to maximize their profits if they are willing to pay Robin Good several million dollars to star in it even though that amount is far more than any other person involved with the movie will make. After all, Robin has in the past been paid a similar amount to work in several films that were very financially successful.

## ANSWERS

| ENGLISH | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | E | 6 | D | 11 | C | 16 | D | 21 | B | 26 | C |
| 2 | E | 7 | E | 12 | D | 17 | B | 22 | C | 27 | D |
| 3 | D | 8 | D | 13 | A | 18 | B | 23 | C | 28 | E |
| 4 | B | 9 | C | 14 | C | 19 | A | 24 | A | 29 | B |
| 5 | A | 10 | C | 15 | B | 20 | A | 25 | D | 30 | B |

| MATHS | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | B | 6 | D | 11 | C | 16 | E | 21 | B | 26 | B | 31 | C | 36 | E |
| 2 | A | 7 | D | 12 | B | 17 | D | 22 | C | 27 | E | 32 | D | 37 | A |
| 3 | E | 8 | E | 13 | C | 18 | E | 23 | E | 28 | B | 33 | B | 38 | D |
| 4 | C | 9 | C | 14 | A | 19 | B | 24 | D | 29 | B | 34 | D | 39 | A |
| 5 | D | 10 | A | 15 | E | 20 | C | 25 | A | 30 | A | 35 | C | 40 | C |

| ANALYTICAL ABILITY | | | |
|---|---|---|---|
| 1 | B | 6 | E |
| 2 | D | 7 | D |
| 3 | C | 8 | B |
| 4 | E | 9 | C |
| 5 | A | 10 | E |

## ENGLISH

1. **(E)** এটি কোথাও বলা হয়নি।
2. **(E)** Fulcrum কিংবা অবলম্বন এখানে প্রতীকি অর্থে ব্যবহার করা হয়েছে যা commitment- কে বোঝায়।
3. **(D)** paragraph 2- তে তার weak physique এবং অদম্য mental spirit-এর কথা বলেছে।
4. **(B)** Last line-এ "health of the army" কথাটি দিয়েই তা বুঝাতে পারা যাচ্ছে।
5. **(A)** এসব প্রশ্ন দিয়ে author Nightingale- এর মনে যা চলছে তার কথা বলছে।
6. **(D)**
7. **(E)**
8. **(D)**
9. **(C)**
10. **(C)**
11. **(C)**
12. **(D)**
13. **(A)**
14. **(C)**
15. **(B)**
16. **(D)** Connect- এর সাথে together ব্যবহার করা redundant. "Or" ব্যবহার করতে হবে কারণ conjunction words ও sentences-কে একে ওপরের সাথে combine করে না।
17. **(B)** Her pronoun- এর ambiguity দূর করা হয়েছে সরাসরি Cleopatra noun- টি ব্যবহার করে।
18. **(B)** Parallel structure- এর যথাযথ প্রয়গ করা হয়েছে।
19. **(A)**
20. **(A)**
21. **(B)** এই option- টিতে parallel structure যথাযথ ভাবে ব্যবহার করা হয়েছে এবং comparative form- এর "more" ব্যবহার করার ফরে যেই than- টির দরকার ছিল, তা ব্যবহার করা হয়েছে।
22. **(B)** . "You and me" একটি phrase. এটি fixed. Sentence-টি conditional নয় তাই "would" ব্যবহার করা যাবেনা।
23. **(C)** দুইটি independent clause আছে তাই comma ব্যবহার করতে হবে।
24. **(A)**
25. **(B)** "Not so much"- এর পর "as for" ব্যবহার করতে হবে।
26. **(C)**
27. **(D)**
28. **(E)**
29. **(B)**
30. **(B)**

## Mathematics

1. **(B)**

   **Explanation:** The Marked Angle ABC এটা ত্রিভুজ BDC বাইরের কোণ কারণ আরো 90 ডিগ্রী হতে হবে, এবং কোণ BDC (90) এবং DCB সম্পর্কে যোগফল সমান হবে হবে.

   Moreover ABC is not a straight line এবং কম 180 হতে হবে.

   অতএব $90 < 5x < 180$ এই সম্পর্ক সন্তুষ্ট যা x এর মান শুধুমাত্র 20

2. **(A)**

   **Explanation:**

   20 large cakes will require the equivalent of 10 helpers working for one hour. 700 small cakes will require the equivalent of 20 helpers working for one hour. This means if only one hour were available we would need 30 helpers. But since three hours are available we can use 10 helpers.

3. **(E)**

   **Explanation:**

   Indian stamps are common to both ratios. Multiply both ratios by factors such that the Indian stamps are represented by the same number.

   US: Indian = 5 : 2, and Indian : British = 5 : 1. Multiply the first by 5, and the second by 2.

   Now US: Indian = 25 : 10, and Indian : British = 10 : 2

   Hence the two ratios can be combined and US : British = 25 : 2

4. **(C)**

   **Explanation:**

   Draw the diagram. The diagonal of the rectangle is the diameter of the circle. The diagonal is the hypotenuse of a 3:4:5 triangle, and is therefore, 5. Circumference = $\pi$. diameter = $5\pi$

5. **(D)**

   **Explanation:**

   চার পরপর পূর্ণসংখ্যা দুই সেটা সারধরণ একং পূর্ণসংখ্যা আছে, মিলিত সেটা মোট 7, এবং আমরা হিসাবে সেটা লিখতে পারেন।

   Thus,

   $n + (n + 1) + (n + 2) + (n + 3)$ and

   $(n + 3) + (n + 4) + (n + 5) + (n + 6)$

   Note that each term in the second set is 3 more than the equivalent term in the first set. Since there are four terms the total of the differences will be $4 \times 3 = 12$

6. **(D)**

   **Explanation:**

   You can solve this by back solving – substitute the answer choices in the expression and see which gives the greatest value.

   A $(-1 + 2) / (-1-2) = -2 / 2 = -1$;

   B $(0 + 2) / (0-2) = 2/ -2 = -1$;

   C $(1 + 2) / (1-2) = 3/-1 = -3$;

   **D $(3 + 2) / (3-2) = 5/1 = 5$;**

   E $(4+ 2) / (4-2) = 6/2 = 3$

   If you had just chosen the largest value for x you would have been wrong. So although it looks a long method, it is actually quick and accurate since the numbers are really simple and you can do the math in your head.

7. **(D)**

**Explanation:**

(Total area of square - sum of the areas of triangles ADE and DCF) will give the area of the quadrilateral

9 - (2 x ½ x 3 x 1.5) = 4.5

8. **(E)**

**Explanation:**

Remember that n could be positive negative or a fraction. Try out a few cases:

In case I, if n is -1, then 2n is less than n.

In case II, if n is a fraction such as ½ then n2 will be less than n.

In case III, if n is 2, then 2-n = 0, which is less than n.

Therefore, none of the choices must be greater than n

9. **(C)**

**Explanation:**

If after each bounce it reaches 2/5 of the previous height, then after the second bounce it will reach 2/5 x 125. After the third it will reach 2/5 x 2/5 x 125. After the fourth it will reach 2/5 x 2/5 x 2/5 x 125. This cancels down to 2 x 2 x 2 = 8

10. **(A)**

**Explanation:**

ক্ষুদ্রতম মান for n such that 5n is a square is 5.

75np can now be written as 75 x 5 x p.

This gives prime factors.... 3 x 5 x 5 x 5 x p

মত প্রকাশের একটি নিখুঁত ঘনক্ষেত্র করার জন্য p will have to have factors 3 x 3 , and hence p =9

n + p = 5 + 9 = 14

11. **(C)**

**Explanation:**

2 x 104 = 30,000; 2 x 102 = 200; 4 x 10 = 40

The total is 30,240

12. **(B)**

**Explanation:**

To find how many problems in the series we need to take the difference and add one.

125 - 74 = 51; 51 + 1 =52

13. **(C)**

**Explanation:**

Y জন প্রদত্ত মান প্রতি স্থঅপন এবং আপনি X- এর জন্য একটি পূর্ণসংখ্যা মান পেতে

For example, using 0 we get 3x = 13; x = 13/3 which is not a whole number.

The right answer is 2, since 3x + 2(2) = 13; 3x = 13 - 4 = 9; x = 9/3 = 3.

14. **(A)**

**Explanation:**

তাদের ঘাঁটি সমান্তরাল কারণ বড় ত্রিভুজ এ বিসি ছোট ত্রিভুজ ADE অনুরূপ (SIMILAR). If corresponding side of two similar triangles are known the ratio of the areas is also known. In this case, let AD be one unit, then AB is 2 units (given that AB = AD + DB). The ratios of the sides is 1 : 2.

The ratio of the areas will be (1)2 : (2)2 ; 1 : 4

Since the big triangle has area 40, using the ratio, the small has area 10.

15. **(E)**

**Explanation:**

Given that n is positive, it could be a positive fraction, 1, or a fraction of whole number greater than 1.

If n = 1, then case I is not true since n2 = 1

Likewise in II if n = 1, n - n2 = 0, and the statement is not true.

In III, if n = ½, then 2n - 1 = 0, and again the statement is incorrect.

16. **(E)**

**Explanation:**

The equation for a straight line is y = mx + c, where m = slope and c = y-intercept.

Putting the given values in this equation we have y = x/2 + 3

The x-intercept occurs where y = 0. Thus, 0 = x/2 + 3 ; -3 = x/2 ; -6 =x

17. **(D)**

**Explanation:**

Imagine the first person of the six. He or she will have to shake hands with each of the other 5. Now turn to the second person. He or she will have to shake with the other five, but he she has already shaken with the first person. This means 4 new handshakes. The third person will have to shake with 5 - 2 = 3 people, and so on. Total handshakes = 5 + 4 + 3+ 2 + 1= 15

18. **(E)**

**Explanation:**

x2 - y2 হিসাবে প্রকাশ করা যেতে পারে (x + y)(x - y); since x - y =11 we can write

(x + y)11 = 55; therefore x + y = 5

Adding the two equations x + y = 5 and x - y = 11 we get

2x = 16; x = 8

Therefore 8 - y = 11; y = -3

19. **(B)**

**Explanation:**

2 হয় খেলানা, এক খেলাধুলা বা অন্যান্য যারা খেলা 28 সদস্য আছে যারা খেলা সংখ্যা যাক উভয় হতে n.

Total (28) will be made up of only badminton players (17 - n), plus only tennis (19 - n) and those who play both (n).

28 = (17 - n) + (19 - n) + n

28 = 36 - n ; n = 8

20. **(C)**

**Explanation:**

অ- ছায়াময় অংশ মোট ঘের আয়তক্ষেত্র এবং অর্ধবৃত্তের পরিসীমা। তিনপক্ষের তৈরি করা হয়.

The area of a half circle = ½ π r2

8 π = ½ π r2; therefore r = 4

The perimeter of the half circle is ½ 8 π = 4 π

The diameter of the circle (8) = the length of the rectangle.

Total perimeter of the rectangle = 26

Three sides measure 26 - 8 = 18 Ans. 18 + 4π

21. **(B)**
**Explanation:**
The weight will be 250g plus (1.55 - 0.65)/0.10 units of 100g
250 + 900 = 1150
এইযে মূল্যে পাঠানো যেতে পারে যে সর্বোচ্চ ওজন. But, weights exceeding
250 + 800 will also get charged this amount (that is what the 'part thereof' implies).
Hence a package weighing 1145 (ans. B) will be charged $1.55

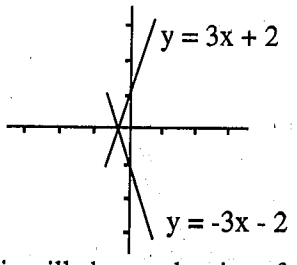
22. (C)
**Explanation:**
Imagine a third parallel line drawn through C. The angle ACD will be made of two angles, one alternate to BAC, and therefore = 30. The other is alternate to CDE and therefore = 50.
Total for angle ACD = 80

23. **(E)**
**Explanation:**
You can eliminate answer choices by picking numbers.
In case (A), x and y could, for example, both be equal fractions and x/y would be an integer.
For the same reason (B) does not have to be correct.
There is no reason for either of them to be negative.
Answer (D) does not need to be correct. Consider x/y = 6/3. Then y/x = 3/6, which is a fraction not an integer.
But rearranging x/y = n, we get x = ny which is therefore always true.

24. **(D)**
**Explanation:**
Four tenths = 0.4
Five thousandths = 0.005
The average is (0.4 + 0.005)/2 = 0.2025

25. **(A)**
**Explanation:**
Step one 2x + 5y
Step two 3(2x + 5y) = 6x + 15y
Step three (6x + 15y) - (x +y) = 6x + 15y - x - y (watch that last minus sign!)
This gives 5x + 14y

26. **(B)**
**Explanation:**




The reflection of the line in the x-axis will change the signs for the slope and the intercept but the absolute value of the intercept and slope will be unchanged.

27. **(E)**
**Explanation:**
The strange sign tells us what operation to carry out on x and y
Carry out the same procedure on 3 and 4 first. So 3^8 is the result.
Now carry out the procedure on 3^8 and 2. So (3^8)4 is the result, which is equivalent to 3^32

28. **(B)**
**Explanation:**
Start constructing the sequence until you see the pattern
1...5...(average of 1 and 5 = 3)...(average of 1, 5, and 3 = 3)...(average of 1,5,3 and 3 = 3)
now you can see that all subsequent terms will be 3

29. (B)
**Explanation:**
Surface area of one small brick = 6; total number of bricks = 12; total surface when disassembled = 6 x 12 = 72
Surface of whole big block= area of four larger faces + area of the two smaller faces = (4 x 6) + (2 x 4) = 24 + 8 = 32
The increase is 40 units

30. **(A)**
**Explanation:**
This is a quadratic equation. To find n we multiply the last terms in each bracket together (2 times -5) = -10
To find 'a' we multiply the first terms in each bracket together (3x times 2x)= 6x2, So a = 6.
Thus a - n = 16
To find k we multiply the first term in the first bracket by the second term in the second bracket and add the result to the product of the second term in the first bracket and the first term in the second. (-15x + 4x) = -11x. So k = -11
16 - 11 = 5

31. **(C)**
**Explanation**: The increase is (24000-20000)= $4000
So extra tax is 8 percent of 4000= $320

32. **(D)**
**Explanation:** Half of the 180 police officers were female. And 18% was represented by them.
So total officers = (90/18)*100 = 500 officers.

33. **(B)**
**Explanation :**
6=(2)(3)
8=(2)(2)(2)
LCM = 24
24 is only divisible by 12. Answer is B.

34. **(D)**
**Explanation:**
X is half between -5 and 3. Thus it is (-5+3)/2=-1
Y is half between -2 and 6. Thus it is (-2+6)/2=2
So halfway between X and Y is = (-1+2)=1/2

35. **(C)**
**Explanation :** The difference is = (63000/36)-(18000/12)=1750-1500=$250

36. **(E)**
**Explanation :** E. We can't determine since we can't assume the figure is a rectangle in the first place.

37. **(A)**
**Explanation** : Using the L.C.M the upper part ( Numerator) is 8/1000 and lower part (denominator) is 8/10000 thus crossing out the 8 and 1000/10000 will mean 1/10

38. **(D)**

39. **(A)**

**Explanation:** $\frac{2x}{3} = x - 1, then \frac{x}{6} =$ thus cross multiplying will result to 2x= 3x-3 so x=3 thus x/6 is 3/6=1/2

40. **(C)**

**Explanation:** Say total income = 100
Amount spent =25+13.5+20+8+15=81.5
Amount saved=18.5
Amount on entertainment
So amount saved: amount on entertainment = 18.5/13.5 = (37/2)/(27/2)= 37:27 (C)

**Analytical Ability**

1. **(B)**

**Explanation:**
Since Dave's comments don't challenge what Sue says, we can eliminate answers E and C (mitigate = lessen). His comments reinforce what she says and so A sounds tempting but is wrong since Dave talks about pollution in general and doesn't mention carbon dioxide. Of the remaining choices, B is best since Dave does give information that suggests, like Sue, that we should take fewer flights. (D is incorrect mainly because Dave is not talking about the 'effect' of pollution. Note how careful you have to be that all the words in an answer are exactly right.

2. (D)

**Explanation:**
In critical reasoning questions many of the answer choices can be factually correct or reasonable sounding, and so eliminating without understanding the question is not possible. Your job is to find the best answer to the specific question, so read carefully. A fallacy in the logic is an error in the thinking behind the proposal. The person concludes that if you wait for a run of five of the same color and then bet against the color, you WILL win. Now the logic behind that suggests that the probability of getting that same color again is low. But just as tossing a fair coin always gives an even chance of a head or tail no matter what has gone before, the probability of getting a color is always the same no matter what has gone before.

3. **(C)**

**Explanation:**
Study each sentence carefully and decide whether it is a fact, and assumption or a conclusion. The first part in bold is a factual statement of a certain prediction. The second part in bold is a statement of the author's view or position on the situation. A view or a position is another way of thinking about a conclusion. So, start with looking for answers that say the second is a conclusion. Now we can have a closer look at C and E. Since the first part is a factual statement, we cannot say that the author does not accept it, and we are left with C. The word 'inconsistency' is fine as the predicted amounts do not match with the observations.

4. **(E)**

**Explanation:**
To defend itself against a charge of discrimination the company will have to show its selections were made on the basis of merit not sex. The best way to do that is to show that none of the women who were rejected had better qualifications than the men who were appointed. Answer E implies just that but without specifying the sex of the rejected applicants.

5. **(A)**
**Explanation:**
An assumption is an unstated premise. So we are looking for something that is implied in the argument, and if wrong, will undermine the argument. All that the speaker implies is that Josh is efficient because he has twenty years of practice, and so answer A is correct. Eliminate B because the word 'identical' is not implied. Eliminate C because we are talking about typing not the whole 'job profile'. The argument claims that Josh is efficient but without defining efficiency we cannot assume that it involves both speed and accuracy, and certainly 'outstandingly' is not warranted. Nothing is implied about fitting into the office.

6. **(E)**
**Explanation:**
From (1) we know the ratio of male to female sheep, but nothing about the color distribution. So the answer cannot be A or D. From (2) we know that forty percent of the animals are black but nothing about whether they are male of female. So the answer cannot be B. Even putting the information together does not help because there is no way to tell what fraction of the female sheep are black. And so C cannot be correct, and the answer is E.

7. **(D)**
**Explanation:**
From (1) we can tell that a side of E is longer than a side of F, since 3 x side E = 4 x side F. Hence (1) is sufficient to answer the question and the answer must be either A or D. From (2) we could work out the ratio of the lengths of the sides (there is no need to do this, but since we are dealing with regular plane figures the geometry is quite simple), and although we cannot get the actual lengths, we can see from the ratio whether one is bigger than the other. So the answer is D.

8. **(B)**
**Explanation:**
Statement (1) tells us nothing about b and so the answer cannot be A or D. To find what percent a is of b we need to solve the expression (a/b) x 100. Statement (2) allows us to do just that: (a/b) = 1/20. No need to go any further; the answer is B

9. **(C)**
**Explanation:**
To find the number of revolutions we need to know the rate of turning and the time duration. Statement (1) gives us only the time, and so the answer cannot be A or D. Statement (2) tells us the rate at which a point on the circumference is moving, which, since we know the dimensions of the wheel, is sufficient to determine the number of rotations per minute. But since we do not know the time, B cannot be correct. But putting (1) and (2) together we have all we need, so the answer is C.

10. **(E)**
**Explanation:**
The mean of three numbers will equal the middle number for any set of evenly spaced numbers (1,2,3 or 2,4,6, or -1, -4, -7 for example) and so we cannot assume that x, y and z are consecutive. Hence the answer cannot be A or D. If x, y and z were 2, 4, and 6, for example, the equation in (2) would be valid, so once again the numbers do not have to be consecutive, and the answer cannot be B. From the numbers we have just substituted, we should be able to see that putting (1) and (2) together will still not give a situation in which the numbers are always consecutive or always not consecutive, and so the best answer is E.

# BUP

# Bangladesh University of Professionals 2013-2014

# Bangladesh University of Professionals (2013-2014)

## Section – 1 English Language and Communication (30 MCQs, 30 Marks)

### Part – I: Reading Comprehension

**Directions:** Read the passage carefully and answer Questions 1 through 5 in light of it.

Organizations are institutions in which members compete for status and power. They compete for the resources of the organization, for example e, finance to expand their own departments, for career advancement and for power to control the activities of others. In pursuit of these aims, groups are formed and sectional interests emerge. As a result, policy decisions may serve the ends of the political and career system rather than those of the concern. In this way, the goals of the organization may be displaced in favor of sectional interest and individual ambition. These preoccupations sometimes prevent the emergence of organic systems (a system which is used by a company that seeks self development as a way to expand rather than purchasing another company).

Many of electronic firms in their study had recently created research and development departments employing highly qualified and well paid scientists and technicians. Their high pay and expert knowledge were sometimes seen as a threat to the established order and rank, power and privilege. Many senior managers had little knowledge of the technicalities and possibilities of new developments and electronics. Some felt that, close co-operation with the experts in an organic system would reveal their ignorance and show that their experience is now redundant.

1. The author makes out a case for-
   A. research and development in organizations
   B. a refresher course for senior managers
   C. an understanding between senior and middle level executives
   D. organic system
   E. finding out the redundancy of experience senior managers
2. The author tends to see the senior managers as-
   A. ignorant and incompetent
   B. jealous of their younger colleagues
   C. a little out of step with their work environment
   D. robbed of their rank, power and privilege
   E. chaos creator and resource consumers
3. Organic system is related to the organization implies its-
   A. natural and unimpeded growth
   B. growth with inputs from science and technology
   C. growth with the help of expert knowledge
   D. steady, all round development
   E. growth through the experience of senior management
4. Policy decisions in an organization supporting organic system would involve-
   A. modernization of the organization
   B. co-operation at all levels in the organization
   C. attracting highly qualified and technical personnel
   D. keeping in view the larger objective of the organization
   E. sacking corrupted senior managers
5. Absence of organic system would ignite-
   A. sectional interest
   B. abuse of financial resources
   C. employment of ill-qualified personnel
   D. abuse of official position
   E. all of the above

**Part – II: Synonyms**

**Directions:** In questions 6 through 10, indicate from the given choices, which has the similar meaning of the word in **CAPITAL.**

6. ABHORE
   A. Aborigine B. Hate C. Abnormal D. Admire E. Kind
7. ASTUTE
   A. Sheer B. Noisy C. Astral D. Unusual E. Clever
8. CLANDESTINE
   A. Secret B. Conglomerate C. Dearth D. Candlelight E. Destiny
9. AFFLUENCE
   A. Fluent B. Affinity C. Wealth D. Acute E. Suffrage
10. TRACTABLE
    A. Distraught B. Docile C. Irritating D. Ruthless E. Lazy

**Part – III: Antonyms**

**Directions:** In questions 11 through 15, indicate from the given choices, which one has an opposite meaning of the word in **CAPITAL.**

11. AMASS
    A. Invent B. Sustain C. Disperse D. Animate E. Tolerate
12. PROFANE
    A. Arrogant B. Benign C. Respectful D. Pious E. Virtuous
13. CENSURE
    A. Census. B. Enclose. C. Praise. D. Penetrate. E. Process.
14. SPURIOUS
    A. Speculative B. Malignant C. Super D. Authentic E. Callous
15. NEFARIOUS
    A. Virtuous. B. Pedestrian. C. Sordid. D. Resourceful. E. Oil.

**Part – IV: Analogy Test**

**Directions:** Carefully notice the relationship between the words in CAPITAL letters in each question numbered 16 through 20. Choose from answers the pair whose relationship most resembles with it.

16. SILO: CORN
    A. Vault: Valuables. B. Wheat: Husk C. Shoe: Leather. D. Mineral: Iron. E. Grain: Oil.
17. TEACHER: IGNORANCE
    A. Stream: River B. Light: Darkness C. Wattage: Bulb
    D. Lightning: Electricity E. Student: Study
18. WOODPILE: LOGS
    A. Forest: Trees B. Husk: Corn C. Mist: Rain
    D. Bouquet: Flowers E. Drift: Snow
19. DEGREE: TEMPERATURE
    A. Ounce: Weight B. Fathom: Volume C. Mass: Energy
    D. Time: Length E. Light: Heat
20. ROBIN: NEST
    A. Animal: Cave B. Horse: Stall C. Alligator: Swamp
    D. Clam: Shell E. Rabbit: Burrow

**Part – V: Sentence Correction**

**Directions:** The questions numbered 21 through 30 consist of number of sentences, in each of which some part or the whole is underlined. Each sentence is followed by five alternative versions of the underlined portion. Select an alternative you consider both most correct and most effective according to the requirements of standard written English. Answer "A" is the same as the original version; if you think the original version is the best, select answer "A". In considering the answer choices, be attentive to matters of grammar, diction, and syntax, as well as clarity, precision, and fluency. Do not select an answer, which alters the meaning of original sentence.

21. The call center executive was asked to talk nicely, clearly, and in a detailed manner.
    A. The call center executive was asked to talk nicely, clearly, and in a detailed manner.
    B. The call center executive was asked to talk nicely, clearly, and thoroughly
    C. The call center executive was asked, talk nicely, talk clearly, and talk in a detailed manner
    D. The call center executives were asked, talk nicely, talk clearly, and talk in a detailed manner
    E. The cal center executive was asked to talk nicely and clearly
22. Unless they reverse present policies immediately, the world may suffer permanent damage from the unregulated use of pesticides.
    A. Unless they reverse present policies
    B. Unless present policies are reversed
    C. Unless present policies will be reversed
    D. If it will not reverse present policies
    E. If present policies will not be reversed
23. Water and resource management problems will be at the head of the legislature's list of concerns for the coming session.
    A. Water and resource management problems
    B. Problems of managing water and resources
    C. Problems in the management of water and other resources
    D. Problems of water and other resource management
    E. Resource management problems, including water.
24. The principal has sought approval for her plan to grant promotions to only those seventh grade students proficient in reading without meeting with opposition.
    A. reading without meeting with opposition
    B. reading, having met with no opposition
    C. reading, without the opposition of others
    D. reading, and has not met with opposition
    E. reading without opposition
25. In the most common procedure for harvesting forage crops such as alfalfa, as much as 20 percent of the leaf and small-stem material, which is the most nutritious of all the parts of the plant, shattered and fell to the ground.
    A. which is the most nutritious of all the parts of the plant, shattered and fell
    B. the most nutritious of all parts of the plant, shatter and fall
    C. the parts of the plant which were most nutritious, will shatter and fall
    D. the most nutritious parts of the plant, shatters and falls
    E. parts of the plant which are the most nutritious, have shattered and fallen
26. Carnivorous mammals can endure what would otherwise be a lethal level of body heat because they have a heat-exchange network which kept the brain from getting too hot.
    A. which kept B. that keeps C. which has kept
    D. that has been keeping E. having kept

27. Management is considering a policy requiring employees provide doctors' notes after taking sick leave so as to prove fitness to return to work.
A. provide doctors' notes after taking sick leave so as to
B. to provide doctors' notes after taking sick leave so as to
C. provide doctors' notes after taking sick leave in order that they
D. to provide doctors' notes after taking sick leave so that the employees can
E. provide doctors' notes after taking sick leave and

28. No one but him could have told them that the thief was I.
A. him could have told them that the thief was I
B. he could have told them that the thief was I
C. he could have told them that the thief was me
D. him could have told them that the thief was me
E. he could have told them the thief was I

29. Although the term "psychopath" is popularly applied to an especially brutal criminal, in psychology it is someone who is apparently incapable of thinking straight.
A. it is someone who is B. it is a person C. they are people who are
D. it refers to someone who is E. it is in reference to people

30. As a result of medical advances, many people that might at once time have died as children of such infections as diphtheria, pneumonia, or rheumatic fever now live well into old age.
A. that might at once time have died as children
B. who might once have died in childhood
C. that as children might have at one time died
D. who in childhood might have at one time died
E. who, when they were children, might at one time have died

## Section – 2 Mathematics (40 MCQs, 40 Marks)

31. If a man can swim downstream at 6 km/hr and upstream at 2 km/hr, his speed in still water is:
A. 1.5 km/hr B. 2 km/hr C. 4 km/hr D. 6 km/hr E. None.

32. What is the absolute value of twice the difference of the roots of the equation 5y2 – 20y + 15 = 0?
A. 0 B. 1 C. 2 D. 3 E. 4

33. It takes one machine 4 hours to complete a production order and another machine 3 hours to complete the same order. How many hours would it take when both machines are working simultaneously at their respective rates to complete the order?
A. 7/12 B. 3/2 C. 12/7 D. 7/2 E. 7

34. An engineer designed a ball so that when it was dropped, it rose with each bounce exactly one-half as high as it had fallen. The engineer dropped the ball from a 16-meter platform and caught it after it had traveled 46.5 meters. How many times did the ball bounce?
A. 5 B. 6 C. 7 D. 8 E. 9

35. Rectangular floors X and Y have equal area. If floor X is 12 feet by 18 feet and floor Y is 9 feet wide, what is the length of floor Y, in feet?
A. 13.5 B. 18 C. 18.75 D. 21 E. 24

36. Kamal and Jamal pay 30% and 40% tax annually, respectively. If Kamal's income is TK. 56000 and Jamal's income is TK. 72000 annually, what is their combined tax rate?
A. 32% B. 34.4% C. 35% D. 35.6% E. 36.4%

37. Which of the following is greater than 2/3?
A. 33/50 B. 8/11 C. 3/5 D. 13/27 E. 5/8

38. The average age of a group of 5 members is 20 years. Two years later, a new member joins the group. The average age of the group becomes 22 years. What is the age of the new member?
A. 20 years B. 21 years C. 22 years D. 23 years E. 24 years

39. If, $\frac{2}{1+\frac{2}{y}}=1$ then y =?
A. -2 B. -1/2 C. 1/2 D. 2 E. 3

40. When $\frac{1}{10}$ percent of 5,000 is subtracted from $\frac{1}{10}$ of 5,000 the difference is:
A. 0 B. 50 C. 450 D. 495 E. 500

41. What is the area of a triangle created by the intersections of the lines x = 4, y = 5 and y = −(3/4)x+20
A. 42 B. 54 C. 66 D. 72 E. 96

42. A basket contains 5 apples, of which 1 is spoiled and the rest are good. If Henry is to select 2 apples from the basket simultaneously and at random, what is the possibility that the 2 apples selected will include the spoiled apple?
A. 1/5 B. 3/10 C. 2/5 D. 1/2 E. 3/5

43. BUP cafeteria opened yesterday with its daily supply of 40 dozens rolls. Half of the rolls were sold by noon, and 80 percent of the remaining rolls were sold between noon and closing time. How many dozen rolls had not been sold when the bakery closed yesterday?
A. 16 B. 20 C. 4 D. 5 E. 6

44. An absent minded scientist walks on an escalator at a rate of 4 steps per second and reaches the other end in 15 seconds. While coming back, walking at the same speed he reaches the starting point in 45 seconds. What is the number of steps on the escalator?
A. 60 B. 90 C. 105 D. 120 E. 140

45. Points A and B are 120 km apart. A motorcyclist starts from A to B along straight road AB with speed 30 kmph. At the same time a cyclist starts from B along a road perpendicular to road AB, with a speed of 10 kmph. After how many hours will the distance between them be the least?
A. 3 hours B. 3.4 hours C. 3.5 hours D. 3.6 hours E. None

46. A right cylindrical container with radius 2 meters and height 1 meter is filled to capacity with oil. How many empty right cylindrical cans, each with radius . meter and height 4 meters, can be filled to capacity with the oil in this container?
A. 1 B. 2 C. 4 D. 8 E. 16

47. A box of balls originally contained 2 blue balls for every red ball. If after 12 red balls were added to the box, the ratio of red balls to blue balls became 5 to 2, how many balls were in the box before the additional 12 balls were added?
A. 9 B. 12 C. 15 D. 18 E. 24

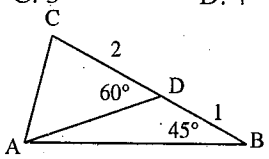
48. If the quotient $\frac{a}{b}$ is positive, which of the following must be true?
A. a>0 B. b>0 C. ab>0 D. a-b>0 E. a+b>0

49. Last year Mrs. Long received $160 in dividends on her shares of Company *X* stock, all of which she had held for the entire year. If she had had 12 more shares of the stock last year, she would have received $15 more in total annual dividends. How many shares of the stock did she have last year?
A. 128 B. 140 C. 172 D. 175 E. 200

50. A certain elevator has a safe weight limit of 2,000 pounds. What is the greatest possible number of people who can safely ride on the elevator at one time with the average (arithmetic mean) weight of half the riders being 180 pounds and the average weight of the others being 215 pounds?
A. 7 B. 8 C. 9 D. 10 E. 11

51. The distance between two points is X. The number of inches in X is equal to the square root of the number of feet in X (1 foot =12 inches.) What is the length of X, in inches?
A. 144 B. 12 C. 1 D. 1/12 E. 1/144

52. How many liters of a mixture containing 80% alcohol should be added to 5 liters of a 20% solution to yield a 30% solution?
A. 1 B. 2 C. 3 D. 4 E. 5

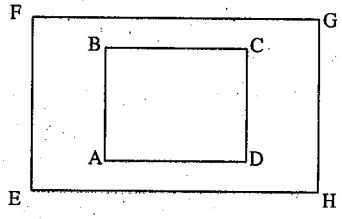



53. In the figure, point D divides side BC of triangle ABC into segments BD and DC of lengths 1 and 2 units respectively. Given that ADC = 60o and ABD = 45o, what is the measure of angle x in degrees?
A. 55 B. 60 C. 70 D. 75 E. 90

54. Rakhi and Mehjabin started a business and invested TK. 20,000 and TK. 25,000 respectively. After 4 months Mehjabin left and Sadia joined by investing Tk. 15,000. At the end of the year, there was a profit of TK. 4,600. What is the share of Sadia.
A. TK. 1,000 B. TK. 1,200 C. TK. 1,500 D. TK. 1,600 E. TK. 1,800

55. How many of the integers that satisfy the inequality $(x+2)(x+3) / (x-2) \geq 0$ are less than 5?
A. 1 B. 2 C. 3 D. 4 E. 5

56. ABCD is a square, EFGH is a rectangle. AB = 3, EF = 4, FG = 6. The area of the region outside of ABCD and inside EFGH is:
A. 6
B. 9
C. 12
D. 15
E. 24




57. What is the largest factor of both 6 and 9?
A. 1 B. 3 C. 6 D. 9 E. 12

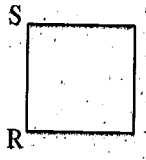
58. A rectangular floor is covered by a rug except for a strip $p$ meters wide along each of the four edges. If the floor is $m$ meters by $n$ meters, what is the area of the rug, in square meters?
A. $mn - p(m + n)$ B. $mn - 2p(m + n)$ C. $mn - p2$
D. $(m - p)(n - p)$ E. $(m - 2p)(n - 2p)$

59. If $-1 < x < 0$, which of the following must be true?
I. X3 < x2 II. X5 < 1 – x III. X4 < x2
A. I only B. I and II only C. II and III only
D. I and III only E. I, II and III

60. BUP basketball team that has played 2/3 of its games has a record of 17 wins and 3 losses. What is the greatest number of the remaining games that the team can lose and still win at least 3/4 of all of its games?
A. 7 B. 6 C. 5 D. 4 E. 3

61. 61. At a certain conference, 72% of the attendees registered at least two weeks in advance and paid their conference fee in full. If 10% of the attendees who paid their conference fee in full did not register at least two weeks in advance, what percent of conference attendees registered at least two weeks in advance?
A. 18.0% B. 62.0% C. 79.2% D. 80.0% E. 82.0%

62. Dan and Karen, who live 10 miles apart, meet at a cafe that is directly north of Dan's house and directly east of Karen's house. If the cafe is 2 miles closer to Dan's house than to Karen's house, how many miles is the cafe from Karen's house?
A. 6 B. 7 C. 8 D. 9 E. 10

63. 

56. Square *RSTU* shown above is rotated in a plane about its center in a clockwise direction. The number of degrees through which *RSTU* is rotated for T to be in the position of S is:
A. 135o B. 180o C. 225o D. 270o E. 315o

64. In traveling from a dormitory to a certain city, a student went 1/5 of the way by foot, 2/3 of the way by bus, and the remaining 8 kilometers by car. What is the distance, in kilometers, from the dormitory to the city?
A. 30 B. 45 C. 60 D. 90 E. 120

65. According to a survey, at least 70% of people like apples, at least 75% like bananas and at least 80% like cherries. What is the minimum percentage of people who like all three?
A. 15% B. 20% C. 25% D. 0% E. 35%

66. If $4x-12 \geq x+9$, which of the following must be true
A. $x > 6$ B. $x < 7$ C. $x > 7$ D. $x > 8$ E. $x < 8$

67. After paying a 10 percent tax on all income over $3,000, a person had a net income of $12,000. What was the income before taxes?
A. $13,300 B. $13,000 C. $12,900 D. $10,000 E. $9,000

68. If 0.497 mark has the value of one dollar, what is the value to the nearest dollar of 350 marks?
A. $174 B. $176 C. $524 D. $696 E. $704

69. In an examination 42% student failed in Bangla and 52% failed in English. If 17% failed in both the subjects, the percentage of those who passed in both the subjects is:
A. 23 B. 27 C. 34 D. 40 E. 50

70. For which of the following values of x is $\sqrt{1-\sqrt{2-\sqrt{x}}}$ NOT defined as a real number?
A. 1 B. 2 C. 3 D. 4 E. 5

**Section – 3 General Aptitude (10 MCQs and 2 Analytical Writing Questions, 30 Marks)**

**Part – 1: Data Sufficiency:**

**Directions:** Each of the following problems numbered 71 through 75, has a question and two statements which are labeled as "(1)" and "(2)". Use the data given at "(1)" and "(2)" together with the other available information (such as the number of hours in a day, the definition of clockwise, mathematical facts etc.) to decide whether the statements are sufficient to answer the question. Then fill in the space at your OMR sheet –

A. If you can get the answer from **"(1)" ALONE** but not from "(2)" alone
B. If you can get the answer from **"(2)" ALONE** but not from "(1)" alone
C. If you can get the answer from **BOTH "(1)" and "(2)" TOGETHER**, but not from "(1)" alone or "(2)" alone

| | |
|---|---|
| D. If **EITHER** statement **"(1)" ALONE** or statement **"(2)" ALONE** suffices<br>E. If you **CANNOT** get the answer from statement "(1)" and "(2)" **TOGETHER** and need even more data | |
| 71. | Who types at a faster rate, John or Bob?<br>(1) The difference between their typing rates is 10 words per minute.<br>(2) Bob types at a constant rate of 80 words per minute. |
| 72. | Did Sammy drive more than 21 kilometers last night?<br>(1) Sammy drove more than 20,000 meters last night.<br>(2) Sammy drove less than 20,500 meters last night. |
| 73. | What percent of the drama club members enrolled at a certain school are female students?<br>(1) Of the female students enrolled at the school, 40 percent are members of the drama<br>club.<br>(2) Of the male students enrolled at the school, 25 percent are members of the drama<br>club. |
| 74. | If x is a positive number, is x an even integer?<br>(1) 3x is an even integer.<br>(2) 5x is an even integer. |
| 75. | How many people are directors of both Company K and Company R?<br>(1) There were 17 directors present at a joint meeting of the directors of Company K<br>and Company R, and no directors were absent.<br>(2) Company K has 12 directors and Company R has 8 directors. |
| **Part – II: Critical Reasoning**<br>**Directions:** For the following questions, numbered 76 through 80, choose the best answer among the listed alternatives | |
| 76. | Most employees in the computer industry move from company to company, changing jobs several times in their careers. However, Summit Computers is known throughout the industry for retaining its employees. Summit credits its success in retaining employees to its informal, nonhierarchical work environment. Which of the following, if true, most strongly supports Summit's explanation of its success in retaining employees?<br>A. Some people employed in the computer industry change jobs if they become bored with their current projects.<br>B. A hierarchical work environment hinders the cooperative exchange of ideas that computer industry employees consider necessary for their work.<br>C. Many of Summit's senior employees had previously worked at only one other computer company.<br>D. In a nonhierarchical work environment, people avoid behavior that might threaten group harmony and thus avoid discussing with their colleagues any dissatisfaction they might have with their jobs.<br>E. The cost of living near Summit is relatively low compared to areas in which some other computer companies are located. |

| | |
|---|---|
| 77. | All elephants are gray.<br>And all mice are gray.<br>Therefore, I conclude that all elephants are mice.<br>The argument above is invalid because<br>A. The writer bases her argument on another argument that contains circular reasoning.<br>B. The writer has illogically classified two disparate groups together when there is no relationship between them, except that they both have the same attribute.<br>C. The writer has made a mistaken analogy between two dissimilar qualities.<br>D. The writer has used a fallacy which involves the ambiguous description of animals by their color.<br>E. The writer has failed to express her reasoning fully. |
| 78. | Most employees in the computer industry move from company to company, changing jobs several times in their careers. However, Summit Computers is known throughout the industry for retaining its employees. Summit credits its success in retaining employees to its informal, nonhierarchical work environment.<br>Which of the following, if true, most strongly supports Summit's explanation of its success in retaining employees?<br>A. Some people employed in the computer industry change jobs if they become bored with their current projects.<br>B. A hierarchical work environment hinders the cooperative exchange of ideas that computer industry employees consider necessary for their work.<br>C. Many of Summit's senior employees had previously worked at only one other computer company.<br>D. In a nonhierarchical work environment, people avoid behavior that might threaten group harmony and thus avoid discussing with their colleagues any dissatisfaction they might have with their jobs.<br>E. The cost of living near Summit is relatively low compared to areas in which some other computer companies are located. |
| 79.5 | Researchers have noticed that people whose blood shows abnormally low levels of calcium usually have laryngeal polyps, which can permanently damage vocal cords and result in partial or even total loss of voice. In order to prevent the polyps, the researchers recommend a diet high in calcium-rich foods such as dairy and green, leafy vegetables<br>Which of the following, if true, most strongly suggests that it would not be advisable to follow the researchers'<br>A. Dairy contains compounds that are difficult for many people to digest.<br>B. Laryngeal polyps sometimes disappear without treatment.<br>C. Laryngeal polyps cause a change in body chemistry that blocks the absorption of calcium.<br>D. Fresh vegetables are not always available in all seasons.<br>E. Low levels of calcium can sometime be remedied with vitamin pills. |
| 80. | In order to increase revenues, a cell-phone company has decided to change its fee structure. Instead of charging a flat rate of $20 per month and $0.50 for every minute over 200 minutes, the company will now charge $50 per month for unlimited usage.<br>Which of the following is a consideration that, if true, suggests that the new plan will not actually increase the company's revenues? |

A. Rival-company, which charges no start-up fee , offers an unlimited calling plan for $40 per month.
B. Two-thirds of the company's customers use less than 500 minutes per month.
C. Studies have shown that customers using unlimited calling plans will increase their monthly usage of minutes by over 50 percent.
D. One-fifth of the company's customers use in excess of 1,000 minutes per month.
E. In recent months the company has received several complaints of insufficient signal strength and poor customer service.

**Part – III: Analytical Writing** **(2 questions, 20 Marks)**

**Direction:** Answer questions 81 and 82 in the given space provided after each question. You have to accommodate within the given space and **no extra paper would be given.**

**81. Analysis of an Issue**

**Directions:** In this question, you need to analyze the issue presented and explain your views on it. There is no correct answer. Instead, you should consider various perspectives as you develop your own position on the issue.

*"Some economists mention that Bangladesh should export Hilsa fish to the overseas market to earn foreign currency and also to develop good international relationship. Some others along with general people claim that the country should not export Hilsa fish. This group believes if Bangladesh exports Hilsa fish local people won't be able to buy the fish."*

Discuss both these views and give your own opinion. Support your opinions / views with reasons and / or examples from your own experience observation or reading.

82. **Analysis of an argument**

**Direction:** In this question, you are asked to write a critique of the argument presented below.

**"Bangladesh is corrupted to the bone, yet it is gaining a certain level of development from economical and financial perspectives. Hence, Bangladesh should continue with such corruption."**

Discuss how well reasoned you find this argument. In your discussion, be sure to analyze the line of reasoning and the use of evidence in the argument. For example: you may need to consider what questionable assumptions underlie the thinking and what alternative explanations or counterexamples might weaken the conclusion. You can also discuss what sort of evidence would strengthen or refute the argument, what changes in the argument would make it logically sound and what, if anything, would help you to evaluate the conclusion in a better manner.

## ANSWERS

| ENGLISH | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | C | 6 | B | 11 | C | 16 | A | 21 | B | 26 | B |
| 2 | B | 7 | E | 12 | C | 17 | B | 22 | B | 27 | B |
| 3 | A | 8 | A | 13 | C | 18 | D | 23 | A | 28 | C |
| 4 | C | 9 | C | 14 | D | 19 | A | 24 | D | 29 | B |
| 5 | A | 10 | B | 15 | A | 20 | E | 25 | C | 30 | B |

| MATHS | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 | C | 36 | D | 41 | E | 46 | C | 51 | A | 56 | C | 61 | D | 66 | A |
| 32 | E | 36 | B | 42 | C | 47 | A | 52 | A | 57 | B | 62 | C | 67 | A |
| 33 | C | 36 | C | 43 | C | 48 | C | 53 | E | 58 | E | 63 | E | 68 | A |
| 34 | A | 36 | D | 44 | B | 49 | A | 54 | B | 59 | E | 64 | C | 69 | A |
| 35 | E | 36 | D | 45 | E | 50 | B | 55 | D | 60 | | 65 | C | 70 | E |

| ANALYTICAL ABILITY | | | |
|---|---|---|---|
| 71 | E | 76 | B |
| 72 | B | 77 | D |
| 73 | E | 78 | B |
| 74 | C | 79 | C |
| 75 | C | 80 | A |

**Section – 1 English Language and Communication**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. C | 2. B | 3. A | 4. C | 5. A | 6. B | 7. E | 8. A |
| 9. C | 10. B | 11. C | 12. C | 13. C | 14. D | 15. A | |

16. (A) Corn is stored in silo and valuables are stored in vault.
17. (B) Teacher gets rid of ignorance and light gets rid of darkness.
18. (D) A collection of logs is woodpile. A collectuon of flowers is a bouquet.
19. (A) Units of measurement
20. (E) Robins build their own nest and rabbits dig their own burrow.
21. (B) Only option without parallel structure error
22. (B) Avoids ambiguous pronoun 'they' and error in tense
23. (A)
24. (D)
25. (C) Avoids tense error by using 'will'
26. (B) The subject here is 'heat exchange network'. The verb will be 'keeps'
27. (B)
28. (C) Subject pronoun 'he' and object pronoun 'me' to be used.
29. (B) Avoids ambiguous pronoun 'someone'
30. (B)

## Section – 2 MATHEMETICS

31. (C) মনে করি, speed in still water = a and speed of the current = b
So, প্রশ্নমতে, a+b = 6 and a-b = 2.
So, $a = \frac{\{(a+b)+(a-b)\}}{2} = \frac{6+2}{2} = 4km/hr$

32. (E) In this equation, middle term করার পর, we can simplify it as 5 (y-1) (y-3) = 0; i.e. the roots of the equation are 1 and 3. So, the difference between the roots are (3-1) = 2. So, twice of the difference is 2 × 2 = 4; whose absolute value is also 4.

33. (C) মনে করি, machine A সময় নেয় 4 hours এবং machine B সময় নেয় 3 hours.
Machine A 1 hour এ করে 1/4 কাজ।
Machine B 1 hour এ করে 1/3 কাজ।
2 টি machines একত্রে করে = $\frac{1}{4} + \frac{1}{3}$ কাজ = 7/12 কাজ।
So, 2 টি machines একত্রে সময় নেয় 12/7hours.

34. (A) বলটি ছেড়ে দেওয়ার পর সেটি 16 মিটার যেয়ে প্রথম bounce খাবে। তারপর 8 মিটার উঠবে এবং আবার ৮ মিটার মেনে দ্বিতীয় bounce খাবে। তারপর ৪ মিটার উঠবে এবং আবার ৪ মিটার নেমে ৩য় bounce খাবে। এরপর ২ মিটার উঠবে এবং ২ মিটার নেমে ৪র্থ bounce খাবে। এরপর ১ মিটার উঠবে এবং ১ মিটার নেমে ৫ম bounce খাবে। এরপর .৫ মিটার উঠবে যখন বলটি কে ধরে ফেলবে।
৫টি bounce এর অতিক্রান্ত দূরত্ব = 16+8+8+4+4+2+2+1+1+.5 = 46.5 মিটার।

35. (E) Rectangle X এর area= 12×18= 216
Rectangle Y এর area= 9×a= 216 ( ধরি, length= a)
So, a= 216/9= 24.

36. (D) Tax amount paid by Kamal= 30% of 56000= 16800
Tax amount paid by Jamal= 40% of 72000= 28800
Combined amount of tax paid by them= 16800+28800= 45600
So, their combined tax rate is = (45600/12800) ×100 % = 35.6%

37. (B) 2/3= 22/33
And, 8/11= 24/33
স্পষ্টতই, 22/33<24/33
তাই, 2/3<8/11.

38. (C) Total age of the 5 members= 20×5=100
After 2 years, their total age will increase by= 5×2=10 years
So, the total age after 2 years of those 5 members becomes= 100+10=!10
As a new member joined, the average age becomes 22. So, the new total age of the 6 members is=6×22=132
So, age of the new member is= 132-110=22

39. (D) $\frac{2}{1+\frac{2}{y}} = 1$
Or, $2=1+\frac{2}{y}$
Or, 2-1=2/y
Or, 1=2/y
So, y=2.

40. (D) 1/10th of 5000= 500
And, 1/10% of 5000=5000/(10 × 100)=5
So, 500-5=495.

41. (E) x=4 ..... (i)
y=5.....(ii)
y= (-3/4)x+20.....(iii)
From (i) and (ii), we get a coordinate (4,5)
From (ii) and (iii), if y=5, from equation (iii), we get x=20; so second coordinate (20,5)
From (i) and (iii), if x=4, then from (iii), we get y=17; so third coordinate (4,17)
So, (4,5) and (4,17) being added create a line segment with a length of (17-5)=12
And, (4,5) and (20,5) being added create another line segment with a length of (20-4) = 16
From the coordinates we understand that the two lines are perpendicular to each other. So, it is a right triangle. We know, area of triangle = ½ × base × height
Here, assume base =16 and height =12.
So area of the triangle = $\left(\frac{1}{2}\right) \times 16 \times 12 = 96$

42. (C) The spoiled apple can be picked at the first or at the second time or might not be picked at all. Since the objective is to measure the probability of its being picked at any order, we will first measure the probability of it's not being picked at all.
For first attempt, probability that the spoiled apple is not picked = 4/5
For second attempt = 3/4.
So, probability that the spoiled apple is not picked within two tries is 4/5 × 3/4=12/20 = 3/5
So, probability of the spoiled apple being picked within two tries is (1- 3/5) = 2/5

43. (C) 40 dozen rolls were brought.
Half of 40 = 20
20% of 20 = *1/5* of 20 = 4 dozens, (80% sold means 20% is not sold)

44. (B) This is basically upstream/downstream math. Think the escalator as river, the scientist as boat, and consider steps = meters
When going up, escalator's speed (e) and scientist's speed (m) adds up.
So, net speed $v_1$ = m+e.....(i)
Coming down, opposite to escalator's direction,
Net speed $v_2$ = m-e.....(ii)
Say, for $v_1$, time is $t_1$ = 15 sec
And for $v_2$, time is $t_2$ = 45 sec
Now, (i) + (ii),
$v_1 + v_2$ = m+e+m-e= 2m
As we know, v=d/t, (d=distance)
The equation can be written as
d/t1 + d/t2 = 2m
or, d/15 + d/45 = 2(4)
So, d = 90 steps

45. (E) After the $4^{th}$ hour, the motor cycle will reach point A and the bicycle will be $10 \times 4 = 40$ km away from point A. This is the least possible distance, because it is perpendicular. So the Answer is 4 hours. Since it is not in the options, so the answer is 'None of these'

46. (C) Volume of a cylinder, $V = \pi r^2 h$
Volume of the bigger cylinder = $4\pi$
Volume of smaller cylinders = $\pi$
So, number of smaller cylinders = $4\pi/\pi = 4$

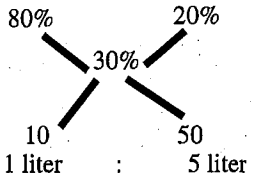
47. (A) Let's assume, before adding;
Number of blue balls = $2x$
And number of red balls = $x$
After adding 12 red balls,
Red/Blue = $x + 12/2x$
$5/2 = x + 12/2x$
$X=3$
So, total number of balls was $2x + x = 3x = 3 \times 3 = 9$

48. (C) a/b is positive,
So, either both a and b are positive or both are negative. There is no way to be certain of any of the a, b, (a-b), or (a+b) is greater than 0, or positive. But if a and b both are positive or both are negative; ab is also positive or greater than 0.

49. (A) \$15 is earned from 12 shares
So, \$1 is earned from 12/15 shares
So, \$160 is earned from 12(160)/15 shares = 128 shares.

50. (B) Half has an average of 180 and the rest has an average of 275. Since equal number of people are divided having different average. Average of 180 and 275= 227.5, is the average of the total population.

51. (A) Accordingly, We should look at the answer choice. 1 ফুট = 12 ইঞ্চি। The number of inches in X is equal to the square root of the number of feet in X.
উদাহরণ স্বরূপ. 12 ফুট = 144 ইঞ্চি (as12×12=144). As now the root of 144 is 12, thus the answer is (A).




52. (A)
According to the data given in the question, the spider method diagram has been constructed. From this diagram the ratio of the liquids of 20% to 80% is 5:1. Since 5 liters of 20% liquid is already available, thus only 1 liter of liquid of concentration 80% will be required for an end product of concentration 30%.

53. (E) Question এ দেওয়া তথ্য থেকে, angle ADB is 180-60 = 120 হয়
As it is a triangle তাই, কোণ DAB= 180-(120+45) = 15
প্রশ্ন দেওয়া দিকে অনুপাত থেকে, angle CAD is twice of angle BAD,
so, angle BAD = 30
From triangle CAD, X = 180-(60+30) = 90

54. (B) R:M = 20000:25000
So ratio is done in terms of amount invested for how much duration in the entire year.
R:M:S = 20000×12: 25000×4: 15000×8
Share of profit for Sadia = (4600 × 120000)/460000 = 1200

55. (D) $\frac{(x+2)(x+3)}{x-2} \geq 0$
এই সমীকণে 4,3,-2 এবং -3 ছাড়া সব মান এর জন্য, the answer is negative. So, there are 4 numbers that satisfies the equation.

56. (C) Tofind the area, outside of ABCD and inside of EFGH
=Area of EFGH - Area of ABCD
= 4×6 -3×4
=12

57. (B) বৃহত্তম ফ্যাক্টররের করতে আমরা HCF নির্ণয় করো প্রয়োজন
6 = 2x3
9 = 3x3
তাই, 6 এবং 9 এর বৃহত্তম প্যাক্টর 3.

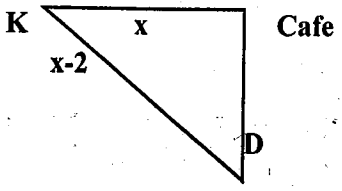
58. (E) If the rug has each side p less than the side, then the length of the rug would be (m-2p) and the breadth be (n-2p). So, area = mn - (m-2p) (n-2p)

59. (E) প্রশ্ন হতে স্পষ্ট বোঝা যাচ্ছে যে x একটি negative number. তাই, x এর ঘাত odd হলে সেই সংখ্যা ও negative হবে। I এবং II, উভয় ক্ষেত্রে ডানের অংশ positive হবে এবং বামের অংশ negative হবে। III এ, যেহেতু x, 0 এবং -1 এর মধ্যে, তাই x এর ঘাত যত বড়, সংখ্যা টি আসলে ততই ছোট। তাই, ডানে x এর ঘাত ছোট হলেও সেটি বামপাশ অপেক্ষা বড়।

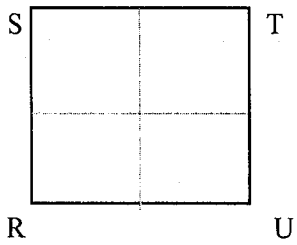
60. (D)
rd of the games = 20
So total games = 30
3/4th of 30 games = 22.5 games
So, out of 30 games, 23 games must be won and 7 can be lost.
Since 3 games are already lost, thus 4 more games can be lost.

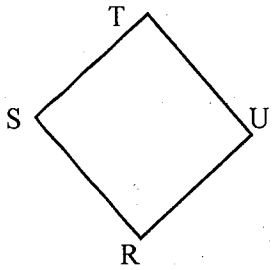
61. (D) 72% attendees registered in advance and paid the fee full. Again, 10% of the people who paid full, did not give advance. i.e. 90% of people who paid full, also pain in advance. So, this 90% of people who paid full and advance, is actually 72% of total conference population.
So total people who paid in advance would be $(72 \times \frac{10}{9})$= 80% of the total population

62. (C) From the figure below, $x^2 + (x-2)^2 = 10^2$
solving the equation, we get, x = 8
so, the cafe is 8 miles from Karen's house.



63. (E)




So, as it has moved clockwise, the number of degrees that the square rotated is= 360-45= 315.

64. (C) farction covered by foot and bus= 1/5 + 2/3 = 13/15
Now, the rest, that is, 2/15 is covered by car which is 8 kms. Let's say, the total distance is x.
So, 2/15 of x = 8
or, x = 60

65. (C) 70% like apples, 75% like bananas. So, the minimum percentage of people who would like both would be (70+75) - 100 = 45 i.e. minimum 45% people likes both apples and bananas.
Again, 80% like cherries, so minimum percentage of people who would like all three, cherries and also apples and bananas would be (45 + 80) – 100 = 25 i.e. minimum 25% has to like all three of the fruits.

66. (A) solving the inequality, we get, $x \geq 7$
so, if x>6, then it covers all the desired values of x. None of the other options does.

67. (A) Let's say, the income before tax is x. Now, income after tax is 90% of x as 10% gets deducted as tax.
So, given, 90% of x = 12000
or, x = (12000 × 100)/90 = 13300

68. (A) .497 mark has the value of one dollar.
So, 350 marks has the value of = 350×.497 dollars = 173.95 or 174 dollars

69. (A) total number of people who failed, n(AUB)= n(A)+n(B)-n(A∩B)
= 42+52-17= 77
So, the number of people who passed both the subjects= 100-77=23

70. (E) Only is the value of x is 5, (2 - √x) would be negative. But, since (2 - √x) is inside another square root, it cannot be negative. So, for the value of 5, the equation would be imaginary.

**Section III: ANALYTICAL**

71. (E)
This is because in evidence 1 it is said that the difference between two of them is 10 words, but who being has the more isn't mentioned. Secondly, Evidence 2 only states the speed of Bob. Even if we combine the evidence we do not a get a source for the answer.

72. (B)
Evidence 2 alone is sufficient because it is said that Sammy drove less than 20,500 meter which is 20.5 kilometers. Thus we get a definite answer of NO from the question.

73. (E)
Evidence 1: Tells us about the percentage of female in drama club but does not talk about specific numbers. Not sufficient.
Evidence 2: Tells us about the percentage of male in drama club but does not talk about specific numbers. Not sufficient.
Together also no additional information is provided. Depending on absolute numbers of female or male students, the percentage of female students at drama club will vary.

74. (C)
A detailed Approach is required
1. 3x is even.
so 3x=2 or x=3/2=1.5. Not even.
also 3x=4 or x = 4/3=1.33. Not Even.
also 3x=6 or x=2. Hence Even.
Thus for some cases its even for some its odd. Hence nothing can be said from this info.
Hence Insufficient.
2. 5x is even.
Same as above.
5x=2 or 4 or 6. x is not even.
5x=10 or 20 or 30. X is even.
Thus nothing can be said.
Hence Insufficient.
Combining 1 and 2.
3x is even and 5x is even.
If 3x=2 or 4 or 8, then from that value of x, 5x is not even.
If 3x=6,12,18 then from that value of x, 5x is also even.
Thus for 1 and 2 to be true, x has to be even.
Hence C is the answer.

75. (C)
Evidence 1 alone is not sufficient
Evidence 2 alone is also not sufficient
Combining the two, we know then there are 17 directors , 12 from K and 8 From R. Using Sets we can find a definite answer thus C is correct.

76. (B) A-states a possible reason why people change jobs ...does not support the argument
B-employees consider the exchange of ideas necessary for work (which is possible in a non-hierarchial environment)- sounds like a good choice BUT remember to read all the alternatives
C-is irelevant
D-states that it is possible people are dissatisfied with their jobs but, given the non-hierarchial environment, they do not discuss the issues w/ their colleagues...sounds more like it is weakening than strengthening the argument
E- is irelevant
You can easily eliminate A, C, and E. D is a little tricky and does the opposite of what is being asked

77. (B) Same as no.76. Answer is B

78. (D) - All mices and elephants are grey,the writer assumes having the same color means that they are same.
IT is a FALLACY- the use of poor, or invalid reasoning for the construction of an argument.
Thus Option D is the right Answer

79. (C) A - This answer doesn't "most strongly" refute the recommendation. Even if true, the recommendation is not strictly limited to dairy food. Eliminate it.
B - This answer is irrelevant to any argument about diet. Eliminate it.
C - This answer does refute the recommendation! If laryngeal polyps block the absorption of calcium, then there is no point to eating a diet high in calcium to get rid of polyps - the action of the polyps themselves will prevent the diet from having any effect.
D - Like A, this answer does not "most strongly" refute the recommendation. Fresh vegetables are not the only recommended food item in this diet. Eliminate it.
E - Like B, this answer is irrelevant to any argument about diet. Eliminate it.

80. A) Correct answer.-Most relevant as a lower charge by competitor may make the company lose customers.
B) Without knowing cost of calls per minute, we cannot deduce whether new plan will increase the company's revenues.
c) This statement again does not provide any information on whether new plan will increase the company's revenues.
D) If this true, new plan may or may not increase the company's revenues, but we cannot say for sure.
E) This may affect the customer base. However, there is no information on effect of new plan on the company's revenues.

**No.81**

**ANALYSIS OF AN ISSUE**
**Breakdown through Structure**
***Introduction paragraph (1st Paragraph):***
- Acknowledge that the issue is complex/interesting/debatable/etc.
- Acknowledge that there are two sides to the issue ( Export to earn foreign currency ,another side being opposition to export)
- State which side you pick ( Example : You pick to support not exporting Hilshas)

***Body paragraphs (next 2-3 paragraphs):***
-Start your topic sentence with a transition.
- State your main points, back up with evidence
-State why the opponents of your position don't really matter:
-Say it only occurs in a minority of cases and the markets are very insignificant and other big sources of foreign currency is there. (e.g)
- Remittance from foreign labours and service Holders. RMG Sectors, Shrimp sectors )
-Say something that seems bad is actually a good thing (e.g. Opponents of not exporting Hilsha say it makes us lose on foreign currency. However, this loss of export actually helps the local people have more supply of Hilsha and they can easily have it for lower prices. )

***Concluding Paragraph***
-Restate your position; summarize the main points of the paragraphs. If you are taking a strong position in your essay, you can also address the opposition.

Example:" Opposition of not exporting Hilsha says that we will lose on foreign currency. However, our opponents should understand that Hilsha is a national treasure and that local people have the first right to it. Exporting it will only drive prices when supply is low. Rather than thinking about exporting Hilsha's,
Other avenues for export should be searched "

# BUP

# Bangladesh University of Professionals 2015-2016

# Bangladesh University of Professionals (2015-2016)

## Section - 1 English Language and Communication (30 MCQs, 30 Marks)

Bangladesh has decided to take technology to people's doorstep. The vision 2021 is bringing results in lifting people's lives and livelihoods. People in Bangladesh receive over 200 services from 5,275 Digital Centres. Over 16,500 IT-connected Community Health Clinics and Union Parishad Health Complexes extend basic health care services. To realize demographic dividend, Bangladesh invested heavily on sill development of younger population. Present Government emphasizes much on education and health for all, particularly of women and girls.

To ensure food and nutrition security, Bangladesh has scaled up its investment in agriculture. Bangladesh agriculture has fast transformed to be a drive of development. Technology and innovation is hallmark of present-day agriculture in Bangladesh. Bangladesh Government has developed stress-tolerant crop varieties to adapt to the changing climate. She has achieved self sufficiency in food production and now exporting rice abroad. Bangladesh wants to sustain the momentum of the MDGs, build on their successes. Bangladesh has set its 'Vision 2021'-to emerge as a Middle Income, knowledge-driven digital economy. These are to realize the dream of the Father of the Nation, Bangabandhu Sheikh Mujibur Rahman, to build a 'Sonar Bangla', the land of Golden Bengla.

1. It can be inferred that Bangladesh Government is undertaking required initiatives in achieving the MDGs few of them include.
   A. mobilizing its national resources and enhanced capabilities
   B. improving access to basic education, health services, water sanitation and empowering people
   C. engaging in partnership with a wide range of local and international actors
   D. All of the above
2. According to the passage, all of the following are true EXCEPT
   A. Commitment of Bangladesh Government has always been to ensure well-being of its people
   B. Over the past decade, exports of Bangladesh grew by more than three times
   C. Bangladesh Government has developed stress-tolerant crop varieties to adapt to the changing climate
   D. Bangladesh is still struggling in achieving MDG
3. According to the passage, Passage, Present Government emphasizes much on
   A. Education and Agriculture
   B. Education and Sanitation
   C. Education and Health
   D. All of the above
4. A suitable Title for the passage would be
   A. Challenges in Implementation of MDGs
   B. Bangladesh becomes a Middle income Country by 2001
   C. Environmental Movements in Bangladesh
   D. Knowledge-driven digital Bangladesh

5. From the passage it can be inferred that Bangladesh has scaled up the investment in Agriculture:
   A. to develop stress-tolerant crop varieties
   B. to ensure the food and nutrition security of its citizens
   C. to export rice abroad
   D. None of the above

**Part II: Synonyms**

In questions 6 through 10, indicate from the given choices, which has the similar meaning of the word in CAPITAL letters.

6. HOMOGENEOUS
   A. Heterogeneous B. Similar C. Different D. Harmony
7. ARTICULATE
   A. Aware B. Disjoined C. Intelligible D. None of the above
8. INGENUOUS
   A. Sophisticated B. Clever C. Cunning D. Naive
9. ANARCHY
   A. Era B. Partner C. Disorder D. Spike
10. DIVULGE
   A. Divert B. Reveal C. Docile D. None of the above

**Part III: Antonyms**

In questions 11 through 15, indicate from the given choices, which one has an opposite meaning of the word in CAPITAL letters.

11. CURTAIL
   A. Increase B. Renounce C. Forbid D. Criticize
12. REALISM
   A. Finale B. Antagonist C. Modern D. Romanticism
13. REVOKE
   A. Establish B. Remove C. Retain D. Escape
14. DEBACLE
   A. Debate B. Decide C. Success D. Discord
15. TRANSIENT
   A. Harmful B. Intentional C. Ornate D. Interminable

**Part IV: Analogy Test**

**Directions**: Carefully notice the relationship between the words in CAPITAL letters in each question numbered 16 through 20. Choose the answer from the pair whose relationship most resembles with it.

16. BOTANY: PLANT
   A. Professor: Degree B. Fruit: Flower C. Science: Chemical D. Zoology: Animal

17. SUPPORT: ADVOCATE
A. Reward: Victor
B. Applaud: Performer
C. Denounce: Accuser
D. Donate: Financier

18. ARCHIVES: RECORDS
A. Clothes: Shoes
B. Catalog: Shelves
C. Aviary: Birds
D. Thread: Spindle

19. INTEREST: FASCINATION
A. Dislike: Abhorrence
B. Faith: Belief
C. Science: Witchcraft
D. Fire: Torch

20. ACCOUNTANT: ACCURATE
A. Judge: Incorruptible
B. Journal: Ledger
C. Books: Accounts
D. Verse: Poem

**Part V: Sentence Correction**

**Directions**: The questions numbered 21 through 25 consist of a number of sentences, in each of which some part of the whole is underlined. Each sentence is following by four alternative versions of the underlined portion. Select an alternative you consider both most correct and most effective according to the requirements of standard written English. Answer 'A' is the same as the original version; if you think the original version is the best, select answer 'A'. In considering the answer choices, be attentive to matters of grammar, diction, and syntax, as well as clarity, precision, and fluency. Do not select an answer, which alters the meaning of original sentence.

21. If I would have known about the traffic jam at the bridge, I would have taken an alternate route.
A. If I would have known
B. If I could of known
C. If I would of known
D. Had I known

22. The number of rooms in my house were less in numbers than yours.
A. were less in numbers than yours
B. were less in numbers than those of yours
C. were fewer in numbers than that of yours
D. was fewer in numbers in numbers than the of yours

23. He likes everyone as much as her, and so she does not feel special.
A. He likes everyone as much as her,
B. He likes everyone as much as he,
C. He has a liking for everyone equal to her,
D. He has a liking for everyone equal to she,

24. When one takes food in this restaurant, you often find that the prices are high and that the food is poorly prepared and the service is quite frustrating.
A. When one takes food in this restaurant, you often find
B. When you take food in this restaurant, one often find
C. When one takes food in this restaurant, one often finds
D. If you take food in this restaurant, you often find

25. Most of the children like to read <u>these kind of books for their bedtime reading.</u>
A. These kind of books B. these kind of book
C. this kind of book D. this kinds of books

**Part VI: Fill in the Blanks**

26. The articles _____ the magazine publishes are very scholarly.
A. which B. and C. of D. in
27. Dinosaurs dominated the earth for 150 million years _____ suddenly vanished 65 million years ago.
A. until they B. until C. that they D. because they
28. Physicist J. Robert Oppenheirmer _____ an important role in the birth of the atomic age.
A. who played B. playing C. had D. was
29. The habit of chewing gum has been _____ him.
A. growing with B. growing upon C. growing on D. given to
30. Mr. Karim was walking through a wood _____ a rainy day.
A. of B. on C. through D. in

**Section - 2 Mathematics (40 MCQs, 40 Marks)**

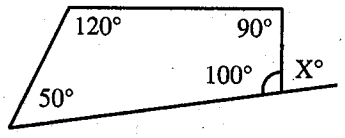
This section contains 40 MCQ type questions numbered 31 through 70. Choose the correct answer. Diagrams given are not necessarily drawn to scale.

31. A jar contains white, red and green marbles in the ratios 2: 3: 4, Five more green balls are added to the Jar and the ratios become 2: 3: 5. How many white balls are there in the Jar?
A. 4 B. 6 C. 8 D. 10
32. In a triangle PQR, PR is the longest side. Then the largest of the three angles is
A. P B. Q C.R D. 90°
33. If n and p are both odd numbers, which of the following numbers must be an even number?
A. n + p B. np C. np + 2 D. n + p + 1
34. Of a group of 27 students, 18 belong to Communication Club and 15 belong to the Business Club. If each student belongs to at least one club, how many students belong to both clubs?
A. 3 B. 6 C. 4 D. None of the above
35. A father's age is four times is son's age now. Twenty years from now, the father's age will be double his son's age. What will be the son's age ten years from now?
A. 10 B. 15 C. 20 D. 30
36. A man and a boy together can complete a job in 81 days. Two man and three boys together can complete the same job in 36 days. In how many days can four men together complete the same job?
A. 21 B. 27 C. 30 D. 36

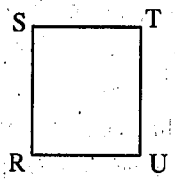
37. If 'n' is an integer, which of the followings must be even?
A. n-1 B. n+2 C. 3n+1 D. 2n+2

38. If a number is divisible by 102, then it is also divisible by:
A. 23 B. 11 C. 103 D. 2

39. A square room has a square carpet symmetrically placed in it. This leaves an uncovered area of 9 $m^2$. The area of the whole room is 25 $m^2$. What is the length of one side of the carper?
A. 2 B. 4 C. 6 D. 8




40. In the figure above, what is the value of x?
A. 50 B. 70 C. 80 D. 90




41. Square RSTU shown above is rotated in a plane about its center in a clockwise direction. The minimum number of degrees necessary for T to be in the position where S is.
A. 135° B. 180° C. 225° D. 270°

42. What is the next number in the series 3, 11, 27, 51,.....?
A. 123 B. 113 C. 90 D. None of the above

43. A line segment is drawn from point (8, -2) to point (4, 6), The co-ordinates of midpoint of this line segment are
A. (12, 4) B. (12, 8) C. (6, 4) D. (6, 2)

44. What % of 0.25 is 0.01?
A. 4% B. 1% C. 10% D. 8%

45. If two halves of $2\frac{1}{2}$ are added to $2\frac{1}{2}$, the result is

A. $5\frac{1}{2}$ B. $3\frac{3}{4}$ C. 5 D. 3

46. A boy can swim 75 feet in 12 seconds. What is his rate of speed of swimming to the nearest mile per hour (mph)?
A. 1 mph B. 2 mph C. 3 mph D. 4 mph

47. If x = 3 and $y = \frac{1}{6}$, then the value of x in terms of y is:

A. 18y B. $\frac{1}{2}y$ C. $\frac{20y}{3}$ D. $\frac{19y}{3}$

48. An old computer that can print a document in 6 hours. With the help of a newer model the job can be completed in 2 hours. How long would it take the newer model to do the job alone?
A. 6 hours. B. 5 hours. C. 4 hours D. 3 hours.

49. Of the following, which is greater than ½?
A. $\frac{2}{65}$ B. $\frac{4}{7}$ C. $\frac{4}{9}$ D. $\frac{5}{11}$

50. There are 50 students enrolled in Mathematics Course. Of the enrolled students, 90% took the final exam. Two-thirds of the students who took the final exam passed the final exam. How many students passed the final exam.
A. 30 B. 33 C. 34 D. 35

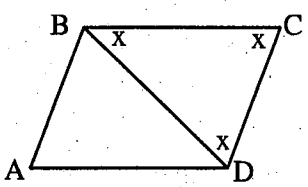
51. Volume of a water tank is 192 cubic feet. Its length, breadth & height are in proportions 4:3:2. What is the area of its base in square feet.
A. 24 B. 48 C. 32 D. 64

52. A Club has 8 male and 8 female members. The club is choosing a committee of members. The committee must have 3 male and 3 female members. How many differed committees can be chosen?
A. 112896 B. 3136 C. 720 D. 112

53. In a survey conducted, it was found that 65% of the people watched the news on television.40% read a newspaper, 25% read a newspaper and watched the news on television. What percent of the people surveyed neither watched the news on television nor read a newspaper?
A. 0% B. 5% C. 10% D. 20%

54. A certain animal in the 200 has concerned 39 pounds of food in six days. If it continues to eat at the same rate, in how many more days will its total consumption be 91 pounds?
A. 12 B. 11 C. 10 D. 8

55.




ABCD is a parallelogram. BD = 2. The angles of triangle BCD are all equal. What is the perimeter of the parallelogram?
A. 12 B. $9\sqrt{3}$ C. 9 D. 8

56. A triangle has a perimeter 13. The two shorter sides have integer lengths equal to x and x + 1. Which of the following could be the length of the other side?
A. 2 B. 4 C. 6 D. 8

57. How much money you must invest for two years to receive an interest of Tk. 10.50 at annual compounding rate of interest of 10%
A. TK. 105 B. Tk. 90 C. Tk. 60 D. Tk. 50

58. Three apples and four oranges cost Tk. 64. Four apples and three oranges cost Tk. 62 One apple, One orange and One papaya cost Tk. 28. What is the cost of papaya in Taka?
A. 12 B. 10 C. 20 D. None of the above

59. If the ratio of the area of two squares is 2: 1, then the ratio of the perimeters of the square is
A. 1: 2 B. $1:\sqrt{2}$ C. $\sqrt{2}:1$ D. 2: 1

60. If value of a certain fraction is equal to 0.4 and the denominator is 15, then the numerator of the fraction is
A. 6 B. 8 C. 9 D. 12

61. A store usually sells a certain item at 40% profit. One week the store has a sale, during which the item is sold for 10% less than usual price. During the sale, what is the profit percentage the store makes on each of these items?
A. 4% B. 14% C. 26% D. 3%

62. If 8 men can do a job in 12 days, what is the percentage change in the number of day required to do the job when 2 men are released?
A. 25% B. 16% C. 4% D. 33.33%

63. Which of the following fractions is the smallest?
A. $\frac{5}{6}$ B. $\frac{11}{14}$ C. $\frac{12}{15}$ D. $\frac{17}{21}$

64. If a circle has a radius 4, and if P and Q are points on the circumference, then the maximum length of an arc which could separate P and Q is
A. 2 B. $2\pi$ C. 4 D. $4\pi$

65. A business man buys a pen for Tk. 25.00. He spends Tk. 15.00 to have it restored to good condition and then sells the same for Tk. 50.00. The percentage of profit of his total investment is
A. 20% B. 25% C. 40% D. 10%

66. If f >b <c, then which of the following must be true?
A. 2a > b + c B. a -b > a - c C. a > b + c D. 2a = b - c

67. How many pounds of pure salt must be added to 30 pounds of a 2% solution of salt and water to increase it to a 10% solution?
A. $\frac{2}{3}$ B. $\frac{8}{3}$ C. $\frac{6}{3}$ D. $\frac{7}{5}$

68. A Coat of Tk. 400 sells for how much after successive discounts of 10% and 5%?
A. 325 B. 342 C. 340 D. 357

69. What number must be added to $(x^2-18x)$ to make the result a perfect square?
A. x+ 9 B. x + 3 C. x- 3 D. 81

70. An investor invests 30%, 40%, 20% and 10% of his total investable amount in four different shares of stock giving returns of 15%, 20%, 12% and 10% respectively. What is the average rate of his returns?
A. 13.25% B. 12.25% C. 14.25% D. None of the above

**Section - 3 General Knowledge** **(Questions, 30 Marks)**

**Direction:** This section contains 30 MCQ type questions numbered 71 through 100 Choose the correct answer

71. Name of the present Governor of the Central Bank of Bangladesh:
A. Dr. Mohammad Farashuddin B. Rehman Sobhan
C. Salehuddin Ahmed C. Dr. Atiur Rahman

72. 'Statue of Liberty' was a gift to the USA from the people of:
A. UK B. Germany C. France D. Italy

73. 'Niagara Fall' is located in between:
A. USA and Alaska B. Canada and Mexico
C. Mexico and USA D. None of the above

74. Panama Canal connects:
A. Indian and Atlantic Ocean B. Indian and Pacific Ocean
C. Pacific and Atlantic Ocean D. Mediterranean and Red Sea

75. 'Yuan' is the currency of:
A. Japan B. South Korea C. Taiwan D. None of the above

76. Which country of the following is not a member of 'BRICS' association?
A. Brazil B. Russia C. Romania D. India

77. Leo Tolstoy was a/an:
A. American military leader B. Russian writer
C. Hollywood actor D. Religious leader

78. 'Mossad' is the name of intelligence agency of:
A. India B. Pakistan C. Myanmar D. Israle

79. 'FBCCI' stands for:
A. Federation of Bangladesh Cricket Council and Institution
B. Federation of Bangladesh Commerce of Chambers and Industry
C. Federal Bureau of Chambers of Commerce and Industry
D. Federation of Bangladesh Chambers of Commerce and Industry

80. The capital city of New Zealand is:
A. Rotterdam B. Vienna C. Wellington D. Havana

81. 'Kantajir Mondir' (a Hindu Temple) is located in:
A. Joypurhat B. Rangpur C. Nilphamari D. Dinajpur

82. The first government of independent Bangladesh was formed in 1971 on:
A. 07 March B. 17 April C. 13 May D. 16 December

83. Name of the Home Minister of Bangladesh is:
A. Asaduzzaman Khan Kamal B. Sahara Khatun
C. Hasanul Haque Inu D. Dr. Hasan Mahmud

84. The Headquarters of IMF is located in
A. Geneva B. Brussels C. Paris D. Washington D.C.

85. 'Tsunami' is a/an:
A. Indonesian word B. Chinese word C. Vietnamese word D. Japanese word

86. Which is not a land locked country?
A. Switzerland B. Swaziland C. Mongolia D. Denmark

87. Father of the national Bangabandhu Sheikh Mujibur Rahman was bron on:
A. 23 May 1921 B. 17 March 1920 C. 17 September 1923 D. 18 January 1920

88. Bangladesh was divided into haw many section during war of liberation?
A. 12 B. 11 C. 8 D. 9

89. 'Nilgirl' is
A. a name of a book B. a place of tourist attraction
C. a name of tribal dance D. a name of narrow valley

90. Narendar Modi, the current prime minister of India was former chief minister of:
A. Punjab B. Uttar Pradesh C. Kerala D. Gujarat

91. In 2015, Dr. Angus Deaton got Nobel Prize in:
A. Medicine B. Peace C. Economics D. Physics

92. 'Mafia' and 'Czar' two words originate respectively from:
A. Greece and Turkey B. Romania and Bulgaria
C. Austria and Germany C. Italy and Russia

93. Current top ranking tennis player (as on 180 October 2015) Novak Djokovic in from:
A. Slovakia B. Serbia C. Russia D. Romania

94. Officially the first cricket match was played in 1877 in between:
A. UK and India B. UK and South Africa
C. UK and Australia D. India and South Africa

95. 'Manik Mia Avenue' is named after the famous personality Manik Mia. By profession, ha was a:
A. Politician B. Poet & Writer C. Musician D. Journalist

96. 'Andaman' and 'Nicobar' are:
A. Names of two tribes B. Names of two islands
C. Names of two viruses D. Name of Co-writers of a book

97. The number of number states in ASEAN is:
A. 12 B. 15 C. 10 D. 11

98. The longest day in Northern hemisphere in 2015 is:
A. 21 July B. 21 June C. 21 May D. 21 August

99. 'Arab Spring' relates to:
A. Actual season B. Cultural festival
C. Democratic uprising D. Economic uplifting

100. The country with highest average height of human being is:
A. Germany B. Norway C. USA D. Netherlands

## Answer Key

**Section I : Language and Communication**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1.A | 2.D | 3.C | 4.D | 5.A | 6.B | 7.C | 8.D | 9.C | 10.B |
| 11.A | 12.D | 13.A | 14.C | 15.D | 16.D | 17.D | 18.C | 19.A | 20.A |
| 21.D | 22.D | 23.A | 24.C | 25.C | 26.A | 27.A | 28.C | 29.C | 30.B |

**Section II : Mathematics**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 31.D | 32.B | 33.A | 34.B | 35.C | 36.B | 37.D | 38.D | 39.B | 40.C |
| 41.D | 42.D | 43.D | 44.A | 45.C | 46.D | 47.D | 48.D | 49.B | 50.A |
| 51.B | 52.B | 53.D | 54.D | 55.D | 56.C | 57.B | 58.B | 59.C | 60.A |
| 61.C | 62.A | 63.B | 64.D | 65.B | 66.A | 67.B | 68.B | 69.D | 70.C |

**Section III: General Knowledge**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 71.D | 72.C | 73.D | 74.C | 75.D | 76.C | 77.B | 78.D | 79.D | 80.C |
| 81.D | 82.B | 83.A | 84.D | 85.D | 86.D | 87.B | 88.B | 89.B | 90.D |
| 91.C | 92.D | 93.B | 94.C | 95.D | 96.B | 97.C | 98.B | 99.C | 100.D |

## BUP 2015-2016 Answer Explanations

### Section - 1 English Language and Communication

1. **(A)** Bangladesh government food production- এ self sufficiency অর্জন করার জন্য natural resources এবং enhanced capabilities-এ ব্যবহার করেছে।
2. **(D)** Passage-এ বলা হয়েছে যে Bangladesh MDG-এর momentum sustain করতে চায়। অতএব, momentum কিছুটা হলেও already gain করেছে।
3. **(C)** প্রথম paragraph -এর last sentence -এ বলা আছে।
4. **(D)** কেননা সম্পূর্ণ passage- টি বাংলাদেশে IT কিভাবে অন্যান্য sector- এর development -এ সহায়তা করে, তা নিয়ে আলাপ করা হয়েছে।
5. **(A)** Passage-এর second paragraph -এর প্রথম sentence -এ বলা হয়েছে।
6. **(B)** Homogenous- একরূপ Similar - একরকম
7. **(C)** Articulate - স্পষ্ট Intelligible- বুদ্ধিগম্য
8. **(D)** Ingenuous- সাদাসিধা Naïve - সাদাসিধা
9. **(C)** Anarchy -- অরাজকতা Disorder - বিশৃঙ্খলা
10. **(B)** Divulge- ফাঁস করা Reveal- প্রকাশ করা
11. **(A)**
12. **(D)**
13. **(A)**
14. **(C)**
15. **(D)**
16. **(D)** Plant -এর বিদ্যাকে botany বলে এবং Animal- এর বিদ্যাকে zoology বলে

17. **(D)** Adovcate-এর একটি কাজ হলো তার client- কে support করা। Accuser-এর একটি কাজ হলো denounce করা।
18. **(C)** Archives-এ পুরাতন records থাকা। একইভাবে, aviary বা পক্ষিশালাতে birds থাকে।
19. **(A)** Synonyms
20. **(A)** আদর্শ accountant- কে accurate হতে হয় এবং আদর্শ judge-কে incorruptible হতে।
21. **(D)**

    Unreal conditions-এর ক্ষেত্রে past time এর সাধারণ নিয়মটি হচ্ছেঃ

    + would

    *If* + subject + past perfect … + could + have + [verb in past participle]

    + might

    If + subject + past perfect এর স্থান এ Had + subject + [verb in past participle] বসলেঃ

    Option (D) Had I known উত্তর হবে।
22. **(D)** এখানে একটি short cut যথেষ্ট। আমরা জানি, 'The number of' সবসময় singular verb নেয়। ৪ টি সম্ভাব্য উত্তর এর মধ্যে কেবল ৪র্থ টি তে singular auxiliary verb WAS রয়েছে।

    তাই option (D) was fewer in numbers in numbers than the of yours হবে উত্তর।
23. **(A)** আমরা জানি যে OBJECT form of the pronoun এর তুলনা OBJECT form of the pronoun এর সাথে হয়। এ জন্য Likes verb টির OBJECT EVERYONE এর সাথে তুলনা এর সময় এমন উত্তর নিতে হবে যেখানে OBJECT form থাকবে। একমাত্র He likes everyone as much as her, এসব নিয়ম মেনে চলে।
24. **(C)** Question statement's meaning constant রেখে, One এর Corresponding possessive adjective his or one's maintain হলে Singular subject singular form of the verb নেয় এমন একমাত্র সম্ভাব্য উত্তর হল (C) When one takes food in this restaurant, one often finds।
25. **(C)** কেবল এক রকম বই এর কথা বুঝাতে যে SINGULAR form necessary সেটা option C এ আছে। তাছাড়া বাকি option গুলোতে plural forms এর ভুল ব্যবহার রয়েছে।
26. **(A)** Blank এর জায়গায় একটি Relative Pronoun ব্যবহার করতে হবে যেটি Article এর সাথে Magazine এর Connection প্রকাশ করবে। তাই which is the answer.
27. **(A)** একমাত্র until they বোঝায় 'যতদিন না পর্যন্ত তারা' এরকম অর্থ। তাই এটি উত্তর।
28. **(C)** Role বোঝায় এক এক ব্যক্তির দায়িত্ব ও কর্তব্য এবং একমাত্র had শব্দ টি particular role থাকার বিষয়টি প্রকাশ করে।
29. **(C)** Growing on means 'To develop the habit gradually'. এজন্য এটিই উত্তর।
30. **(B)** Appropriate form of preposition অনুযায়ী, কোনো সুনির্দিষ্ট দিন কোন কাজ করা হলে, সেদিন বোঝাতে এর আগে সবসময় ON বসে।

## Section - 2 Mathematics

31. **(D)**

    W: R: G = 2 : 3 : 4 = 2x : 3x: 4x

    এখন, G add করা হয়েছে 5

    তাহলে, এখন লেখতে পারি

    2x : 3x: 4x+5 = 2x: 3x: 5x

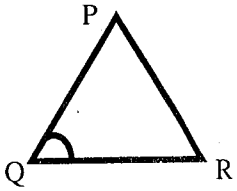
    $$\frac{2x}{4x+5}=\frac{2x}{5x}$$

    8x+10=10x

    x = 5

    Therefore, number of white = 5×2= 10

32. **(B)**




যদি PR largest side হয়, তাহলে PR এর opposite angle টি largest angle হবে. Therefore, Angle Q largest angle হবে।

33. **(A)** n = Odd and p = Odd

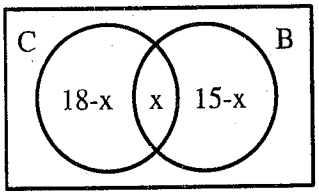
(A) n+p = Odd + Odd = Even

(B) np = Odd*Odd = Odd

(C) np+2 = (Odd*Odd) + 2 = Odd

(D) n+p+1 = Odd + Odd +1 = Odd

34. **(B)**




18 - x + x + 15 - x = 27

33 - x = 27

x=6

35. **(C)**

F=4S

F+20=2(S+20)

4S+20=2S+20

S=10

এখন থেকে 10 years পর S এর বয়স = 20

36. **(B)**

$1m+1b = \frac{1}{81}$, $2m+3b = \frac{1}{36}$

$3m+3b = \frac{1}{27}$

$2m+3b = \frac{1}{36}$

---

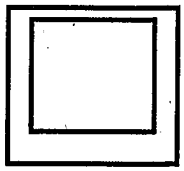
$1m = \frac{1}{27} - \frac{1}{36} = \frac{1}{108}$

So 1 man takes 108 days, so 4 men will take = $\frac{108}{4}$ = 27 days

37. **(D)**
If n is any integer, n can be odd or even
n – 1 = যদি n হয় even, n – 1 হবে odd
n + 2 = যদি n হয় odd, n + 2 হবে odd
3n + 1= যদি n হয় even, 3n +1 হবে odd
2n + 2 = যদি n হয় even কিংবা odd, 2n + 2 হবে even

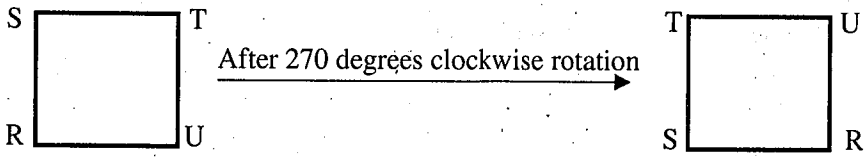
38. **(D)** If the number is divisible by 102, the number must be an even number. If it is an even number, it will be divisible by 2.

39. **(B)**
Area of the whole room = 25 m2
Area of the uncovered portion = 9 m2
Therefore, area of the carpet = 16 m2
Sides of the carpet, x × x = 16, so x=4



40. **(C)** 100+x = 180 (angle in a straight line)
x = 80

41. **(D)**




Starting from bottom left:
Initial position: RSTU
After 90 degrees rotation: URST
After 180 degrees rotation: TURS
After 270 degrees rotation: STUR

42. **(D)** 3,11,27,51, _
11-3 = 8
27-11= 16 ( multiples of 8 করে বাড়ছে )
51-27=24
...51+32=83

43. **(D)** Midpoint = $\left(\frac{x1+x2}{2}, \frac{y1+y2}{2}\right)$

$\left(\frac{8+4}{2}, \frac{-2+6}{2}\right) = (6, 2)$

44. **(A)** $= \frac{0.01}{0.25} X 100 = 4\%$

45. **(C)** Two-halves = One

$2\frac{1}{2} + 2\frac{1}{2} = 5$

46. **(D)** আমরা জানি যে 1 Mile = 5280 feet
Now, in 12 seconds boy swims 75 feet
Therefore in 1 second boy swims (75/12) feet
And, in 3600 seconds (1hour) boy swims (75 × 3600)/12 feet = 22500 feet
22500/5280 = 4.26 miles = 4 miles approximately

47. **(D)** দেওয়া আছে,
x = 3
and, y = 1/6
so, 6y = 1
or, 18 y = x

48. **(D)** ধরি, নতুন Printer এর সময় লাগবে x hour
অতএব,
1/6 + 1/x = 1/2
Or, 1/x = 1/2 – 1/6
or, 1/x = (3–1)/6
or, 1/x = 1/3
therefore, x = 3

49. **(B)** ½ এর থেকে বড় fraction বের করতে আমাদের দেখতে হবে, কোথায় Numerator > Half of Denominator

50. **(A)** People taking Mathematics course = 50
People taking final exam = (90/100) × 50 = 45
People passing final exam = (2/3) × 45 = 30

51. **(B)** Let, length be 4x, breadth be 3x and height be 2x.
Therefore, 4x × 3x × 2x = 192
or x = 2
So, area of base = 8 × 6 sq. ft. = 48

52. **(B)** Number of male to be chosen = 8 C 3 = 56
Number of female to be chosen = 8 C 3 = 56
Therefore, total number of possible selections = 56 × 56 = 3136

53. **(D)** Given, news on Television, n (T) = 65
News on newspaper, n(N) = 40
News on both newspaper and television, $n(T \cap N) = 25$
Now, $n(T \cup N) = n(T) + n(N) - n(T \cap N) = 65 + 40 - 25 = 80$
So, number of people who do not read or watch news = 100 - 80 = 20

54. **(D)** Additional consumption = 91 – 39 = 52
So, 39 pounds is consumed in 6 days
Or, 1 pound is consumed in 6/39 days
And, 52 pounds is consumed in (6 × 52)/39 days = 8 days

55. **(D)** Since, the angles of triangle BCD are all equal, BCD is an equilateral triangle. So, BD = CD = BC = 2
Therefore, perimeter of parallelogram = 2 × 4 = 8

56. **(C)** The measure of the third side of a triangle must lie between the sum and the difference of the other two sides. Using this fact along with the answer choices, we can eliminate the wrong answers.
2 and 4 cannot be correct because 2 or 4 would not be the longest side. (sides 2, 5 and 6) or (sides 4, 5 and 4)
6 could be correct because the other two sides would be 3 and 4.
8 cannot be correct because this third side would be greater than the sum of the other two sides.

57. **(B)** Let 'A' denote apples and 'O' oranges.
According to the question,
$3A + 4O = 64$ ..... (i)
$4A + 3O = 62$ .....(ii)
Equations গুলো solve করে we get, O=10 tk and A=8 tk
আবার according to the question,
$A + P + O = 28$
so, $P = 28 - 10 - 8 = 10$
P = 10 tk.

58. **(B)** $3x + 4y = 64$
$4x + 3y = 62$
$9x + 12y = 192$
$16x + 12y = 248$
$x = 8$
$y = 10$
$8 + 10 + P = 28$
$P = 10$

59. **(C)** Let, the two sides of the square be A and B.
Ratio of their areas: A^2 : B^2 = 2 : 1
so, $A : B = \sqrt{2} : 1$
so, $4A : 4B = 4\sqrt{2} : 4 = \sqrt{2} : 1$. (perimeter = 4A, 4B)

60. **(A)** According to the question,
$\frac{x}{15} = \frac{4}{10} = 6$

61. **(C)** যখন 40% profit করতে, তখন selling price ছিল 140 tk.
10% discount দিলে = 140 - 10% ×140 = 14 tk
Selling Price during the sale= 140-14 = 126tk

62. **(A)** If, 8 men does a work in 12 days
then 1 man does that work in $\frac{12}{8} days$
so, (8-2)=6 men will do that work in $\frac{12}{8} \times 6 = 9$ days
Percentage change: $\frac{3}{12} \times 100 = 25\% days$

63. **(B)** Option B and C তে cross multiplication করে, that is, 11 × 15 and 12 × 14 করে, আমরা 165 and 168 পাই। 165<168. So, option B is smaller.
$165 \downarrow __ \downarrow 168$
$\Rightarrow \frac{11}{14} \Leftrightarrow \frac{12}{15}$
$66 \downarrow __ \downarrow 70 \qquad 231 \downarrow __ \downarrow 238$
Similarly, $\Rightarrow \frac{11}{14} \Leftrightarrow \frac{5}{6}$ and $\Rightarrow \frac{11}{14} \Leftrightarrow \frac{17}{21}$ So, we find that option B is still the smallest.

64. **(D)** Let, p and q be the ends of a diameter
The diameter is the largest chord of a circle
And circumference is $2\pi r = 2\pi \times 4 = 8\pi$
Dividing it by 2, we get, $4\pi$.

65. **(B)** Cost Price of the pen= (25+15) tk = 40 tk
Selling Price= 50tk
Percentage profit $= \frac{10}{40} \times 100 = 25\%$

66. **(A)** Given, a > b > c
Let, a = 4, b = 3, c = 2
option A true হয়।
আবার let, a = -2, b = - 3, c = - 4
Option A is only true.

67. **(B)** If we back calculate , we will find the answer to be B
as 0.6 + 8/3= 3.267
And total will be 30+ 8/3 = 32.67
Thus salt is 10 percent of the solution

68. **(B)** we know, a and b percentage discounts হলে,
successive discount= $a+b-\frac{ab}{100}$
so, $10+5-\frac{10\times5}{100} = \frac{29}{200}$
so, discount in tk. $= \frac{29}{200} \times 400 = 58tk$
so, selling price= 400 - 58 = 352 tk.

69. **(D)** Equation টা complete করলে,
$x^2 - 18x = x^2 - 2.9.x$
so, 9 must be the other number. So, perfect square হতে হলে, 9^2 i.e 81 add করতে হবে existing equation এর সাথে।
তাহলে, $x^2 - 18x + 9^2 = (x+9)^2$

70. **(C)** সবগুলো return add করতে হবে, 15% + 20% + 12% + 10% = 57%
এখন 4 দিয়ে divide করলে, $\frac{57}{4}\% = 14.25\%$

# Chapter 9
# Real Questions

## Real Questions of IBA (2017-2018) with Solution

# BBA (IBA)

## Admission Test Question (2017-2018) with Solution

# Part I: Multiple Choice Questions (MCQs)

**Section I: MCQ** — **70 Questions: 70 Marks**

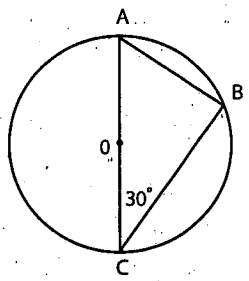
## Mathematics

1. Two friends Moinul and Nuru have 40% and 60% share in a business. After some time a third friend Azmal joined the business by investing Tk 500,000 and acquired 20% shares in the business. What is the amount (in Tk) of Moinul in the business now?
   A) 500,000 B) 800,000 C) 900,000 D) 1000,000 E) None of these
2. Hasan bought a pen for his friend. The cost of the pen was Tk 80 before tax. If the total price including tax was Tk 96, what was the tax rate?
   A) 6% B) 6.5% C) 7% D) 20% E) None of these
3. What is the sum of all the integers from -557 to 559, inclusive?
   A) 1 B) 2 C) 1116 D) 1117 E) None of these
4. The sequence $a_1, a_2, a_3, \ldots\ldots a_n$ is defined by $a_n = 9 + a_n$ for each integer $n \geq 2$. If $a_1 = 11$, what is the value of $a_{34}$?
   A) 308 B) 327 C) 458 D) 469 E) None of these
5. There is a 15% discount for a conference ticket if it is bought 5 to 29 days in advance. The discount is 30%, if the ticket is bought 30 to 59 days in advance. The discount is 40%, if the ticket is bought 60 to B9 days in advance. Sheela paid Tk 252 for the conference ticket. If she had purchased the ticket one day later, she would have paid Tk 306. How many days in advance did she purchase the ticket?
   A) 5 B) 30 C) 59 D) 60 E) None of these

| | Favorable | Unfavorable | Not Sure |
|---|---|---|---|
| Proposal A | 40 | 20 | 40 |
| Proposal B | 30 | 35 | 35 |

6. The table above shows the result of a survey of 100 voters who responded 'Favorable' or 'Unfavorable' or 'Not Sure' about their opinions about two proposals A and B, If the number of voters who did not respond 'Favorable[1] for either proposal was 40, what was the number of voters who responded 'Favorable' for both proposals?
   A) 5 B) 10 C) 15 D) 20 E) None of these
7. What is the value of $\sqrt{(3/2)} - \sqrt{(2/3)}$?
   A) $(\sqrt{3}-\sqrt{2})/\sqrt{6}$ B) $1/\sqrt{6}$ C) $\sqrt{3}/3$ D) $\sqrt{3}/2$ E) None of these
8. When x is divided by 10, the quotient is y with a remainder of 4. If x and y both are positive integers, what is the remainder when x is divided by 5?
   A) 1 B) 2 C) 3 D) 4 E) None of these

9. The circle with center O has a circumference of $12\pi\sqrt{3}$. If AC is a diameter of the circle, what is the length of line segment AB?




A) $3\sqrt{2}$ B) 6 C) $6\sqrt{3}$ D) 18 E) None of these

10. How many positive integers are both multiples of 5 and divisors of 75?
A) 2 B) 3 C) 4 D) 5 E) None of these

11. Five integers in a set are written in ascending order. The median of this set is 17, and the average of the smallest and largest integers is 16. When the smallest and largest numbers are removed from the set, the average of the new smallest and largest integers is 15. What can be the minimum value of the largest of the original five integers?
A) 17 B) 18 C) 19 D) 20 E) None of these

12. An UberX car charges Tk 40 as base fare, Tk 3.6 for each 0.2 of a kilometer and Tk 180/ hour as the travelling time charge. What will be the fare for a 6 kilometer trip if the travelling time is 110 minutes?
A) 230 B) 340 C) 460 D) 478 E) None of these

13. What is the units digit of the sum $3^{44}+5^{43}+2^{12}$?
A) 2 B) 4 C) 8 D) 9 E) None of these

14. Johny bought a book and sold it at a loss of 10%. If he had bought it for 20% less and sold it for Tk 55 more, he would have made a profit of 40%, What was the cost of the book?
A) Tk 150 B) Tk 250 C) Tk 350 D) Tk 450 E) None of these

15. In a working group of a class project, the number of boys is 3 fewer than twice the number of girls. If one boy were replaced by a girl, there would be an equal number of boys and girls in the group. How many students are in the class?
A) 14 8) 12 C) 10 D) 9 E) None of these

16. A certain test consists of 8 sections with 25 questions numbered from 1 to 25, in each section. If a student answered all of the even-numbered questions correctly and ¾ of the odd numbered questions correctly, what was the total number of questions he answered correctly?
A) 150 B) 172 C) 174 D) 175 E) None of these

17. In a certain used-car lot, there are 4 times as many blue cars as green cars and 1/3 as many green cars as red cars. If there are 4q red cars in the lot, how many blue cars are in the lot?
A) 12q B) 3q C) 4q/3 D) 16q/3 E) None of these

18. The length of each side of a triangle is an even number. If no two of the sides are equal, what is the smallest perimeter the triangle could have?
A) 18 B) 16 C) 14 D) 12 E) None of these

19. A hiker walked for two days. On the second day the hiker walked four hours longer and his speed was 2 miles per hour faster than that of the first day. If during the two days he walked a total of 104 miles and spent a total of 20 hours, what was his average speed (miles/hour) on the first day?
A) 2 B) 4 C) 5 D) 8 E) None of these

20. A tank currently holds 60 liters of water. If 30 liters of water is added to the tank when it is half full of water, the amount of water in the tank increases by 1/3. What is the maximum water holding capacity of the tank?
A) 60 liters B) 90 liters C) 120 liters D) 150 liters E) None of these

21. This year Rana will save certain amount of his income, and he will spend the rest. Next year Rana will have no income, but for each taka that he saves this year, he will have (1 + r) taka available to spend. In terms of r, what fraction of his income should Rana save this year so that next year the amount available for his spending will be equal to half the amount that he spends this year?
A) 1/(r+2) B) 1/(2r+2) C) 1/(r+3) D) 1/(2r+3) E) None of these

22. XYZ company hired an accountant and 8 office assistants to do a job. The daily wage for the accountant is 4 times more than that of an office assistant. If the company paid a total of Tk m for the work, how much was paid to the accountant?
A) m/3 B) m/4 C) 4m/11 D) 2m/13 E) None of these

23. A rectangular field is to be fenced on three sides leaving a side of 10 feet uncovered. If the area of the field is 240 square feet, how many feet of fencing will be required?
A) 48 B) 58 C) 68 D) 78 E) None of these

24. Abdul buys 40 pens at the market price of 36 pens from a wholesaler. If he sells these pens giving a discount of 1% on market price, what is the percentage of profit?
A) 2 B) 10 C) 15 D) 20 E) None of these

25. How many different 3 digit numbers can be formed, such that 1st and 3rd place should be filled up with odd numbers?
A) 400 B) 250 C) 150 D) 120 E) None of these

## Analytical Ability

**Questions 26 to 30:** Read the following paragraph and answer the questions below;

An experiment consists of eight steps - H, J, K, L, M, O, P, and S - that all must be performed. Three days are allotted for the experiment. Each step requires exactly one morning or else one afternoon to be performed, and at most two steps can be performed during any given morning or afternoon. The following restrictions must be observed:

- J must be performed on the second day.
- P must be performed in the morning.
- K and M must be performed at the same time.
- J must be performed at some time after M has been completed and at some time after O has been completed.
- O must be completed at some time before P and at some time before S.

26. Which of the following must be completed at some time before J?
A) H B) K C) L D) P E) E

27. At the earliest, P can be performed during which, of the following time periods?
A) The morning of the first day
B) The afternoon of the first day
C) The morning of the second day
D) The afternoon of the second day
E) The morning of the third day

28. If J is performed in the morning, which of the following must be performed on the first day?
A) H B) K C) L D) P E) S

29. If H and L are both performed on the first day, which of the following must be performed on the third day?
A) K B) M C) O D) P E) S

30. If the experiment is to be completed by the end of the second day, which of the following must be performed on the second day?
A) H B) K C) L D) O E) S

**Questions 31 to 36:** Each problem consists of two statements. Decide whether the data in the statements are sufficient to answer the question.

31. The average of X and Y is 20. What is the average of X, Y and Z?
1) $5<Z<8$
2) $3Z > X$
A) Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.
B) Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.
C) BOTH statements TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.
D) EACH statement ALONE is sufficient.
E) Statements (1) and (2) TOGETHER are NOT sufficient.

32. In 2016, Rajshahi produced 2/3 of all the mangoes in Bangladesh. Data of two districts, Natore and Khulna, were not found. If all other districts combined produced 18 million tons mangoes that year, how many million tons did Rajshahi produce in 2016?
1) Natore produced 1/6 of all the mangoes in Bangladesh.
2) The climate of Khulna is not very suitable for mangoes.
A) Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.
B) Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.
C) BOTH statements TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.
D) EACH statement ALONE is sufficient.
E) Statements (1) and (2) TOGETHER are NOT sufficient.

33. From the profits of a certain investment, Faisaf got 1/3 of the total profit and three of his friends each got 1/3 of the rest. What was the total profit?
    1) Faisal and one of his friends got 5/9 of the total profit.
    2) Two of Faisal's friends got a total of 48000 taka.
    A) Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.
    B) Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.
    C) BOTH statements TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.
    D) EACH statement ALONE is sufficient.
    E) Statements (1) and (2) TOGETHER are NOT sufficient.

34. Two tanks A and B are filled with petrol. If 100 liters of petrol were taken out from each tank, tank A would then contain 3 times as much petrol as tank B. What is the total amount of petrol in the two full tanks?
    1) Tank B holds 600 liters less petrol than tank A.
    2) Tank A holds 2.5 times more petrol than tank B.
    A) Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.
    B) Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.
    C) BOTH statements TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.
    D) EACH statement ALONE is sufficient.
    E) Statements (1) and (2) TOGETHER are NOT sufficient.

35. C is a circle with radius r. If DE is a chord in circle C, is DE<6?
    1) r = 5.
    2) The distance from the center of C to DE is smaller than 4.
    A) Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.
    B) Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.
    C) BOTH statements TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.
    D) EACH statement ALONE is sufficient.
    E) Statements (1) and (2) TOGETHER are NOT sufficient.

36. Three friends - P, Q, R each contributed money to buy a computer. They bought the computer on sale forTk 19500 plus 10% tax, thus saving Tk 2100. How much money will each of them get back from the initial contribution?
    1) P contributed 50% more than what Q contributed.
    2) P contributed less than R.
    A) Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.
    B) Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.
    C) BOTH statements TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.
    D) EACH statement ALONE is sufficient.
    E) Statements (1) and (2) TOGETHER are NOT sufficient.

37. Traditionally, the foundations of houses are made of concrete. A builder is experimenting with using a hard plastic polymer for foundations. A foundation made with the polymer is about the same price to construct and install a concrete foundation. Unlike concrete, the polymer will not block all water flow and is not prone to cracking with age. The builder argues that houses built with the polymer foundation will last longer.

    Which of the following must be studied in order to evaluate the argument presented above?

    A) Whether repairs to polymer foundations are more expensive than repairs to concrete foundations
    B) Whether soil acidity, to which all stone is resistant, can dissolve the polymer
    C) How dry the soil in this region becomes during typical summer droughts
    D) Whether residents will be able to smell the vapors that outgas from the polymer
    E) Whether consumers aiming to buy a house will trust a house with an alternate foundation

38. Three workers P. Q. R can do a certain job at their own rate separately. If X represents the ratio of the work-speed of P and R, and Y represents the ratio of the work-speed of Q and R. such that $X<Y$ and $Y<1$, who is the fastest worker of the three?

    A) P  B) Q  C) R  D) P & Q both  E) None of these

39. The number of people diagnosed with Chikungunya fever (which is contracted from the bite of an infected mosquito) in Dhaka this month is twice the number diagnosed last month. The authorities have concluded that measures to control the mosquito population have failed in this city.

    All of the following, if true, would cast doubt on the authorities conclusion except -

    A) more cases are now reported because of increases in administrative efficiency
    B) a very high proportion of the cases were in people who had recently returned from neighboring cities
    C) an effective diagnostic test was introduced about two months ago
    D) the disease is prevalent only in some industrialized cities which have shown a dramatic increase in population due to migration
    E) the incidence (number of cases per thousand) of dengue, also contracted from mosquito bites, has increased

**Questions 40 to 45:** Read the following paragraph and answer the questions below:

An artist is planning to exhibit his paintings in an auditorium. Seven paintings - F, G, H, J, R, S and U are to be exhibited, three in the south hall and four in the north hall. Four of the paintings - F, G, H, J are oil paintings and three - R, S and U are acrylic paintings. The artist will satisfy the following requirements in setting up the exhibit:

- Each hall will exhibit at most two acrylic paintings.
- G cannot be exhibited in the same hall as U.
- H cannot be exhibited in the same hall as R.

40. Which of the following groups could be placed in the north hall?
A) F, G, H and U B) F, H, S and U
C) G, H, R and U D) G, J, R and U E) J, R, S and U

41. If U and R are placed in the north hall, which of the following groups must be placed in the south hall?
A) F, G and H B) F, J and S
C) G, H and S D) G, H and U E) H, S and U

42. If S and U are placed in the south hall, each of the following must be placed in the north hall EXCEPT_____.
A) F B) G C) H D) J E) R

43. If S and R are placed in the south hall, which of the following must also be placed in the south hall?
A) F B) G C) H D) J E) U

44. If G and H are placed in the south hall, which of the following must also be placed in the south had?
A) F B) J C) R D) S E) U

45. If F and G are placed in the north hall, which of the following groups could be placed in the south hall?
A) H, J and S B) H, J and U C) H, R and U D) J, S and U E) R, S and U

**English Language**

**Questions 46 to 82:** Replace the underlined segment of each sentence with the phrase/word which represents the most appropriate usage of grammar.

46. After witnessing the declining sales trend, the company decided <u>in favor for a revised sales strategy.</u>
A) in favor for a revised sales strategy. B) favoring a revised sales strategy.
C) in favor of a revised sales strategy. D) to favor a revision for sales strategy.
E) on the favor of a revised sales strategy.

47. <u>John had such bad a sense of humor.</u> that nothing ever appealed to him as funny.
A) John had such bad a sense of humor, B) John had such a bad sense of humor,
C) John has such a bad sense of humor, D) So bad is John's sense of humor.
E) John is having such a bad sense of humor,

48. <u>It is mandatory that each of the workers have</u> safety equipment.
A) It is mandatory that each of the workers have
B) It is mandatory for each of the worker having
C) It is mandatory that each of the workers has
D) It is mandatory that the workers each having
E) It is mandatory to each of the worker for having

49. Who does this shop assistant think he is? He behaves as if he owns the grocery.
A) He behaves as if he owns the grocery. B) He behaves as if he owned the grocery.
C) He behaves as if he has owned the grocery. D) He behaves as if he is owning the grocery.
E) He behaves as if he would own the grocery.

50. The bus stop is not far away my office.
A) far away B) far than C) far from D) far out E) far off

51. You shouldn't have left the door open. Suppose a burglar hag broken into the house.
A) had broken into B) broke into C) have broken D) have broken into E) breaks

52. The dangers of a storm includes torrential rains, high winds and storm surges.
A) includes B) included C) including D) to include E) include

**Questions S3 to 57:** Read the following excerpt and answer the questions below:
In 1917 Marcel Duchamp took an ordinary mass-produced urinal, named it Fountain, signed his name at the bottom, declared it a work of art and placed it in a Paris museum. Medieval people would not have bothered to even argue about it. Why waste oxygen on such utter nonsense? Yet in the modern humanist world, Duchamp's work is considered an important artistic milestone. In countless classrooms across the world, first-year art students are shown an image of Duchamp's Fountain and at a sign from the teacher, all hell breaks loose. It is art! No it isn't! Yes it is! No way! After letting the students release some steam, the teacher focuses the discussion by asking "What exactly is art? And how do we determine whether something is a work of art of not?" after a few more minutes of back and forth, the teacher steers the class in the right direction: "Art is anything people think is art, and beauty is in the eye of the beholder." If people think that a urinal is a beautiful work of art - then it is. What higher authority is there that can tell people they are wrong? Today, copies of Duchamp's master piece are presented in some the most important museums in the world, including the San Francisco Museum of Modern Art, the National Gallery of Canada, the Tate Gallery in London and the Pompidou Centre in Paris. The copies are placed in the museums' showrooms, not in the lavatories.

Such humanist approaches have nad a deep impact on the economic field as well. Suppose Toyota decides to produce the perfect car. It sets up a committee of experts from various fields: it hires the best engineers and designers, brings together the finest physicists and economists, and even consults with several sociologists and psychologists. After five years of research and development, they unveil the perfect car. Millions of vehicles are produced, and shipped to car agencies across the world. Yet nobody buys the car. Does it mean that customers are making a mistake, and that they don't know what's good for them? No. In a free market, the customer is always right. If customers don't want it, it means that it is not a good car. It doesn't matter if all the engineers, mechanics, environmentalists and all the physiologists, priests and mullahs cry out from every pulpit that this is a wonderful car - if customers reject, it is a bad car. Nobody has the authority to tell customers that they are wrong.

53. What does the expression - "Why waste oxygen on such utter nonsense?" mean in line 3 of the first paragraph?
    A) Arguing on nonsense issues is nothing but wastage of energy
    B) Medieval people do not like to waste their breath talking about a urinal
    C) Medieval people had firm believe that an ordinary urinal cannot be art work; so they wouldn't waste their breath arguing on this
    D) In medieval period there was solid authoritative definition of good, bad and aesthetics; so people wouldn't waste their time and energy making subjective arguments
    E) None of these

54. What does the phrase 'Release some steam' mean?
    A) Taking sides on a controversial issue
    B) Releasing one's pent-up emotions
    C) Expressing strong opinions while being engaged in vigorous discussion
    D) Retorting to a proposition
    E) None of these

55. How is paragraph 2 linked to paragraph 1?
    A) Paragraph 1 discusses what can be an art whereas paragraph 2 discusses what should be considered as a good product
    B) Paragraph 2 provides an example of the theme discussed in paragraph 1
    C) Paragraph 2 presents the argument made in paragraph 1 in an economic context
    D) Paragraph 1 presents the humanist approach to art whereas paragraph 2 depicts the same in the context of business
    E) All of the above

56. Which one of the following would be the most appropriate title of the excerpt presented above?
    A) 'Beauty is in the Eyes of the Beholder'
    B) 'The Humanist Approach'
    C) 'Customers are Always Right'
    D) 'There is no Right or Wrong of Anything; All Depends on People's Feelings'
    E) The Humanist Approach to Art and Economy'

57. According to the excerpt presented above, what is the main idea of the Humanist Approach?
    A) There is no right or wrong of anything; all depends on people's feelings.
    B) No one can challenge a customer's choice.
    C) Customers and art viewers decide the value of the product/ art work.
    D) Art can be anything that people consider to be art. E) All of the above

**Questions 58 to 59:** Select the pair of words that best expresses a relationship similar to that expressed in the original pair.

58. Endure: Perseverance
    A) Reflect: Thoughts  B) Ridicule: Commendation
    C) Indifferent: Passion  D) Original: Creativity  E) Morality: Morale

59. Careful: Fastidious
A) Strict: Tyrannical B) Luxury: Rare
C) Warning: Foreboding D) Reign: Kingdom E) Scrupulous: Contemptible

**Questions 60 to 65:** Fill in the blanks with the word/pair of words which best fits the meaning of each sentence.

60. The performance of the young artist was so_____ that it left an_____ impression on my mind and made me look forward to their future endeavors.
A) compelling...indelible B) powerful...fleeting
C) uninspiring...enduring D) sensational...transient E) feeble...credible

61. Since the _____ of violent crimes has not decreased in years, it appears that more _____ consequences are necessary for those who commit these awful acts.
A) occurrence...amenable B) freuqency...averse
C) nature...tolerant D) increment..clement E) incidence...stringent

62. Although John likes to be _____ over the weekends, he is known as a very _____ employee at his workplace.
A) vivacious...earnest B) industrious...diligent
C) apathetic...passive D) lazy...reckless E) indolent...conscientious

63. Her husband's icy and aloof behavior told Nazia that her gifts had failed to _____ his anger.
A) appease B) agitate C) exacerbate D) aggrandize E) garner

64. Because she was typically correct about life's difficult dilemmas, my grandmother was sought after for her _____by friends and family.
A) bewilderment B) guile C) sagacity D) simplicity E) None of these

65. Completely impenetrable to the layperson, the text was _____ even to experts.
A) clear B) unequivocal C) abstruse D) obtuse E) equivocal

**Questions 66 to 70:** Read the following excerpt and answer the questions below:

Despite a long-term decline in the circus industry, Cirque du Soleil profitably increased revenue 22-fold over the last ten years by reinventing the circus. Rather than competing within the confines of the existing industry or trying to steal customers from rivals, Cirque developed uncontested market space that made the competition irrelevant. Cirque created what is called a blue ocean, a previously unknown market space. In blue oceans, demand is created rather than fought over. There is ample opportunity for growth that is both profitable and rapid. In red oceans existing companies in the industry compete to grab a greater share of limited demand. As the market space gets more crowded, prospects for profits and growth decline. Products turn into commodities, and increasing competition turns the water bloody.

There are two ways to create blue oceans. One is to launch completely new industries, as eBay did with online auctions. But it's much more common for a blue ocean to be created from within a red ocean when a company expands the boundaries of an existing industry. A blue ocean strategy encourages companies to focus less on their competitors and more on alternatives, while at the same time focusing less on their current customers and more on potential new customers. While

competitive strategy would advise companies to enter attractive industries and avoid unattractive ones, blue oceans can be created in any industries, be they attractive or unattractive, stagnant or fast growing, high tech or low tech. It is all about creating new market space rather than letting the existing market structure confine strategic choices.

Creating blue oceans builds brands. Along with Cirque, Southwest Airlines offers an example of successful blue ocean strategy execution. Southwest tapped into a customer base who preferred driving to air travel due to the lower cost. Instead of competing with other airlines, Southwest positioned itself as an alternative to cars and offered reduced prices, improved check-in times and increased flight frequency. Winners in a blue ocean strategy like Southwest, use 'value innovation' to drive their strategy. However, a blue ocean strategy is inherently disruptive and that makes it far riskier than a red ocean strategy.

66. The primary purpose of the passage is to:
    A) Highlight the necessity of favoring a blue ocean strategy over a red ocean strategy for business survival
    B) Describe how a blue ocean strategy can redefine the conventional boundaries of an industry
    C) Present arguments in favor of overlooking market competition since a blue ocean strategy can make it irrelevant
    D) Highlight the strong profit potential associated with a blue ocean strategy
    E) Emphasize the importance of coming up with radical innovations in order to implement a blue ocean strategy

67. A blue-ocean strategy involves:
    A) Finding ways to price the competition out of the market
    B) Drawing customers away from rivals by creating more value
    C) Strategically evaluating existing market offerings to find untapped niches
    D) Redefining industry norms to become the market leader
    E) Differentiating between an attractive industry and an unattractive one

68. A principal difference between a red ocean and a blue ocean is:
    A) A red ocean exists in a stagnant industry whereas a blue ocean originates in a growing industry
    B) Powerful brands are unlikely to exist in a red ocean
    C) Products offered in a blue ocean are not necessarily of superior quality, but more attuned to customer needs than those offered in a red ocean
    D) Any industry can become a red ocean over time, but blue oceans can be created in only a limited number of industries
    E) All of the above

69. All of the following are advantages of a blue ocean strategy except:
    A) It increases the number of strategic options available to a firm
    B) It can extend the life of a product that may have otherwise gone into decline
    C) It can make a company's product offering more appealing to the customer without necessarily requiring major financial outlays by the company
    D) It promises higher financial return since the blue ocean has high growth potential
    E) All of the above

70. A blue ocean strategy is called disruptive because:
   A) It tilts the balance of power in favor of suppliers rather than customers
   B) It essentially involves the creation of market offerings that are technologically superior and make the existing market offerings technologically obsolete
   C) It involves giving customers the impression that they are getting more value out of a market offering although the core product is essentially the same
   D) It challenges the status quo in an industry and redefines the competitive landscape
   E) It is riskier than a red ocean strategy

| **Section II: Descriptive Section** | **[30** |
|---|---|

**Question 1: Write an essay on "Sleep"** **[10 marks]**

**Question 2: Critical Writing** **[10 marks]**

**"Discipline and creativity don't go together."**

Discuss the extent to which you agree or disagree to the opinion stated above. Support your views with reasons and/or examples from your own experience, observations or reading.

**Question 3: Bengali Section**

a) Retranslate the following passage into Bengali. **[5 marks]**

The Institute of Business Administration, University of Dhaka, is the pioneer in rendering business education in Bangladesh. It is also the leading business school in the country. Commitment to the highest educational standards distinguishes IBA from other educational institutes in Bangladesh. This reputation has been achieved through a tradition of excellence and dedication to quality education and research. IBA graduates are highly sought after by the industry and IBA is proud of its students who have made outstanding contributions to various fields, both at home and abroad.

b) নিচের শব্দগুলো ব্যবহার করে ৫টি বাক্যের একটি অনুচ্ছেদ লিখুন, যা প্রদত্ত শিরোনামের সাথে সংগতিপূর্ণ। **[5 marks]**

বাংলাদেশ মোবাইল-ফোন চিটি উন্নত জীবনযাত্রা

প্রযুক্তি ও বাংলাদেশ

# Answer Key

## Section II: Mathematics

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1.B | 2.D | 3.D | 4.A | 5.B | 6.B | 7.B | 8.D | 9.C | 10.C |
| 11.E | 12.D | 13.A | 14.B | 15.B | 16.C | 17.D | 18.A | 19.B | 20.E |
| 21.D | 22.A | 23.B | 24.B | 25.B | | | | | |

## Section II: Analytical Ability

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 26.B | 27.C | 28.B | 29.D | 30.E | 31.E | 32.E | 33.B | 34.D | 35.B |
| 36.E | 37.B | 38.C | 39.B | 40.B | 41.C | 42.C | 43.B | 44.D | 45.B |

## Section III: Language and Communication

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 46.C | 47.A | 48.A | 49.B | 50.C | 51.A | 52.E | 53.A | 54.B | 55.C |
| 56.A | 57.A | 58.A | 59.C | 60.A | 61.E | 62.E | 63.A | 64.C | 65.C |
| 66.B | 67.C | 68.C | 69.E | 70.D | | | | | |

## Section I: Mathematics — 25 Questions: 25 Marks

1. **(B)** 800,000
   Azmal's shares= 20% = Tk. 500,000
   Moinul's and Nuru's total shares= (100-20) % =80%
   Moinul's share= 40% of Remaining 80% = 32% = Tk $\frac{32\times500000}{20}$ Tk 800,000.
2. **(D)** 20%
   Tax apply করার আগে কলমটির দাম = Tk 80
   Tax apply করার পরে কলমটির দাম = Tk. 96
   সুতরাং, Tax= Tk 16
   Tax Rate = $\frac{16}{80} \times 100\ \% = 20\%$.
3. **(D)** 1117
   Sum = -557-556-555-554-.....-1+0+1+.....+554+555+556+557+558+559
   = 0+0+0+0+.....+0+0+0+558+559
   = 1117
   -555 থেকে +557 পর্যন্ত সব সংখ্যার যোগফল 0 হয়। তাই, শুধু 558 and 559 যোগ করে আমরা উত্তর পাই।
4. **(A)** 308
   given, $a_n = 9 + a_{n-1}$ and $a_1 = 11$.
   So, $a_2 = 9 + a_1$
   $a_3 = 9 + a_2 = 9 + 9 + a_1 = 2x9 + a_1$
   $a_4 = 9 + a_3 = 9 + 9 + 9 + a_1 = 3x9 + a_1$
   ...
   ...
   $a_{34} = 33x9 + a_1 = 33x9 + 11 = 308$.

5. **(B)** 30
There are three cases when the price of the ticket will increase if it is bought one day later.
**Case 1:** The ticket was bought 5 days in advance and price would increase if it was bought one day later i.e. 4 days in advance.

This means Tk 252 is the price after 15% discount and Tk 306 is the total price of the ticket. But if we calculate we will find that after applying 15% discount on Tk 306 the amount is not Tk 252. So the ticket was not bought 5 days in advance.

**Case 2:** The ticket was bought 30 days in advance and price would increase if it was bought one day later i.e. 29 days in advance.

This means Tk 252 is the price after 30% discount and Tk 306 is the price after 15% discount. If we find the total price from both of these amounts then we can see that the total price is same i.e. Tk 360 for both amounts. So the ticket was actually bought 30 days in advance.

**Case 3:** The ticket was bought 60 days in advance and price would increase if it was bought one day later i.e. 59 days in advance. No need to check, since answer already found.

6. **(B)** 10
Total number of voters = 100.
Number of voters who did not respond 'Favorable' for either proposal is 40. So number of voters who responded 'Favorable' for either A or B or both is 60. So for voters who responded 'Favorable' AUB = 60, A = 40, B = 30.
So, $A \cap B = A + B - AUB = 40 + 30 - 60 = 10$

7. **(B)** $1/\sqrt{6}$
$\sqrt{(3/2)} - \sqrt{(2/3)} = (\sqrt{3} \times \sqrt{3} - \sqrt{2} \times \sqrt{2})/(\sqrt{3} \times \sqrt{2}) = (3 - 2)/\sqrt{6} = 1/\sqrt{6}$

8. **(D)** 4
দেওয়া আছে, if x is divided by 10, the quotient is y with a remainder of 4.
So, $x = 10y + 4$
এখন যদি X - কে 5 দিয়ে ভাগ করা হয়, the remainder will be 4, since 10y will be divisible by 5, but 4 will not be divisible.

9. **(C)** $6\sqrt{3}$
দেওয়া আছে, বৃত্তর পরিধি হয় $12\pi\sqrt{3} = 2\pi r$, so $r = 6\sqrt{3}$. Since AC is the diameter, $AC = 2 \times 6\sqrt{3} = 12\sqrt{3}$. Triangle ABC is a right angled triangle whose angles are 30, 60 and 90. So the ratio of the sides opposite to the angles will be,
$AB : BC : AC = 1 : \sqrt{3} : 2$
$AC = 12\sqrt{3}$
So, $AB = 6\sqrt{3}$

10. (C) 4
Positive Divisors of 75 = 1, 3, 5, 15, 25, 75.
So the positive multiples of 5 which are also the divisors of 75 = 5, 15, 25, and 75.
Answer is 4 integers.

11. **(E)** None of these
Suppose, the numbers in ascending order are A, B, 17, C, D. The average of A and D is 16 and that of B and C is 15. If minimum value of C is 18 then B must be 12. The maximum value of A can be 11. So the minimum value of D is 21. Answer is none of the options given.

12. **(D)** 478
Base fare = Tk 40
Distance charge = Tk 3.6 per 0.2 km = Tk 18 per km
Travelling time charge = Tk 180/hour = Tk 3/minute
Total distance = 6 kms
Total time = 110 mins
Total Charge = Tk 40 + Tk (6 x 18) + Tk (110 x 3) = Tk 478

13. **(A)** 2
Units digit of the sum of $3^{44}+5^{43}+2^{12}$ will be the units digit of sum of the units digit of $3^{44}$, $5^{43}$ and $2^{12}$. The units digit of $3^{44}$ is 1. The units digit of $5^{43}$ is 5. And the units digit of $2^{12}$ is 6. So the sum is 12. Therefore the units digit of the whole sum will be 2.

14. **(B)** Tk. 250
ধরি নেই, ক্রয় মূল্য = x. তাহলে, বিক্রয় মূল্য = 0.9x.
যদি সে 20% কম দাম এ ক্রয় করত, i.e. 0.8x এবং আরও Tk 55 দাম বাড়িয়ে বিক্রয় করত, then the profit will be 40%. That is, 0.9x + 55 = 140% of 0.8x
55 = 1.12x – 0.9x
x = 250.

15. **(B)** 12
Let the number of girls be x. Then the number of boys will be 2x - 3. এখন, একজন ছেলের জায়গায় একজন মেয়ে আসলে group- টায় ছেলে এবং মেয়ের সংখ্যা সমান হয়ে যাবে।
So, 2x – 3 -1 = x + 1
x = 5.
So total number of students in the class = x + 2x – 3 = 25 – 3 = 12.

16. **(C)** 174
There are 8 sections with 25 questions numbered from 1 to 25, in each section. So, in each section there are 12 even-numbered questions and 13 odd-numbered questions.
Total number of even-numbered questions = 8 x 12 = 96 and total number of odd-numbered questions = 8 x 13 = 104.
So, total number of questions answered correctly = 96 + ¾ x 104 = 174.

17. **(D)** 16q/3
Blue cars = 4 x Green cars and Green cars = 1/3 x Red cars.
So Blue Cars = 4/3 x Red cars = 4/3 x 4q = 16q/3

18. **(A)** 18
If we take the first three even integers – 2, 4, 6, we can't form a triangle, since 6 = 2 + 4.
But if we take 4, 6, 8, a proper triangle can be formed. So the smallest perimeter of the triangle = 4 + 6 + 8 = 18

19. **(B)** 4
Total distance walked = 104 miles and total time taken = 20 hours.
দ্বিতীয় দিন hiker- টি চার ঘন্টা বেশী হাঁটে এবং তার speed আরও 2 miles per hour বেশী ছিল প্রথম দিন এর তুলনায়
So the hiker walked for 8 hours on the first day and 12 hours on the second day.
Suppose his average speed on the first day was X miles/hour. So on the second day his average speed was (X + 2) miles/hour.
104 = 8 x X + 12 x (X + 2)
X = 4 miles/hour

20. **(E)** None of these
Given, if 30 liters of water is added to the tank when it is half full of water, the amount of water in the tank increases by 1/3. This means 1/3 of half of the tank is 30 liters. So half of the tank is 90 liters. So the maximum water holding capacity of the tank is 180 liters.

21. **(D)** 1/(2r+3)
ধরি নেই, Rana spend করে X taka এবং save করে Y taka. So his income is (X + Y) taka this year. Amount of money he will have for his spending next year will be Y x (1 + r) taka. If he wants his next year's spending to be half of this year's spending,
Y x (1 + r) = X/2
so, Y = X/(2 + 2r).
So fraction of his income to be saved this year = Y/( X + Y)
= {X/(2 + 2r)}/{X + X/(2 + 2r)}
= 1/(2r + 3)

22. **(A)** m/3
Suppose the daily wage for an office assistant is X. So the daily wage for an accountant is 4X
So, the total daily wage for one accountant and 8 office assistants = (4X+ 8X) = 12X = m
So, 4X = m/3.

23. **(B)** 58
Area of the rectangular field is 240 sq. ft. One side of 10 feet is to be left uncovered. So the field has a side equal to 240/10 =24 ft.
Required feet of fencing = 24 +10 +24 = 58.

24. **(B)** 10
Suppose, the market price of 1 pen is 100.
Cost Price of 40 pens = 36 x 100 = 3600
Selling price of 40 pens with 1% discount on market price = 40 x 99 = 3960
Profit = 3960 – 3600 = 360
Percentage of profit = (360/3600) x 100 % = 10%.

25. **(B)** 250
The 1st and 3rd place of the number should be filled up with any of the five odd numbers – 1, 3, 5, 7 or 9. And the 2nd place can be filled with any of the ten numbers from 0 to 9.
So the number 3 digit numbers which can be formed = 5 x 10 x 5 = 250.

## Section II: Analytical Ability

### Question 26 - 30

Conditions
i. 'J' অবশ্যই ২য় দিনে করতে হবে।
ii. 'P' অবশ্যই সকালে করতে হবে।
iii. K ও M একসাথে করতে হবে।
iv. 'J' করার পূর্বে M ও O শেষ করতে হবে।
v. P ও S এর পূর্বে O শেষ করতে হবে।

26. **(B)** যেহেতু 'J' এর পূর্বে M এবং O করতে হবে। আবার K ও M একসাথে করতে হয়। সুতরাং 'K' অবশ্যই 'J' এর পূর্বে শেষ করতে হবে।

27. **(C)** যেহেতু 'P' সকালেই করতে হবে, So option B, D বাদ এখন, P এর আগে O শেষ করতে হবে, তাই প্রথম দিন সকালে P করা possible নয়। So, P earliest করা possible morning of second day.

28. **(B)** Condition অনুযায়ী, J এর আগে M এবং O করতে হবে, আবার K ও M একসাথে করতে হবে, So, J, ২য় দিন সকালে করলে, প্রথম দিনে K, M এবং O শেষ করতে হবে। তাই option থেকে Answer হল K.

29. **(D)** According to Condition, for any given mooring/afternoon, maximum দুটো Step করা possible এখন, HL প্রথম দিনে করলে, প্রথম দিনে maximum আরও দুটো Step করা যাবে, যেহেতু, J করার পূর্বে K, M, O তিনটা Step-ই শেষ করা লাগবে এবং K ও M একসাথে করতে হবে, So, প্রথম দিনের বাকি দুটো কাজ হবে K ও M, এখন, দ্বিতীয় দিন সকালে যদি 'O' করা হয় হবে, P Step সম্পন্ন করার জন্য একটাই possible option থাকে তা হল, The morning of third day. যেহেতু P সকালে করতে হবে। So Answer 'P'.

30. **(E)** যদি experiment দুই দিনেই শেষ করতে হয়, তবে S অবশ্যই ২য় দিয়ে করতে হবে। কেননা K, M, O, J এর পূর্বে করতে হবে এবং O→P ও S এর আগে করতে হবে, তাই প্রথম দিনের ৪টি Step এর মধ্যে ৩টি হবে K, M, O, এখন যেহেতু S অবশ্যই O এর পরে করতে হবে, তাই S কে প্রথম দিনে করা possible নয়। তাই So Answer 'S'.

31. **(E)** According to the questions X ও Y এর Average 20. কিন্তু X ও Y পূর্ণসংখ্যা বা Positive number এখন কিছু বলে দেওয়া নেই।
Statement-1 এর ভিত্তিতে Z এর Value 5 থেকে 8 এর ভিতরে যে কোন number হতে পারে।
ঠিক একই ভাবে statement-2 থেকে X এর উপর depend করে Z এর অনেক ধরনের Value হওয়া possible.
এমনকি দুটো statement এর information ব্যবহার করে ও Z এর specific value বের করা possible নয়।

32. **(E)** Khulna তে আমের Production কত তা না জেনে এই Question Solve করা Possible নয়।
Statement- 1 থেকে যদিও নাটোর এর Production পাওয়া যায় না।
Statement -2 তে বলা হবে Khulna-র Climate আমের Production এর জন্য খুব একটা ভালো নয়, কিন্তু এই তথ্য থেকে এই Conclusion এ আসা সম্ভব নয় যে Khulna-য় কোনো আম উৎপাদিত হয় না।
তাই দুটো Statement use করেও Answer বের Possible করা নয়।

33. **(B)** Statement-1 থেকে বের করা Possible নয়, কেননা total profit না জানা থাকলে শুধু fraction দিয়ে actual value বের করা Possible নয়।
Statement -2 থেকে বের করা সম্ভব, কেননা যদি Faisal $\frac{1}{3}$ পায়, তবে তার প্রত্যেক বন্ধু পেয়েছে
$\left(1\frac{1}{3}\right) : \frac{2}{3}$ এর $\frac{1}{3}$ অংশ
So according to question যদি total profit x হয়, $2x\ \frac{2x}{9} = 48000$
এই Equation solve করলেই Answer পাওয়া যাবে।

34. **(D)** Statement -1: ধরি, Tank A holds = x Liter
∴ Tank B holds = x-600 Liter
প্রশ্নমতে, x - 100 = 3 (x-600 - 100)
এই Equation solve করে Ans বের করা সম্ভব।
Statement -2: ধরি, Tank B holds = x Liter
∴ Tank A holds = 2.5x Liter
প্রশ্নমতে, 2.5x - 100 = 3 (x - 100)
এই equation solve answer বের করা সম্ভব।

35. **(B)** Statement -1 থেকে বের করা Possible নয়.
Statement -2: যদি ধরেনি, center হবে Chord এর distance 4 তখন, Chord এর length হয় 6 কিন্তু যেহেতু distance 4 থেকে ছোট, length অবশ্যই 6 থেকে বেশি।

36. **(E)** This question asks for the exact amount of initial contribution made by P, Q and R. Although statement (1) tells us the exact relation between the contributions of P and Q, there are no data to relate the exact contribution of R to either P or Q. Hence, no equation can be formed to determine their contributions.

37. **(B)** The conclusion of this question focuses on the fact that the foundation made by polymer would last longer than the concrete foundation. Therefore, we need to evaluate whether there is any scope to undermine statement. Statement (B) states that stone can resist soil acidity and polymer cannot, meaning that polymer foundation will become weak overtime. Hence, if this study is carried out, then the argument presented above can be properly evaluated.

38. **(C)** We know that the absolute (পরম মান) of a fraction (ভগ্নাংশ) depends on the difference of value of the numerator and the denominator. If the value of the numerator is smaller than the denominator, then the fraction will have a value that will be less than 1, and if the value of the numerator is greater than the value of the denominator, then the value of the fraction will be greater than 1. This concept can be applied to this problem.
X represents the ratio of work-speed of P and R, which is, X=P/R.
Y represents the ratio of work-speed of Q and R, which is, Y=Q/R.
Given that, X<Y and Y<1, therefore, the value of both X and Y are less than 1 and greater than 0, since working speed cannot be negative.
Since in both the fractions, the value is less than 1 and they have the common denominator R, we can say that the work speed of R is clearly greater than that of P or Q.

39. **(B)** The conclusion states that the measures taken by the authority have failed. In order to 'cast doubt' or weaken this conclusion, we need to highlight a scenario that depicts that Dhaka is safe from Chikungunia and the people diagnosed by this disease may have been affected by it from another place. Therefore, statement (B) is the best answer, which states that people who have been diagnosed by this disease have recently come from neighboring cities and they may have been affected by the disease from there.

40. **(B)** G and U cannot be placed in the same hall and all three acrylic paintings; R, S and U cannot be placed in the same hall. These two conditions eliminates 4 of the given options and which only leaves us with the correct answer.

41. **(C)** Since U and R are placed in the north hall, then G and H must be placed in the south hall as per the given conditions. Again, since all three acrylic paintings (R, S and U) cannot be placed in the same hall, thus S must also be placed in the south hall.

42. **(C)** Since S and U are two of the acrylic paintings and all of them cannot be placed in the same hall(in this case the south hall), then R must be placed in the north hall. Again, as R must be placed in the north hall, therefore, H has to be placed in south hall as per the given condition.

43. **(B)** If S and R are placed in the south hall, then U must be placed in the north hall since all three acrylic painting cannot be placed in the same room. Again, as U is placed in the north hall, G cannot be placed there and hence must be placed in the south hall as per the given condition.

44. **(D)** If G and H are placed in the south hall, then we must put U and R in the north hall as per the given conditions. Again since all three acrylic painting cannot be placed in the same hall, we must put the remaining acrylic painting, S, in the south hall.

45. **(B)** We must remember that we can put three painting in the south hall and four paintings in the north hall. If we put F and G in the north hall, we must put U in the south hall. We must also keep in mind that R and H must me in different halls, so we can put R in the north hall and H in the south hall. So, H and U can be put together in the same room along with another remaining painting (S or J). By evaluating the given options, we can say that option "B" is the correct answer.

**Section III: Language and Communication**

46. **(C)** the correct phrase is: "in favor of"

47. **(A)** The first clause needs to be in the past tense i.e. use "had". The format should be: *such+a+adjective+noun*

48. **(A)** The sentence has a subjunctive mood. So, the base of form of the verb (in this case "Have") should be used.

49. **(B)** as if/as though এর আগে simple persent থাকলে as if/as though এর পরে simple past বসে।

50. **(C)** "From" is commonly used after "far" to denote the distance between two places.

51. **(A)** structure: *modal verb+have+past participle*

52. **(E)** Subject (The dangers) is plural and the tense will be simple present since the sentence is a universal fact (সার্বজনীন সত্য)।

53. **(A)** The question expects a general meaning of the expression, NOT in terms of medieval people.

54. **(B)** Releasing one's pent-up emotions- দমিয়ে রাখা আবেগ মুক্ত করা।

55. **(C)** Paragraph 2 provides an example of the theme discussed in paragraph 1 that there is no higher authority that can dictate what is art; it is determined by the audience and what they find appeasing.

56. **(A)** 'Beauty is in the Eyes of the Beholder' অর্থাৎ ভিন্ন ভিন্ন দর্শকের কাছে সৌন্দর্যের সংজ্ঞাও ভিন্ন ভিন্ন। সৌন্দর্যের কোন নির্দিষ্ট মানদণ্ড (definite standard) নেই।

57. **(A)** There is no right or wrong of anything; all depends on people's feelings- সঠিক বা ভুল বলে কিছু নেই, প্রত্যেকের স্বীয় অনুভূতির উপর কোনটা ভুল ও কোনটা সঠিক তা নির্ধারিত হয়।

58. **(A)** **Verb**: **Noun** where the verb is an action acted upon due to the presence of the noun.

59. **(C)** Synonyms

60. **(A)** The use of "an" before the 2nd blank automatically narrows it down to 2 options, A) & C). Between these, A) has a cause and effect relationship while the other doesn't.

61. **(E)** incidence= occurrence, stringent= strict

62. **(E)** indolent= lazy, conscientious= careful

63. **(A)** appease= pacify (শান্ত করা)

64. **(C)** sagacity= wisdom

65. **(C)** abstruse= obscure (অস্পষ্ট)

66. **(B)** Describes the scope of blue ocean strategy but doesn't suggest taking it up over red ocean strategy

67. **(C)** Strategically evaluating existing market offerings to find untapped niches

68. **(C)** C) Products offered in a blue ocean are not necessarily of superior quality, but more attuned to customer needs than those offered in a red ocean

69. **(E)** All of the above

70. **(D)** It challenges the status quo in an industry and redefines the competitive landscape

## Section II: Descriptive Section [30 Marks]

**Answer no. 1**
**Sleep**

The necessity for sleep is obvious, for thereby man gives rest to his tired brain, restores the vigour of this body, and fits himself once more for the labours of the coming day. It is a gentle consoler, often having the power to drive away the sorrows of the wretched and banish the pain of those who lie in torture upon a bed of sickness.

Though universally beloved as a great blessing, it is a mysterious thing. In moments of thoughtfulness, it is impossible to reflect without surprise that man resigns himself to sleep so carelessly and cheerfully.

He enters a state of oblivion from which he may never awake, and deliberately loses consciousness of his surroundings, though knowing that he is deaf to any danger that may approach.

Most pitiable is the condition of those who are unable to sleep, whether the inability comes from physical pain which will not allow the body to rest, or from sorrow or remorse which banishes from the mind its natural healer. Pain indeed is one of the most common causes of sleeplessness.

Excessive fatigue, or idleness, also will often cause long and dreary nights, and only those who have suffered thus, can realise with what intense impatience the coming of the dawn is awaited.

The injuries that sleeplessness is responsible for, are many and far-reaching in their effects. When mind and body cannot rest, they cannot recuperate or restore their shattered energies. They grow feebler and feebler, until at length the mind ceases to perform its functions and the man becomes mad.

The body is not so quickly affected, but continuous absence of sleep will gradually take away and finally destroy its power. A healthy man does not suffer from this evil. It is necessary, therefore, to keep body and mind sound and healthy. They should both be made to work, the harder the better, so long as they are not subjected to over-fatigue.

Only wholesome food should be eaten, and that in moderation. Rational amusements should be cultivated, which will chase away worry and trouble and prevent unnecessary brooding. Vice and over-indulgence in any form should be avoided, and all important is the maintenance of regular habits.

**Answer no. 2**

**"Discipline and creativity don't go together."**

Often in my creative conquests, I have found out that discipline needs to be forgone. Based on my own experiences, I believe discipline and creativity do not go together.

Firstly, creativity is a spontaneous process. It can not be constricted by hard and fast rules. It is not something that can be forced out of one like clockwork. Creativity comes to you and when it does, you can produce masterpieces.

Secondly, creativity defies the fastidious discipline of prioritization. Creativity often finds itself fixated on one passion project even when encumbered by other more important assignment. Therefore, you can not schedule creativity through discipline.

Thirdly, most of the creative minds who have etched their names on the pages of history, decided at an early age to detach themselves from institutionalized education due to the enforced "discipline". If anything, this is a glowing testament to how creativity is best flourished when it is not bound by discipline; rather, it is let to flow freely and amplify its own beauty.

On the contrary, discipline does help one in a few cases. Discipline ensures that the body and mind is reinvigorated to think freely. An exasperated brain often fails to conjure creativity. Therefore, discipline is required to some extent in order to ensure a sound mind.

In a nutshell, discipline only goes with creativity when it does not tie down a free-thinking process. Discipline serves as a catalyst to a creative mind in cases, but ore often than not, creativity and discipline do not go together.

**Answer no. 3 (A)**

ঢাকা বিশ্ববিদ্যালয়ের ব্যবসায় প্রশাসন ইন্সটিটিউট বাংলাদেশে ব্যবসায় শিক্ষা প্রবর্তনের পথিকৃৎ। ইন্সটিটিউট দেশের মুখ্য ব্যবসায় প্রতিষ্ঠান। শিক্ষার সর্বোৎকৃষ্ট মান নিশ্চিত করার প্রতিশ্রুতি আই,বি,এ-কে অন্যান্য শিক্ষা প্রতিষ্ঠান থেকে আলাদা করে রাখে। শ্রেষ্ঠত্বের ঐতিহ্য এবং গুণগত শিক্ষা ও গবেষণার প্রতি আত্মোৎসর্গের মাধ্যমে এই খ্যাতি অর্জিত হয়েছে। শিল্পের বিভিন্ন ক্ষেত্রে আই,বি,এ-এর স্নাতকরা অন্বেষিত হয়ে থাকে এবং আই,বি,এ তার শিক্ষার্থীদের নিয়ে গর্বিত যারা দেশে-বিদেশে বিভিন্ন ক্ষেত্রে অসামান্য অবদান রেখেছে।

**Answer no. 3 (B)**

<u>প্রযুক্তি ও বাংলাদেশ</u>

বিশ্বায়নের প্রভাবে বাংলাদেশ বিজ্ঞান ও প্রযুক্তির ক্ষেত্রে আজ বৈপ্লবিক পরিবর্তনের দোরগোড়ায়। আর এ প্রযুক্তির প্রভাবে ব্যাপকতার নমুনাস্বরূপ আমরা এখন প্রায় সকলের হাতেই দেখি মোবাইল-ফোন। এখন চিঠির পরিবর্তে এ মোবাইল-ফোনের ব্যবহার যোগাযোগ ব্যবস্থাকে নিয়ে এসেছে আমাদের হাতের মুঠোয়। উন্নত জীবনযাত্রার মান নিশ্চিত করার ক্ষেত্রে প্রযুক্তির অবদান অনস্বীকার্য। তাই দেশের সকল ক্ষেত্রে প্রযুক্তির যথাযথ ব্যবহার করে দেশকে উন্নতির দ্বারপ্রান্তে নিয়ে যাওয়া আমাদের সবার লক্ষ।

# BBA (IBA)

## Admission Test Question (2019-2020) with Solution

# Part I: Multiple Choice Questions (MCQs)

**Section I: MCQ** — **70 Questions: 70 Marks**

## SECTION I; ENGLISH LANGUAGE AND COMMUNICATION

**Questions 1 to 5:** In the passage that follows, certain segments are underlined and numbered. Each numbered question below relates to the corresponding underlined part. (For instance, Question 1 relates to the underlined segment that is numbered 1). Read the passage carefully and choose the most appropriate answer for each question.

Do you want your kids to grow up to be successful? If yes, make them do chores. When they balk (and trust me, they probably will), you can tell them that scientific research supports you.

In a Harvard Grant Study, researchers identified two things that people need in order to be happy and successful. The first is love. The second is work ethic.

(1) Developing Work ethics in young people is not easy. Based on the experience of 714 high-achievers who were part of the study (including people like future President, Kennedy), there's a consensus.

The study found that professional success in life (2 comes from chores done as a kid. "The earlier you start, the better," according to Lythcott-Haims, editor of 'How to Raise an Adult'. "A roll-up-your-sleeves-and-pitch-in-mindset, a mindset that says, (3) there's some unpleasant work, someone's got to do it, might as well be me-that's what gets you ahead in the workplace."

(4) Here's the drawback, It's that having your kids do chores doesn't necessarily wind up being less work for you as a parent. But sometimes, even if you could do a job perfectly, you have to let someone else do it, even if just passably, (5) if you want, the other person to learn from experience. It's the same principle whether we're talking about training soldiers for the army, or letting kids empty the dishwasher.

1. What would the passage lose if the underlined segment were omitted?
   A) There would be no impact on the passage
   B) It would lack realism, since it would imply that the authors are expecting children to do chores just as well as adults
   C) It would fail to highlight that practice is sometimes more important than perfection
   D) It would fail to highlight that the findings of the study are applicable to children as well as to professionals
   E) It would make teaching children to do chores sound easier than it actually is

2. What is the best way to introduce the third paragraph?
   A) No change
   B) The research shows that there are many different ways to create work ethics in young people
   C) Now, what's the best way to develop work ethics in young people?
   D) There are differences between high-achievers and low-achievers
   E) Love is, of course, the most valuable gift we can give to our children

3. How would you replace the underlined segment to make it correct? '
   A) No change
   B) came from doing chores as a Kid
   C) will come from chores we did as a kid
   D) comes from having done chores as a Kid
   E) comes from chores we do as a kid

4. What does this sentence highlight about good work ethic?
   A) Good work ethic is about taking up more than your fair share of responsibility
   B) Good work ethic involves taking up certain essential tasks even if these are not very likable
   C) Good work ethic is about striving for success despite the odds
   D) Good work ethic is about learning to like unpleasant tasks
   E) None of the above

5. What would the passage lose if this sentence were omitted?
   A) There would be no impact on the passage
   B) It would lack balance, due to overemphasis on the positive aspects of teaching chores
   C) It would lose a critical link to the final paragraph
   D) It would make the entire passage less convincing
   E) It would lose a major argument against teaching chores to kids

**Questions 6 to 9:** Select the most appropriate word(s) to fill in the gap(s).

6. _____that the photographer is adept in seeking out and capturing, with humanity and grace, each little _____ of everyday life in the city.
   A) It was said .... obscurity
   B) Apparently ... nuance
   C) It is evident... epiphany
   D) It was proclaim ... aspect
   E) As professed ... beauty

7. It .is our _____ that all individuals show self-control in the actual hour of _____.
   A) elusive belief... crises
   B) delusive belief... crisis
   C) illusive thought... adversity
   D) false believe ... crisis
   E) illusion ... crises

8. The teacher was a man of liberal spirit, _____ to narrow views and _____uniformity.
   A) constitutionally diverse ... forcible
   B) organically averted ... coerced
   C) constitutionally averse ... enforced
   D) opposed ... inscribed
   E) inclined ... sundry

9. Competition often breeds _____ because copying what a competitor is doing and benefitting from doing so often reduces the _____ of adopting a particular strategy or technology.

A) initiation ... uncertainty
B) emulation ... certainty
C) formulation ... uncertainty
D) imitation ... uncertainty
E) invention ... certainty

**Questions 10 and 11:** Identify the correct sequence of the group of sentences.

10. i) Before partnering with a marketing agency, make sure you do your due diligence.
ii) Unfortunately, it's also made it easier for scammers to deflect detection and slip in under the radar.
iii) Digital transformation has changed our marketing capacity for the better.
iv) Begin by reviewing its website; if basic elements are not available or difficult to find, take that as a major red flag.

A) iv, ii, iii, I B) iii, i, iv, ii C) i, ii, iii, iv D) iii, ii, i, iv E) ii, iii, i, iv

11. i) Melting glaciers have also added challenges for mountaineers.
ii) Their concerns were voiced at a meeting of the International Climbing and Mountaineering Federation this week.
iii) Mountaineering in some parts of the world is becoming riskier because of climate change, climbing experts and scientists warn.
iv) They say warming in the Alps has thinned ice and snow cover, resulting in frequent rock-falls and landslides.

A) i, iii, iv, ii B) iv, i, ii, iii C) iii, iv, ii, i D) iii, i, iv, ii E) iv, ii, i, iii

**Questions 12 to 15:** Read the following paragraph and answer the questions.

Scholars once proclaimed that the agricultural revolution was a great leap forward for humanity. They told a tale of progress fueled by human brain power. Evolution gradually produced ever more intelligent people. Eventually, people were so smart that they were able to decipher nature's secrets, enabling them to tame sheep and cultivate wheat. As soon as this happened, they cheerfully abandoned the grueling, dangerous, and often **spartan** life of hunter-gatherers, settling down to enjoy the pleasant, satiated life of farmers.

That tale is a fantasy. There is no evidence that people became more intelligent with time. Foragers knew the secrets of nature long before the Agricultural Revolution, since their survival depended on an intimate knowledge of the animals they hunted and the plants they gathered. Rather than heralding a new era of easy living, the Agricultural Revolution left farmers with lives generally more difficult and less satisfying than those of foragers. Hunter-gatherers spent their time in more stimulating and varied ways, and were less in danger of starvation and disease. The Agricultural Revolution certainly enlarged the sum total of food at the disposal of humankind, but the extra food did not translate into a better diet or more leisure. Rather, it translated into

population explosions and pampered elites. The average farmer worked harder than the average forager, and got a worse diet in return. The Agricultural Revolution was history's biggest fraud. Who were responsible? Neither kings, nor priests, nor merchants. The culprits were a handful of plant species, including wheat, rice and potatoes. These plants domesticated Homo Sapiens, rather than vice versa.

12. An underlying objective of this extract is to establish that -
    A) Greater leisure time is not beneficial for Homo Sapiens.
    B) Farmers had lower mortality rates.
    C) Domestication of plants and animals was a monumental discovery.
    D) The Agricultural Revolution has not been properly documented.
    E) Domestication of plants and animals was not a groundbreaking phenomenon.

13. According to the extract, which one of the following is NOT an outcome of the Agricultural Revolution:
    A) Greater population
    B) Elite class of society
    C) Greater protection from illness and malnutrition
    D) Longer working hours
    E) Less varied lifestyle

14. The word "spartan" in line 4 can be best substituted with:
    A) embellished B) opulent C) frugal D) reticent E) insipid

15. Why can we conclude from the extract that foragers were not less intelligent than the farmers?
    A) The foragers had more leisure time
    B) The farmers had a more stimulating lifestyle
    C) The foragers had a better diet
    D) The foragers must have had knowledge regarding plants and animals for their survival
    E) None of these

**Questions 16 to 22:** Choose from the options the pair that expresses a relationship similar to the original pair of words.

16. Refulgent: Ambience
    A) Accolades : Success B) Striking : Memories C) Derelict: Shambles
    D) Ominous : Atmosphere E) Scanty : Reservoir

17. Poem : Connotation
    A) Artist: Genre B) Mystery : Evidence
    C) Childhood : Petrichor D) Sacrilege : Morality E) Cuisine: Piquancy

18. Magician: Feint
    A) Monk: Loneliness  B) Writer: Illusion
    C) Athlete: Tactics  D) Artist: Accomplishment  E) Explorer: Discovery

**Questions 19 to 22:** Each of the following consists of the same statement, constructed differently. Choose the sentence construction which is grammatically correct.

19. A) In a rare instance of oversight, his application was rejected by the company.
    B) In a rare instant of oversight, his application was rejected by the company.
    C) In a rare instance of oversight, the company rejected his application.
    D) In a rare instant of oversight, the company rejected his application.
    E) In a rare instance of oversight, he found his application rejected by the company.

20. A) Despite the validity of some of the management's claims, there was blatant hostility from the workers.
    B) Despite their validity, some of the management's claims faced blatant hostility from the workers.
    C) Although some of the management's claims had validity, the workers responded with blatant hostility.
    D) Despite the validity of some of the claims made by management, there was blatant hostility from the workers.
    E) Despite their validity, workers responded with blatant hostility to some of the claims made by management.

21. A) Baker saw the driver of the car that had hit him in the theatre.
    B) Baker saw the driver of the car who had hit him in the theatre.
    C) In the theatre, Baker saw the driver who has hit him with the car.
    D) Baker saw, in the theatre, the driver of the car by whom he has been hit.
    E) In the theatre, Baker saw the driver of the car by which he had been hit.

22. A) Success often finds those who works hard.
    B) Success often finds who works hard.
    C) Success often finds those who work hard.
    D) Success finds often those who work hard.
    E) Success has often found those who have work hard.

**Questions 23 to 25:** Choose the option where the underlined word(s) has been used ***correctly.***

23. i) Bland, banal music tinkled discreetly from hidden loudspeakers.
    ii) Social structures are not discreet objects: they overlap and interweave.
    iii) The spy was discreet while sneaking into the locked building.
    A) i only  B) ii only  C) i and iii  D) ii and iii  E) i, ii and iii

24. i) The arsonist presumably harbours a grudge against the company,
ii) These woodlands once harboured a colony of red deer,
iii) Rina is known to harbour old magazines, books and various collectibles.
A) i only B) ii only C) iii only D) i and ii E) i.ii and iii

25. i) The gallant soldiers lost their lives so that peace might rein again.
ii) The young film-makers were given free rein to experiment with new themes and techniques.
iii) We must rein our emotions and not be swayed by them.
A) iii only B) ii only C) i and iii D) i and ii E) ii and iii

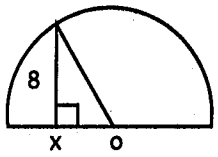
**SECTION II: MATHEMATICAL PROBLEM SOLVING**

26. One laptop seller is planning to increase the price/laptop by BDT 10,000 from the next month. Market research shows that with this increase in price he will be able to sell 6 fewer laptops in the next month but the total revenue will increase by BDT 32,000 to BDT 760,000. What is the number of laptops the seller will sell in the next month at this new price?
A) 16 B) 20 C) 26 D) 32 E) 36

27. A wholesaler ordered 120 units of a certain product from its producer. The product would be sold at a price of BDT 500 each which was marked 20% over its initial cost. However, the wholesaler could not sell 12 units of that product which were returned to the producer for a refund of 50% of the wholesaler's initial cost. What was the wholesaler's approximate profit or loss as a percentage of his initial cost for the 120 units?
A) 6% Loss B) 13% Loss C) No Loss or Profit D) 6% Profit E) 13% Profit

28. In an excel sheet, there are 5 rows and 5 columns where you can put either 5 or 10. Suppose the number of 5s in $x^{th}$ row of the table is x-1 for each row. What is the arithmetic mean of all the numbers in the table?
A) 5 B) 6 C) 7 D) 8 E) None of these

29.




In the figure, O is the center of a semicircle and X is a point few meters left to it. If the area of the semi-circle is $50\pi$ square meter and height of the inner right triangle is 8 meters, what is the length of XO?
A) 4 meters B) 5 meters C) 6 meters D) 8 meters E) 10 meters

30. Karim takes 2 days longer than Rahim to produce x units of products. At these rates, Karim & Rahim together take 2 days to produce $5/6^{th}$ of x units. How many days would Karim take to produce 3x units of this product?
A) 4 days B) 6 days C) 12 days D) 18 days E) None of these

31. One City-bus charges BDT 'p' for the first half-kilometer of a trip and BDT 'p/8' for each additional half- kilometer. What is the charge for a trip whose distance in kilometers is the whole number 'q'?
A) (7p + 2pq)/8 B) 8/(7p + 2pq) C) (8p + pq)/8
D) Cannot be determined E) (4p + pq)/4

32. S = {16, 9, 23. X, 13, 16}
In list S, the mean, median and mode are all equal to one another. What is the value of X?
A) 15 B) 16 C) 19 D) 29 E) 36

33. What is the difference between the sum of the 5 largest and 5 smallest three digit numbers?
A) 4475 B) 4470 C) 4485 D) 4490 E) 4495

34. If $-1<x<0$, which of the following expressions has the greatest value?
A) $1-x$ B) $1+x$ C) $1+x^2$ D) $1-1/x$ E) $1+1/x$

35. If $|X+3| < 5$, then which of the following cannot be true?
A) $X>1$ B) $X=0$ C) $X<-6$ D) $X<-9$ E) None of these

36. If the average of five distinct positive integers is 10, what is the difference between the largest and the least possible values of the greatest of the five integers?
A) 0 B) 5 C) 12 D) 28 E) 32

37. If $a/b<c/d$, and none of a, b, c, and d is equal to 0, which of the following must be true?
A) $-a/b>c/d$ B) $|a/b|<|c/d|$ C) $b/a<d/c$ D) $-a/b>-c/d$ E) None of these

38. Fill in each of the empty spaces between the numbers in the following series with symbols +, -, / and × (use each symbol only once and no parenthesis). What is the least possible value of the result? 1__3__5__7__9 =?
A)-5.29 B)-57.67 C)-61.4 D)-2.3 E)-3.29

39. In a flight of 600 km, an aircraft was slowed down due to bad weather. Its average speed for the trip was reduced by 200 km/hr and the time of flight consequently increased by 30 minutes. The duration of the flight was:
A) 1 hour B) 1.5 hours C) 2 hours D) 2.5 hours E) 3 hours

40. A long rope has to be cut to make 23 small pieces. If it is double folded to start with, how many times does it need to be cut?
A) 9 B) 11 C) 12 D) 23 E) None of these

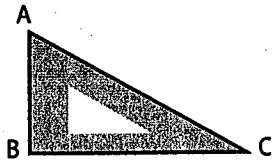
41. The population of a country increased by an average of 1% per year from 2016 to 2019. if the population of this country was 21 million on December 31, 2019, then the population of this country on January 1, 2016, to the nearest thousand had been _____

A) 20400 B) 20200 C) 20000 D) 18000 E)15000

42. The three solutions of the equation f(x) = 0 are -2, 0, and 3. Therefore, the three solutions of another equation f(x - 2) = 0 are:

A)-4,-2, and 1 B)-2,0 and 3 C) 4, 2, and 5 D) 0, 2 and 5 E) None of these

43.




The shaded region in the figure above represents a frame shaped as a right triangle with sides AB =15cm and AC = 17cm. The frame ABC encloses a picture, shaped also as a right triangle, whose area is 1/2 of the area of the frame. What is the length of the hypotenuse of the triangular picture if the length of the other two sides is 14cm?

A) $2\sqrt{34}$ cm B) $\sqrt{89}$ cm C) $2\sqrt{29}$ cm D) $2\sqrt{130}$ cm E) $2\sqrt{6}$ cm

44. The price of one kilogram (kg) sugar is 175% of the price of one kg salt. If 7 kgs of sugar and 5 kgs of salt cost BDT 690, what is the difference between the prices of one kg sugar and two kgs salt?

A) BDT 10 B) BDT 15 C) BDT 25 D) BDT 30 E) BDT 35

45. If $-8 \leq x \leq 2$ and $-4 \leq y \leq 10$ which of the following represents the range of all possible values of xy?

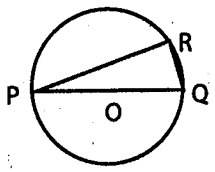
A) $-8 \leq xy \leq 20$ B) $-80 \leq xy \leq 32$ C) $-32 \leq xy \leq 20$

D) $-8 \leq xy \leq 32$ E) None of these

46. The average age of a team is 32.7 years. The average age of the males in the team is 33.2 years and the average age of the females Is 32.2 years. What is the ratio of the number of females to the number of males in the team?

A) 3:2 B) 1:1 C) 3:5 D) 2:3 E) 1:2

47.




In the figure above O is the center of the circle and PQ is the diameter and angle P = 30 degrees. If the length of PR is 12 cm, what is the area of the circle?

A) 144 7T B) 487T C) 288 TT D) 216 TT E) 96 TT

**Questions L 48 to 5Q :** Answer the following questions using the information below.
A sum of BDT 200 will be divided among 5 swimmers, named Emran, Durjoy, Chopol, Billal and Anabi, who have just finished a swimming competition. Everyone will receive at least BDT 5 and no two swimmers will receive the same amount of money. Emran has come 1st and will get BDT 80; Durjoy has come 2nd, Chopol is 3rd, Billal is 4th and Anabi is last. Moreover, the distribution of money is subject to the following conditions:

- No one will get any fractional amount of money.
- The swimmer who finishes earlier must receive more money than the swimmer(s) he defeats..

48. What are the greatest and least amount of money, consecutively, that Billal can receive?
A) 37, 6 B) 39, 18 C) 40, 12 D) 38, 6 E) None of these

49. What are the greatest and least amount of money, consecutively, that Durjoy can receive?
A) 79, 3 B) 79. 32 C) 69, 32 D) 32, 31 E) None of these

50. What are the greatest and least amount of money, consecutively, that Chopol can receive?
A) 55, 15 B) 78, 5 C) 31, 14 D) 54, 15 E) None of these

**SECTION III: ANALYTICAL ABILITY**

**Questions 51 to 55:** Each of the following questions consists of two statements given below it. You have to decide which (if any) statement(s) is (are) sufficient to answer the given question.

51. What is the value of 'm'?
I. The number m yields a remainder p when divided by 14 and a remainder q when divided by 7
II. $p - q = 7$
A) Only I B) Only II C) Both I and II
D) Either I or II E) Cannot be determined

52. Is $1 < p$?
I. $p^2 < 2p$ II. $p < 3$
A) Only I B) Only II C) Both I and II
D) Either I or II E) Cannot be determined

53. How much money did Rabu give to Johra?
I. Rabu gave three-fifths of the money she had to Johra.
II. Rabu now has 200 dollars.
A) Only I B) Only II C) Both i and II
D) Either I or IE E) Cannot be determined

54. What is the average of three numbers a, b, c?
I. The average of the first two numbers is 2.
II. The average of the last two numbers is 3
A) Only I B) Only II C) Both I and II
D) Either I or II E) Cannot be determined

55. What is the value of x?
I. $7^{\sqrt{x}} + 24^{\sqrt{x}} = 25^{\sqrt{x}}$
II. x is a non-negative integer
A) Only I B) Only II C) Both I and II
D) Either I or II E) Cannot be determined

**Questions 56 to 60:** Answer each question based on the following information.

Zubin is a high school music teacher who teaches in classes VIII to XII. From all his students, he has found seven to be exceptionally talented, and believes that if groomed properly, they will be big stars someday. The students are Bappy, Muhit, Sabbir, Bobby, Zakir, Tonmoy, and Zofen. He plans to tutor each of them personally outside the class once a week, and has set aside an hour each day from Sunday to Thursday from his personal schedule for this purpose. But he started facing some problems while preparing the full schedule, as the students are from different classes and have different schedules of their own. He summarized the scheduling constraints as follows;

- Zakir's lesson must be on the day immediately before the day of Zofen's lesson.
- Muhit is the only student interested in clarinet, so he needs to be taught in a separate lesson.
- Bobby's lesson must be on an earlier day than Sabbir's lesson.
- Only two of the lessons can be for two students, but those two joint lessons cannot be on consecutive days.

56. If a joint lesson for Sabbir and Zofen is scheduled earlier in the week than a joint lesson for Tonmoy and Bappy, for which day must Muhit's lesson be scheduled?
A) Monday B) Tuesday C) Wednesday D) Thursday E) Friday

57. If Bobby and Zakir were to be in a joint lesson, then the latest day in the week when this lesson could be is -
A) Wednesday B) Thursday C) Sunday D) Monday E) Tuesday

58. If Zubin wants to schedule the two joint lessons as early in the week as possible, and wants to tutor Zakir and Zofen as late in the week as possible, Zubin could schedule Bappy's lesson-
A) with Sabbir B) with Zakir C) with Zofen D) with Tonmoy E) by himself

59. Which of the following is an acceptable weekly schedule of lessons, Sunday through Thursday?
A) Bobby, Zofen & Tonmoy, Zakir & Bappy, Muhit, Sabbir
B) Muhit, Bobby & Sabbir, Zakir, Zofen & Tonmoy, Bappy
C) Zakir, Zofen, Bobby & Muhit, Sabbir, Tonmoy & Bappy
D) Tonmoy & Bappy, Muhit, Zakir, Bobby & Zofen, Sabbir
E) Bappy, Zofen & Tonmoy, Muhit, Bobby & Zakir, Sabbir

60. If Muhit's lesson is scheduled for Wednesday, Zakir's lesson must be scheduled for either -
A) Sunday or Monday B) Monday or Tuesday C) Monday or Thursday
D) Tuesday or Thursday E) Sunday or Tuesday

61. In a City, attendance at movie theatres is just sufficient for the theatre owners to make moderate profit. The population of that city is unlikely to increase much in next few years. Yet investors are prepared to double the number of movie theatres in the city within three years, and they expect solid profits both for themselves and the owners of movie theatres.

Which of the following helps to justify the investors' prediction?

A) Over the next 5 years, people in teenage years, the prime movie theatre going age, will be the fastest growing proportion of the city's population.
B) The sale of fast food snacks and beverage represents a constantly growing share of movie theatre's profit.
C) Spending on movie CD as well as rental DVD has been increasing for the past 5 years.
D) Industrialization in the city is expected to increase the economic revitalization for the next few years.
E) None of these

62. Fresh cola, a company offering carbonated beverages in different flavors, aims to increase its market share by offering price discount of almost 20% on its different brands. The price reduction will initially cut its profit but the company will use huge advertisement and promotional effort to attract consumers away from its rival companies. Company hopes that after few years, the consumers initially attracted by the price reduction will turn into loyal customers. In evaluating the success of this proposed plan which of the following is the most important to know?

A) Whether price of some of Fresh Cola's products will be reduced to a greater extent than that of its other existing products.
B) Whether the promotions and advertisements will be carried out by the company's current advertising agencies.
C) Whether the competitors will respond by offering heavy discounts on their products as well.
D) Whether any alternative strategy needs to be employed by the company to achieve its aim in addition to the current strategy.
E) Whether Fresh Cola will be able to manage its costs sufficiently to maintain its profit even though price reductions are in effect.

63. Viewership of ABC News, a Bangladeshi news channel, dropped significantly after controversial news on the Share market of Bangladesh was aired last month. ABC News received a substantial number of complaints from its viewers. However, the CEO of this channel claims that the adverse reaction from the report had no relation with the decline in ABC News Channel's viewership. Which of the following, if true, strongly justifies the CEO's claim?
A) ABC news received most of the complaints from its regular viewers.
B) Many people consider news channel's report a credible source of information about the Share market.
C) The other Bangladeshi news channels experienced similar drop in viewership.
D) Most of the large news channels publicly attribute reduction in viewership to their own reports only when they receive complaints about those reports.
E) ABC News Channel had broadcast controversial news on Bangladeshi Share market several times in past years that instigated the viewers to lodge complaints to the news channel.

64. People who are 45 to 55 years old are more likely to buy smartphones now a day. They are also more likely to buy it in larger number than any other people from rest of the age groups. The common belief that young people use more smartphones than adults must be false. Which of the following is a primary flaw of this argument?
A) It discusses smartphones rather than laptops or other tech based products,
B) It draws conclusion in general from mere survey findings.
C) The arguments focus on popular perception rather than on carefully designed research outcomes.
D) The argument does not differentiate buying from using smart phones.
E) The argument does not mention the specific data regarding the number of smart phones bought by other demographic groups.

65. Ruby's height is 5'2". Ana is taller than Ruby but she is not taller than Pamela. Pamela is shorter than her cousin Ron but she is not shorter than Ruby. If Ron's height is 5'10", which of the following cannot be Pamela's height?
A) 5'2" B) 5'4" C) 5'5" D) 5'6" E) None of these

**Questions 66 to 70:** Answer each question based on the following information.
A fantasy game show host has to organize a fantasy game among nine contestants: three Mistborns - Ishmam, Labib, Arfan and six Rithmatist - Arnab, Rajon, Imran, Osman, Aszad, and Wahid. Two teams - The Reckoners and The Legion - will be organized. The Reckoners will have four members while The Legion will have five. Membership assignment to teams is subject to the following constraints:

- Ishmam and Arnab cannot be on the same team.
- If Rajon is on the same team as Aszad, then Arfan must be on the opposite team.
- Osman and Rajon must be on the same team.
- Imran and Aszad cannot be on the same team.
- There must be exactly two Mistborns in The Reckoners.

66. Each of the following is a pair of members who can be on The Reckoners together EXCEPT-
A) Ishmam and Imran B) Labib and Arfan
C) Arfan and Aszad D) Arnab and Rajon E) Arnab and Imran

67. If Wahid and Osman are in The Legion, the members assigned to The RecKoners could be -
A) Ishmam, Arfan, Rajon, Imran B) Labib, Arfan, Arnab, Rajon
C) Labib, Arfan, Arnab, Aszad D) Labib, Arfan, Rajon, Imran
E) Labib, Arnab. Imran, Aszad

68. If Arfan and Rajon are in The Legion, which of the following is a pair of members who must be on The Reckoners?
A) Ishmam and Imran B) Ishmam and Osman
C) Ishmam and Aszad D) Arnab and Aszad
E) Imran and Wahid

69. If Ishmam, Imran, and Wahid are in The Reckoners, which of the following must be true?
A) Labib is in The Legion B) Arfan is in The Legion
C) Rajon is in The Reckoners D) Osman is in The Reckoners
E) Aszad is in The Reckoners

70. If Labib is on the same team as Arfan, which of the following must be true?
A) Labib is on the same team as Arnab
B) Imran is on the same team as Wahid
C) Aszad is on the same team as Wahid
D) Ishmam is not on the same team as Imran
E) Arnab is not on the same team as Aszad

## Part II: Descriptive Type Questions — 4 Questions - 30 Marks - 30 Minutes

**SECTION I: ENGLISH**

**Question - 1:** Critically analyze the following idea. Support your argument with reasons and/or examples from your own experience, observations or reading. [10 Marks]

**'Liberty comes with responsibility'**

**Question - 2:** Write an essay on the following topic. [10 Marks]

**'A Typical Day in the Year 2050'**

**SECTION II: Bangla**

প্রশ্ন ৩: আমাদের জাতীয় সংগীতে বাংলার প্রকৃতির কোন দিকগুলো কবি ফুটিয়ে তুলেছেন বর্ণনা করুন। [5 Marks]

প্রশ্ন ৪: বাংলায় অনুবাদ করুন। [5 × 1 = 5 Marks]

| | |
|---|---|
| Her remarks hurt me deeply | |
| Why don't you try ringing the airport once more? | |
| She smiled, waved and disappeared in the crowd. | |
| You would enjoy the enchanting sunset scene if you were here. | |
| Asking questions is not always easier than answering them. | |

## Answer Key

### Section 1: Language & Communication

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1.E | 2.C | 3.D | 4.B | 5.C | 6.A | 7.B | 8.C | 9.D | 10.D |
| 11.C | 12.D | 13.C | 14.C | 15.D | 16.D | 17.E | 18.C | 19.C | 20.C |
| 21.E | 22.C | 23.C | 24.D | 25.C | | | | | |

### Section 2: Mathematics

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 26.B | 27.E | 28.D | 29.C | 30.D | 31.A | 32.C | 33.A | 34.D | 35.D |
| 36.D | 37.D | 38.C | 39.B | 40. B | 41.B | 42.E | 43.C | 44.A | 45.B |
| 46.B | 47. B | 48.A | 49. E | 50. E | | | | | |

### Section 3: Analytical Ability

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 51. E | 52. E | 53. C | 54.E | 55.A | 56.B | 57. E | 58.D | 59. D | 60.A |
| 61. A | 62. C | 63. C | 64. D | 65. A | 66. D | 67. E | 68. C | 69. A | 70. A |

# Solutions

## Section 1: Language and Communication

1. **(E)** Elimination is the best way to go here. A is self-evidently incorrect as the first line is important is setting a message. B and C are not stated or implied. D is incorrect because the study was conducted on children who went on to become high-achievers and was not necessarily a professional-oriented study.

2. **(C)** Please note that the (2) marking in the question has been incorrectly placed. We will just find the third para beginning ourselves and work with that. We can see that both C and D can be used to introduce the third para and would make it better. A is eliminated. B is not the point of this para and E is completely unrelated. Between C and D, C is more consistent with the tone of the passage and a more interesting way to begin.

3. **(D)** The (3) marker has been incorrectly placed. The segment marked as (2) should be (3). The answer is C. The reasoning here is that a person's chores do not make that person successful. Rather, the fact that he/she has done the chore as a kid helps with work ethic and hence success. C is the only answer that brings focus to this.

4. **(B)** The (4) marker has been incorrectly placed. The segment marked (3) is what we will work with here. A, C and D cannot be interpreted from the passage directly. B reflects what has clearly been stated.

5. **(C)** The idea of the last paragraph, and to a certain extent the passage, is that kids should be made to do chores to help them grow. Removing this sentence would dilute this message. A and E are incorrect. B and D are not relevant points here.

6. **(A)** We can rule out D because the word "proclaim" is used rather than proclaimed. C is incorrect because "Epiphany" should not be paired with little under normal circumstances. E can be ruled out because "As professed that the..." is incorrect. B is wrong because "Apparently that the..." is wrong. A is the only correct answer here.

7. **(B)** Rule out A and E because the plural of crisis is used. That is inappropriate here because of "actual hour of" is used and should be followed with a singular word. Rule out D because of the word believe- it is a verb. Rule out C because thought is not as appropriate as belief and there is also an unnecessary capitalization of adversity.

8. **(C)** A is incorrect because of "diverse" and "forcible". E is incorrect because it fit with the liberal spirit. D can be ruled out because of "inscribed". B can be ruled out because "organically averted" does not fit in well with the sentence. C gives the sentence clarity and makes sense.

9. **(D)** A, C, E can be ruled out on the basis of the first word. B can be ruled out because Certainty cannot be used here. D makes sense.

10. **(D)** 3 must start the sequence; it has no markers at the start (before, after, etc) and is the best starting sentence among the ones given. 2 must follow because it contrasts the opening sentence and sets up the base for discussing the actual advice of the para. 1 and 4 follow in that order and are the main message that is to be delivered after the set up.

11. **(C)** Because of the general nature of statement 3, we conclude that the para must begin with this. We rule out A,B and E on this basis. Between C and D, the latter cannot be the answer because the para cannot end with statement 2. Hence, we quickly find C to be the answer.

12. **(D)** A can be ruled out because based on this extract we can say that more leisure was not the result of the agricultural revolution. Whether it is good or bad has also not been discussed. B is not stated. C and E are contradictory to the message that the agricultural revolution has been mischaracterized by scholars.

13. **(C)** A,B, D and E have directly been stated to be the outcomes. The opposite of C, according to the passage, is true. Hence C is the answer.

14. **(C)** Only frugal fits within the context.

15. **(D)** This can clearly be concluded from the beginning of the second para.

16. **(D)** Refulgent can be used to describe the ambience. Rule out A because the adjective: noun structure isn't met. Rule out B because Memories is different from ambience- the former is countable while the latter is not. Memories also talk of instances that have already happened while the Ambience is more of a general state. C can be ruled out because they do not form the given relationship. E does not fit as well as D does. D is the answer.

17. **(E)** Connotation is something you find in poems. C,D can immediately be ruled out. A and B don't express relationships that are necessarily present. E is the closest to the given conditions.

18. **(C)** Athletes uses tactics in their craft like magicians use feints. A, B, D and E do not have relationships of the same strength.

19. **(C)** Rule out B and D because of "instant". Among A, C and E, C is the best because the company is being modified by the opening modifier.

20. **(C)** Rule out B because the claims did not face hostility. Rule out E because workers are not to be modified by the opening modifier. Rule out A and D because the opening modifier is followed by "there". Those aren't the best way of constructing the sentence. C is correct.

21. **(E)** A is wrong because Baker was not hit in the theatre. B is wrong because of "who". C and D can be ruled out because of tense issues- "has" is inappropriate. We therefore select E.

22. **(C)** A is incorrect because of "works". B is wrong because you need to have a word after finds and also because it repeats the error in A. D uses "often" in the wrong place and E has tense issues.

23. **(C)** Sentence 2 has an incorrect use of discreet. Discrete and discreet are separate words.

24. **(D)** Sentence 3 uses harbor incorrectly. Harbor means to cherish, nurture, bear, foster, etc.

25. **(C)** Sentence 1 uses rein incorrectly. Sentence 2 confuses the use of rein with reign. Sentence three is also technically an error, it should say "rein in" rather than just rein. However, since our options limit us from choosing no answer is correct, we choose option C. We can infer that C is the desired answer because it is the "least incorrect".

**Section 2: Mathematics**

26. **(B)** ধরি, বিক্রিত laptop এর সংখ্যা x
So next month he will be able to sell x-6 laptops
The price at he sells per laptop be y
So new price per laptop = y+10,000
So, (y+10,000) (x-6) = 760,000
and xy – (y+10,000)(x-6) = 32,000
Solving these 2 equations we get x=26
So the number of laptops he can sell next month = 26-6 =20

27. **(E)** 20% marked up price এ product টি 500 টাকায় sell হবে
So if selling price is 120, cost price is 100
So, if selling price is 500, cost price is 416.66
So total cost price = 416.66 * 120 = 50,000
Now, total income = 500*108 + 12*50%*416.666
= 54,000 + 2,500
= 56,500
So profit = 56,500-50,000=6,500
So in percentage, 6,500*100/50,000 = 13%

28. **(D)** Number of 5s in xth row is x-1
So number of 5s in 1st row is 0
Number of 5s in 2nd row is 1
Number of 5s in 3rd row is 2
Number of 5s in 4th row is 3
Number of 5s in 5th row is 4
In total there are 5x5=25 cells. Among them, 10 are filled with "5". So remaining 15 are filled with "10". So the mean is (10*15+5*10)/25 = 8

29. **(C)** Area of semi-circle = $\pi r^2/2$
So, $\pi r^2/2 = 50\pi$
$\Rightarrow r^2 = 100$
$\Rightarrow r = 10$ or $r = -10$
Since radius must be positive, so r= 10
Now in right angled triangle
$XO^2 = 10^2 - 8^2$ [Pythagoras theorem]
$\Rightarrow XO^2 = 36$
$\Rightarrow XO = 6$ or $XO = -6$
Since length must be positive, so XO =6

30. **(D)** Let, Rahim takes y days to produce x units
So in 1 day Rahim produces x/y units
So Karim takes y+2 days to produce x units
So in 1 day Karim produces x/(y+2) units
Together, in 1 day they produce (x/y) + {x/(y+2)} units
So in 2 days they produce 2[(x/y) + {x/(y+2)] units
= x(4y+4)/y(y+2) units
According to question,
x(4y+4)/y(y+2) = 5x/6
=> 24y+24 = 5y2 + 10y
=> y = 4 or -6/5
Since y can't be negative, so y must be 4.
So Karim takes y+2 = 4+2 = 6 days to produce x units
So to produce 3x units, Karim need 3x6 = 18 days.

31. **(A)** After first half km, each half km costs p/8.
Now, for ½ km the cost is p/8
so for 1 km the cost is (p/8)/ (1/2) = p/4
so for {q-(1/2)} km the cost is (p/4) * {q-(1/2)}
= (2pq-p)/8
So total cost is (2pq-p)/8 + p
= (2pq+7p)/8

32. **(C)** Arranging the number is ascending order without X, we get 9, 13, 16, 16, 23
If there are odd number of numbers, the median the one in the middle when arranged in ascending or descending order. If there are even number of numbers, the median is the average of the 2 numbers in the middle when arranged in ascending or descending order. Mode is the number that occurs most frequently.
So X cannot be equal to 15, because then mode would be 16 and median would be 15.5. So option A can be omitted
If x=16, median = mode, but mean is (9+13+16+16+16+23)/6 = 15.5. So option B can be omitted
So x must be greater than 16. Which means, since mean=median=mode, it can be only one number, hence the number is 16.
Now, mean is 16. So,
(9+13+16+16+23+X)/6 = 16
=> x = 19. So answer is option C

33. **(A)** The 5 largest 3 digit numbers are 999, 998, 997, 996 and 995. Adding them we get 4985
The 5 smallest 3 digit numbers are 100, 101, 102, 103 and 104. Adding them we get 510
The difference between these two sums is 4475.

34. **(D)** Since $-1 < x < 0$, so the value of x is negative and between 0 and -1. So it is a fraction between 0 and -1.
Since x is a negative number, if added to 1, the sum will be smaller than 1. So we can omit option B and E.
Again, since x is a fraction between -1 and 0, squaring it will make it a positive number but a smaller positive value than the negative value. That means, (-0.5)2 = 0.25. Here 0.25 is positive, but a smaller value than 0.5. So adding x2 to 1 will result in a value greater than 1, but the value will not be greater than 1 by x. On the other hand, subtracting x from 1 will result in a value greater than 1 by x. So among option A and C, option C can be omitted.
Again, since x is a fraction between 0 and -1, if any number is divided by it, it will result in smaller number. So when 1 is divided by x, it will result in a number smaller than -1. If this number is subtracted from 1, the result will be greater than option A. So answer is option D

35. **(D)** $|x+3| < 5$
So, $-5 < x+3 < 5$
So, $-5-3 < x+3-3 < 5-3$
So, $-8 < x < 2$
So, the value of x can be anything between -8 and 2 but not -8 and 2 themselves. So, x can be greater than 1, as in 1.01, 1.001 and so on; x can be equal to 0; x can be less than -6 as in -7, -6.5, and so on; but x cannot be less than -9. So correct answer is option D

36. **(D)** The average of 5 distinct positive integer is 10, so their sum must be 10*5=50. In order to find the greatest possible value of the largest integer, we take 4 integers to be the minimum possible values. That gives us, 1, 2, 3 and 4. So the greatest possible value for the largest number is 40. The smallest possible value of the largest integer can be found if we take consecutive integers, keeping 10 (average) in the middle. The series is, 8, 9, 10, 11, 12. So the smallest possible value of the greatest integer is 12.
40 – 12 = 28

37. **(D)** If we multiply/divide both sides of an inequality by -1 (or any negative numbers), their inequality sign changes.

38. **(C)** Following the BODMAS rule of simplification.
1+3/5-7*9 = -61.4

39. **(B)** Let, speed be S and time be T
Now, ST = 600
Again, (S-200) * (T+0.5) = 600
Or, ST – 200T + 0.5S -100 = 600
Or, 200T – 0.5S + 100 = 0
Or, $200T^2 + 100T - 300 = 0$; [S = 600/T]
Or, $2T^2 + T - 3 = 0$
Or, (2T + 3) (T – 1) = 0
Or, T = -3/2, 1
So, flight টির duration ছিলো 1+0.5 hours = 1.5 hours

40. **(B)** The rope is U shaped. So, the cut near the turn will cut off a piece of the rope and will leave two parallel strands of rope. To get 22 other pieces, 10 more cuts will be needed. Total number of cuts is 11.

41. **(B)** We can verify the answer by back calculation. 20200 increases to 21020 after it is consecutively increased by 1% four times.

42. **(E)** Since the f(x)=0 has a solution -2, (x + 2) is a factor of f(x). So, in f(x-2) the factor equals to 0. As a result f(x – 2)=0 will be true for all values of x.

43. **(C)** Given, AB = 15 cm and AC = 17 cm. So, BC = 8 cm. The area of the triangle ABC is 0.5*15*8 = 60 sq. cm.
Now sum of two sides of the picture is 14. Let the sides be x and (14 – x)
So, 3*0.5*x*(14 – x) = 60
Or, x = 10, 4
Two sides of the picture are 4 and 10
So, using Pythagoras' theorem, the length of the hypotenuse is $2\sqrt{29}$ cm

44. **(A)** Let, the price of 1 kg salt is x
The price of 1 kg sugar is 175/100 x or, 7/4 x
5x + 7*7/4 x = 690
Or, x = 40
The price of 1 kg sugar is 7/4 *40 = 70
The difference is 40*2 – 70 = 10

45. **(B)** We multiply the intervals and then take minimum and maximum values. (-8,2), (-4,10)
The products are 32, -8, -80, 20
Minimum is -80 and maximum is 32

46. **(B)** The average of 33.2 and 32.2 is 32.7. So, the ratio of male and female must be equal.

47. **(B)** The angle on the semi-circle is always 90°. So, triangle PQR is right triangle. Angle P is 30° so the ratio of the sides will be $1:\sqrt{3}:2$
PR = 12 cm, so PQ = $24/\sqrt{3}$ = diameter
Area of the circle, $\pi*(12/\sqrt{3})^2 = 48\pi$ sq. cm.

48. **(A)** Bilal comes 4th. So, he must get more than 5. The least possible value is 6.
Again, 1st position got 80, leaving 120 for the rest four. To find the greatest value that Bilal can get, the 5th person must get the least amount, that is 5. The rest 115 is to be distributed among the 2nd, 3rd and Bilal. This can be done in two ways. (40,38,37) and (39,38,38). Since no repetition is allowed, the greatest possible value that Bilal can get is 37.

49. **(E)** Durjoy is 2nd. The greatest amount that he can get is found by giving 3rd, 4th and 5th the least amount, 5, 6 and 7. So, the greatest amount that Durjoy can get is (200 - 80 - 5 – 6 - 7 =) 102.

50. **(E)** Chopol is 3rd. তাই ওর জন্য সবনিম্ন মান হচ্ছে 7.

## Section 3: Analytical Ability

51. **(E)** The answer cannot be determined as both statements are unable to from a specific value of m.

52. **(E)** প্রথম statement থেকে আমরা বুঝতে পারি যে p 2 এর থেকে ছোট, কিন্তু 1 এর থেকে ছোট কিনা বোঝা যাচ্ছে না। Statement 2 থেকে এটা বোঝা যায় যে p 3 এর থেকে ছোট, কিন্তু 1 এর থেকে ছোট কিনা বোঝা যাচ্ছে না। তাই দুইটা statement insufficient

53. **(C)** ধরি Rabu এর কাছে X টাকা ছিল। johra কে দেওয়ার পরে তার কাছে থাকে 2/5 of X. So statement 1 is important. এই 2/5 of X এর value হচ্ছে 200, তাহলে X এর value জানতে পারছি, আর johra কে কত দিয়েছে সেটাও বের করতে পারছি। তাই Statement 2 ও important. Both St1 and St2 are required.

54. **(E)** আমাদের unknown 3টা আর আমদের equation 2টা। তাই a, b, আর c এর value বের করা যাবে না। average ও বের করা যাবে না।

55. **(A)** Statement 1 থেকে আমরা বুঝতে পারি root x এর value 2. তাহলে X এর value হচ্ছে 4। তাই Statement 2 আমাদের লাগছে না।

(For 56 – 60, the name of one person (Bappy) is missing.)

56. **(B)** Zakir কে Zofen এর আগে দিতে হবে। তাই Zakir হবে Sunday আর Sabbir আর Zofen হবে Monday তে। অন্য joint class টা হবে Tonmoy আর bobby এর, কিন্তু এটা Tuesday তে বসতে পারনে না। কারন দুইটা joint class পাশাপাশি হবে না। যেহেতু Muhit একা ক্লাস করে, তাই Tuesday তে Muhit কে বসাতে হবে।

57. **(E)** Bobby বসবে Sabbir এর আগে, আবার Zakir বসবে Zofen এর আগে। আবার Bobby Zakir কে Wednesday তে দিয়ে Sabbir Zofen কে jointly Thursday তে দিতে পারছি না, কারন দুইটা joint class পাশাপাশি হবে না। তাই, latest Tuesday তে Bobby আর Zakir এর class হবে।

58. **(D)** Zakir আর Zofen as late as possible বসলে ওরা বসবে Wednesday আর Thursday তে। আবার joint class গুলা নিতে হচ্ছে Sunday আর Tuesday তে। Monday তে বসছে Muhit, এদিকে Sunday তে Bappy আর Tuesday তে Sabbir বসছে। তাই bappy কে class করতে হবে Tonmoy এর সাথে।

59. **(D)** Option A আর E তে Zofen Zakir এর আগে বসেছে, তাই এই দুইটাই বাদ। B তে Bobby আর Sabbir কে একসাথে রাখা হয়েছে বলে এইটাও বাদ। option C তে Muhit একা না, তাই এইটাও ভুল।

60. **(A)** Muhit Wednesday তে বসলে Zakir Tuesday বা Thursday তে বসবে না, কারন Zakir এর ঠিক পরেই Zofen কে বসতে হবে। তাই Zakir হয় Sunday নাহলে Monday তে বসবে।

61. **(A)** যদিও population বাড়ছে না, কিন্তু teenager দের number বাড়ছে, আর তারাই সবচেয়ে বেশি movie দেখে। তাই movie দেখার লোক বাড়ছে, তাই invester রা বেশি করে profit করার আশা করছে।

62. **(C)** Fresh Cola এর plan হচ্ছে cheap price দেখে customer তাদের product কিনবে। কিন্তু rival ও যদি price cut করে, তাহলে customer তাদের কাছে যাবে না, তাই এইটা জানা সবচেয়ে জরুরী, rival রা price cut করতে পারবে কিনা।

63. **(C)** Since the other channels faced the similar drop in viewership, it can be said that the controversial news report was irrelevant to the incident.

64. **(D)** এমন হতে পারে যে 45 to 55 age এর লোকজন smartphone কিনছে, অন্য কারোর জন্য। যারা কেনে তারাই যে use করবে এটা ঠিক না। তাই "young people use more smartphones than adults must be false" এই conclusion টা ভুল।

65. **(A)** Ruby এর height 5.2। Pamela Ruby এর থেকে লম্বা, তাই ওরা height 5.2 হবে না।

66. **(D)** Rajon কে reckoners এ দিলে osman ও reckoners এ থাকবে। কিন্তু reckoners এ Rithmatist থাকবে দুইজন, তাই Arnab আর Rajon দুইজনই Reckoners এ থাকতে পারবে না।

67. **(E)** Osman Region এ গেলে Rajon ও Region এ, তাই option A, B আর D বাদ। option C তে দুইজন Mistborn, তাই এইটাও ভুল।

68. **(C)** Arfan যেহেতু legion এ, তাই ishmam আর labib reckoners এ থাকবে। আবার afnan আর Rajon যেহেতু একই team এ, তার মানে aszad আর Rajon একসাথে না। তাই aszad ও reckoners এ।

69. **(A)** 3 জন reckoners এ চলে গেলে Rajon আর osman যাবে legions এ। তারপর ishmam reckoners এ থাকলে Arnab থাকবে legions এ, আবার imran reckoners এ গেলে aszad যাবে legions এ। finally, Rajon আর aszad legions এ, তাই arfan যাবে reckoners এ আর labib legions এ থাকবে।

70. **(A)** Labib আর arfan same team মানে দুইজনই reckoners এ, কারন তারা Mistborn. তার মানে ishmam legions এ যাবে, আর Arna যাবে reckoners এ। তাই labib আর Arnab একই team এ।

**Part 2: Descriptive Type Questions 4 Questions- 30 marks -30 minutes**

**SECTION 1: ENGLISH**

Question 1: Quickly analyze the following idea. Support your argument with reason and/or examples from your own experience, observations or reading.

**'Liberty comes with responsibility'**

Liberty and responsibility are inseparable. What often comes off as a paradox because responsibility seemingly obstructs liberty are actually counterparts to each other. Responsibility is the restriction placed by expectations from us while liberty is emancipation from limitations. However, to truly enjoy liberty one must uphold the self-responsibility entailed.

In each person being his own master, that person also has to accept that the actions they take produce real consequences. The acceptance of responsibility allows individuals to learn through consequence. If we weren't held responsible for our actions, we wouldn't learn to change our actions to influence outcomes. The burden of accountability and ramifications force individuals to take calculated steps and make the world a better place. Irresponsibility would soon beget chaos and ruin the beauty and security of the world the individual chose to enjoy through their liberty. Hence it is a self-balancing mechanism.

Liberty enables individuals to hone their skills and unique abilities to then utilize those skills anywhere they choose to, while responsibility navigates them towards deciding how to use their capacities in the best possible way to better serve human society. If we want an effective, capable society, then we must allow for liberty and responsibility to co-exist.

A society built on taking responsibility for one's own free movement is the only way we can learn, and by learning we are incentivized to create better outcomes for ourselves and, in turn, better systems. The more responsibility one takes on, the more meaning their life has. The higher degree of responsibility one voluntarily agrees to bear, the richer their life is because of the self-correcting mechanism. Picking up responsibility means having something worth striving for, so it gives one purpose.

*"Freedom is not the last word. Freedom is only part of the story and half of the truth. Freedom is but the negative aspect of the whole phenomenon whose positive aspect is responsibleness. In fact, freedom is in danger of degenerating into mere arbitrariness unless it is lived in terms of responsibleness."*

In conclusion, the coexistence of responsibility and liberty not only is a necessary condition for a free society to prosper, but also helps one become the best person they can be. This creates a better society and a meaningful existence. Having responsibility gives them a sense of purpose amidst absolute liberty.

**Question 2: Writing essay on the following topic.** **[10 marks]**

**'a typical day in the year 2050'**

Alarm clocks might have been a thing in the past but it is not anymore. Now in the year 2050, as per the global constitution we all have been implanted with a microscopic device that regulates our circadian rhythm, which is our body clock due to which we automatically fall asleep by 12 am and wake up 6 am in the morning.

Since, the global coronavirus pandemic of 2020, things have never been the same. Most of the jobs since then have been automized with Artificial Intelligence replacing both manual and intellectual jobs. As a result, most of us actually work from home now conducting meetings through state-of-the-art virtual media featuring holograms. Office hours are the same though: nine to five.

Although, most of us stay indoors during the day, the streets bustle with activity during the evening which is when most of us go out for recreation. Holograms have radicalized the way we enjoy festivals and concerts. We do not have to commute to a distant location to enjoy a Tomorrow land festival anymore. The local park features the life like holograms of such concerts. Most cars these days are hovercrafts i.e. they do not need wheels which is why long drive cruises are more common these days. By 11pm, however, our microscopic chip warns us that our body is getting tired and will soon shut down warning us to return home. By the time we get home, the device makes us so tired that we ultimately fall asleep.

## সেকশন ২: বাংলা

প্রশ্ন ৩: আমাদের জাতীয় সংগীতে বাংলার প্রকৃতির কোন দিকগুলো কবি ফুটিয়ে তুলেছেন বর্ণনা করুন।

আমাদের জাতীয় সংগীতে কবিগুরু রবীন্দ্রনাথ ঠাকুর বাংলার প্রকৃতির প্রতি তাঁর অসীম ভালবাসা তুলে ধরেছেন। প্রথমেই তিনি এই বাংলার মাঠ, ঘাট, প্রান্তরকে তুলনা করেছেন মহা মূল্যবান স্বর্ণ এর সাথে। এখানের সোনালি ফসল, উর্বব জমিকে তিনি আখ্যায়িত করেছেন সোনার বাংলা হিসবে।বাংলার প্রকৃতির প্রতি ছিল তাঁর অগাধ প্রেম। তাইতো তিনি সবসময় এখানের আকাশ-বাতাসের সান্নিধ্য কামনা করেছেন। বাংলার আকাশ-বাতাস তাঁর প্রাণে মোহময় বাঁশির মতো সুর তোলে। বাংলাদেশ যে ষড়ঋতুর দেশ এবং তার প্রতিটি মৌসমের যে আলাদা আলাদা সৌন্দর্য আছে কবিগুরু তাঁর লেখায় তা উল্লেখ্য করেছেন। ফাল্গুনমাসে যে আমের ঘ্রাণে চারদিক মঁ মঁ করে, অগ্রহায়ণে সোনালি ফসলে ভরা ক্ষেতের যে সৌন্দর্য তা সবই ফুটে উঠেছে কবিগুরুর লেখায়। এত ফলফলাদিতে ভরপুর বাংলা, শস্য শ্যামলে ভরপুর বাংলার যে আনন্দ, সেই হাসির কথাও তাঁর লেখনী থেকে বাদ যায়নি। এই বাংলায় প্রকৃতির যে অপরিমেয় আশীর্বাদ রয়েছে কবিগুরু আমাদের জাতীয় সংগীতে তা সুনিপুণ ভাবে ফুটিয়ে তুলেছেন।

প্রশ্ন ৪: বাংলায় অনুবাদ করুন। [৫×১ = ৫]

| | |
|---|---|
| Her remarks hurt me deeply | তার মন্তব্য আমাকে গভীরভাবে আঘাত করেছে। |
| Why don't you try ringing the airport once more? | আর একবার বিমানবন্দরে কল করার চেষ্টা করুন। |
| She smiled, waved and disappeared in the crowd. | তিনি হাসলেন, হাত দুলালেন, এবং ভিড়ের মধ্যে অদৃশ্য হয়ে গেলেন। |
| You would enjoy the enchanting sunset scene if you were here. | আপনি এখানে থাকলে আপনি মোহনীয় সূর্যস্তের দৃশ্য উপভোগ করবেন। |
| Asking questions is not always easier than answering them. | প্রশ্ন জিজ্ঞাসা করা উত্তর দেওয়ার চেয়ে সবসময় সহজ নয়। |