

## Admission Test 2012 – 2013

1. The meaning of 'BELLICOSE' is-

- a) boastful                      b) warlike                      c) sluggish                      d) fantastic

Bellicose অর্থ হলো যুদ্ধবাজ।

2. Which of the following sentence is correct

- a) the mayor, with his councilors', is to be present  
 b) sliver as well as cotton have fallen price  
 c) Bangla as well as English are taught here  
 d) justice as well as mercy allow it

as well as, with, along with যুক্ত বাক্য হলে আগের subject অনুযায়ী verb নিতে হবে। তাই the mayor অনুযায়ী verb হল is.

3. He stood before me. The underlined word is:

- a) noun                      b) verb                      c) adverb                      d) preposition

After/before যুক্ত বাক্য complex হয়।

4. He put on his hat and went out. Complex form of the sentence

- a) he went out after he put on his hat  
 b) putting his hat on, he went out  
 c) he put on his hat to go out  
 d) he put on his hat went out

5. The meaning of 'RESTROSPECT' is:

- a) careful inspection      b) reversal of form      c) review of the past      d) respect for authority

Retrospect meaning হল অতীতের দিকে দৃষ্টিপাত।

6. Zaman comes here frequently. The underlined word is:

- a) verb                      b) pronoun                      c) adverb                      d) adjective

frequently, generally, normally এগুলো adverb of time.

7. Promise should be kept. The active form of the sentence

- a) we should keep our promise  
 b) a promise must be kept  
 c) we can't put to keep our promise  
 d) one should keep one's promise

এই ধরনের passive sentence গুলো active করতে গেলে everyone / one দিয়ে করা উচিত। My/We/I/ Our এই ধরনের personal pronoun avoid করতে হয়।

8. All the following sentences are incorrect except:

- a) the poet had died before he finished his swan song  
 b) the poet died before he finished his swan song

- c) the poet died before he had finished his swan song  
d) the poet was died before he finished his swan song

Before যুক্ত বাক্যতে যে অংশটি আগে ঘটবে তার সাথে past perfect বসাতে হয়।

9. Opposite of 'BOON':

- a) bore                      b) curse                      c) boost                      d) technicality

boon মানে আশির্বাদ আর curse মানে অভিশাপ।

10. Turn into indirect form of speech:

The teacher said, "Well Razib, I shall reward you"

- a) the teacher said to Razib that he would reward him  
b) the teacher said to Razib that he should reward him  
c) the teacher said to Razib he would reward him  
d) the teacher asked to Razib that he would reward him

Narration এ direct to indirect করার সময় said to এর পর that আসে এবং shall change হয়ে would হয়।

11. He failed because he was so rush. Simple form of the sentence

- a) he failed because of being so rush  
b) he was too rush and therefore failed  
c) being too rush made him failed  
d) as he was too rush, he failed

Because যুক্ত compound sentence কে simple sentence করতে গেলে শুরুতে verb এর ing form আনতে হয়। তাই was থেকে being করা হয়েছে।

12. Whom did they accuse. Passive form of the sentence

- a) by whom he was accused?  
b) who was accused by them?  
c) whom were accused by them?  
d) by whom he was accused?

whom যুক্ত passive sentence কে active করতে হলে who দিয়ে শুরু করতে হয়।

13. Turn into indirect form of speech. "don't make a noise in the class" said the teacher

- a) the teacher said not making a noise in the class  
b) the teacher said do not make a noise in the class  
c) the teacher said not to make a noise in the class  
d) the teacher asked and hoped not to make a noise in the class

14. Airplanes that used to take more than half a day to cross Atlantic are now \_\_\_ to make several hours

- a) fast enough                      b) so fast                      c) faster than                      d) faster

adjective এর পর enough বসে।

15. Opposite of 'DISHEARTEN'

- a) engage                      b) encourage                      c) predict                      d) dismember

16. It is \_\_\_ whom the committee has chosen

- a) him                      b) he himself                      c) he                      d) himself



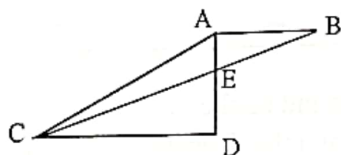
Dream's

Iodine =  $0.4x$  lts, Water =  $0.6x$  lts.  
 Solution 2: 35 liters of a 20% iodine solution  
 Iodine = 7 lts, Water = 28 lts.  
 Total iodine =  $0.4x + 7$   
 Total water =  $0.6x + 28$   
 The resultant is a 35% iodine solution.  
 Hence  $(0.4x + 7) / (x + 35) = 35/100$   
 $40x + 700 = 35x + 1225$   
 $5x = 525$   
 $x = 105$  lts  
 Ans: A

21. If  $Y=6^x$ , then  $6y=?$   
 a)  $36^x$                       b)  $6^{x+1}$                       c)  $6^x+6$                       d)  $6^x-1$

$6y = 6 \cdot 6^x = 6^{x+1}$   
 Ans: B

22. In the figure below  $AD = 4$ ,  $CD = 9$ , and  $AB = 3$ . What is the area of the triangle AEC?



- a) 4.5                      b) 13.5                      c) 9                      d) 18

If we take AE as the base of triangle AEC, then the height is CD.  
 The height of the triangle is therefore, 9 (given).  
 To find the base we need to see that triangles AEB and CDE are similar. The ratio AB:CD, is therefore equal to the ratio AE:ED. The given information shows that the ratio is 3:9, or 1:3. Now dividing AD (4) in this ratio gives us AE as 1.  
 The area of AEC =  $\frac{1}{2}$  base x height  
 $= \frac{1}{2} \times 9 = 4.5$   
 Ans: A

23. Dr. Kramer plans to invest \$20000 in an account paying 6% interest annually. How much more she must invest at the same time at 3% so that her total annual income during the first year is 4% of her entire investment?  
 a) \$320000                      b) \$36000                      c) \$40000                      d) \$49000

Total amount =  $x$   
 Total annual income =  $4x/100$   
 Initial amount = 20000  
 Income generated =  $6/100 \cdot 20000 = 1200$   
 Extra amount to invest =  $y$   
 Income generated =  $3y/100$   
 $y + 20000 = x$  ----- equation 1  
 $y = x - 20000$  ----  $y$  expressed in terms of  $x$   
 $1200 + 3y/100 = 4x/100$  ----- equation 2  
 $1200 + 3(x - 20000)/100 = 4x/100$  ----- substitute the value of  $y$

$(12000+3x-60000)/100=4x/100$   
 $x = 60000$   
 the additional amount to invest =  $60000 - 20000 = 40000$   
 Answer is C.

24. Two dogsled team raced across a 300-mile course in Wyoming. Team A finished the race in 3 fewer hours than did team B. if Team A's speed was 5 mile per hour greater than that of team B, what was team B's average speed?  
 a) 12                      b) 20                      c) 18                      d) 25

Option A, 12 -->  $12 + 5 = 17$  OUT as 17 is not a factor of 300  
 Option B. 15  
 Option C. 18 --->  $18 + 5 = 23$  OUT as 23 is not a factor of 300  
 Option D. 20  
 Option E. 25  
 Likely answer will be B or D.  
 Option B,  $20 * 15 = 300$  problem is  $15 + 3 = 18$  is not a factor of 300.  
 Option D,  $25 * 12 = 300$ .  $12 + 3 = 15$  is a factor of 300. ✓✓  
 Option E,  $30 * 10 = 300$ . The problem is  $10 + 3 = 13$  is not a factor of 300.  
 So Ans is B

25. If x dozen eggs cost y dollar, what is the cost, C, of Z dozen eggs?  
 a) xyz                      b) xy/z                      c) xy+z                      d) yz/x

x dozen eggs cost y dollar  
 So, 1 dozen eggs cost  $y/x$  dollar  
 Therefore, z dozen eggs cost  $yz/x$  dollar  
 Ans is D

26. If 11 persons meet at a reunion and each person shakes hand exactly once with each of the other, what is the total number of handshakes?  
 a) 110                      b) 220                      c) 55                      d) 990

1st person will have 10 handshakes, 2nd will have 9, ....10th will have 1 and 11th will have 0 handshake  
 $= 10+9+8+7+6+5+4+3+2+1 = 55$   
 if we generalize this: if there are n people then there will be  $n(n-1)/2$  handshakes.  
 Ans is C

27. Over the course of a year, a certain microbrewery increased its beer output by 70%. At the same time, it decreased its total working hours by 20%. By what % did the factory increase its output per hour?  
 a) 90%                      b) 112.5%                      c) 212.5%                      d) 50%

Let's take the original output to be 100 and the new output to be 170% or 170.  
 Let's take the original work hours to be 100 hours and the new work hours to be 80% or 80 hours.  
 The old output per work hour =  $100/100$  hours or 1.  
 The new output per work hour =  $170/80$  or 2.125. So the resulting increase is actually new minus old or 1.125 or 112.5%.

Dream's

Ans is B

28. If  $f(x) = \sqrt{x}$  and  $g(x) = \sqrt{(x^2+7)}$ , what is the value of  $f(g(3))$ ?  
 a) 2                                      b) 3                                      c) 4                                      d) 6

First, calculate  $g(3) = \text{square root of } 9 + 7$ , which is 4  
 Now, calculate  $f(4) = \text{square root of } 4$   
 Discard all negative roots.  
 Answer is A.

29. When the integer  $k$  is divided by 7, the remainder is 5. Which of the following expression will have a remainder of 6 when divided by 7?  
 (i)  $4k+7$                               (ii)  $6k+4$                               (iii)  $8k+1$   
 a) i                                      b) i & ii                                      c) i, ii & iii                                      d) iii

The options for the integer  $k$  are 5, 12, 19, 26...  
 Let's look at each of the three cases:  
 1.  $4k+7$  yields 27, 55... yes  
 2.  $6k + 4$  yields 34, 76... yes  
 3.  $8k + 1$  yields 41, 97... yes  
 Ans is C

30. In a rare coin collection, all the coins are either pure gold or pure silver, and there is initially one gold coin for every three silver coins. With the addition of 10 more gold coins to the collection, the ratio of gold to silver coins is 1 to 2. Based on this information how many total coins in the collection now?  
 a) 40                                      b) 50                                      c) 70                                      d) 90

No. of gold coins =  $x$   
 no. of silver coins =  $y$   
 thus, initially  $x/y = 1/3$  or  $y=3x$  -----1)  
 after addition of 10 gold coins, this ratio becomes  $1/2$ , thus we have,  $x+10/y = 1/2$   
 $2x+20=y$ , now from 1 we have  
 $2x+20 = 3x$   
 or  $x=20$ , also from from 1)  $y=3(20) = 60$   
 thus total number of coins after acquisition =  $10+60+20 = 90$   
 Ans is D

31. A couple spent \$264 in total while dinning out and paid this amount using credit card, the \$264 figure included a 20% tip which was paid on top of the price of the food which already included a sales tax of 10%. What was the actual price of the meal before tax and tip?  
 a) \$184                                      b) \$204                                      c) \$212                                      d) \$200

Consider price of the meal as  $x$  dollars  
 after a 10% sales tax addition price becomes  $1.1*x$   
 finally after a 20% tip on this amount it becomes  $1.2*1.1*x = 1.32x$   
 but this amount is given as \$264  
 $1.32x = 264$   
 $x = 200$

Answer is D

32. A grocer has 400 pound of coffee in stock 20% of which decaffeinated. If the grocer buys another 100 pounds of coffee of which 60% is decaffeinated, what %, by weight, of the grocer's stock of the coffee is decaffeinated?
- a) 30%                      b) 32%                      c) 40%                      d) 28%

Since the grocer has 400 pounds of coffee in stock, 20 percent of which is decaffeinated,  $0.2 \times 400 = 80$  pounds are decaffeinated.

Since the grocer buys another 100 pounds of coffee, 60 percent of which is decaffeinated, the grocer has 60 more pounds of decaffeinated coffee.

Thus, the percentage of decaffeinated coffee is  $(80 + 60)/(400 + 100) = 140/500 = 28/100 = 28\%$ .

Ans is D

33. Timothy leaves home for school, riding his bicycle at a rate of 9 miles per hour. 15 minutes he leaves his mother sees his math homework lying on his bed and immediately leaves home to bring it to him. If his mother drives 36 miles per hour, how far (in terms of miles) must she drive before she reaches Timothy?
- a)  $1/3$                       b) 4                      c) 3                      d) 12

In 15 mins, Timothy travels  $= 9/4$  miles.

Now, let his mother takes  $x$  hours to reach him, traveling at 36mph.

So,  $36x = 9x + 9/4$

$x = 1/12$  hrs.

Thus, the distance traveled by his mother to reach  $= 36 * 1/12 = 3$  miles.

Ans is C

34. One-fifth of the batteries produced by an upstart factory are defective and one-quarter of the batteries are rejected by the quality control technician. If one-tenth of the non-defective batteries are rejected by mistake, and if all the defective batteries not rejected are sold, then what % of the batteries sold by the factory are defective?
- a) 4%                      b) 3%                      c) 6%                      d) 5%

Lets assume 100 Batteries are manufactured.

$1/5(100) = 20$  are defective.

$1/4(100) = 25$  are rejected

$1/10(100-20) = 8$  Rejected by mistake.

75 Non rejected and sold.

So out of 25 batteries, 8 are rejected by mistake  $\Rightarrow 25 - 8 = 17$ .

20 were defective and 17 are already rejected, but 3 leaked to non-rejected lot.

$(3/75) * 100 = 4\%$

Ans is A

35. Bill and Ben can clean the garage together in 6 hours. If it takes Bill 10 hours working alone, then how many hours will it take Ben working alone?
- a) 11                      b) 16                      c) 15                      d) 4
36. In a class, 60% of the students enrolled for math and 70% enrolled for economics. If 45% of the students enrolled for both of the subjects, what % of the students in the class didn't

- enroll for either subject?  
 a) 85%                      b) 30%                      c) 25%                      d) 15%

Consider enrollment for math and economics to be exclusive.

$$60\% + 70\% = 130\%$$

If 45% enrolled for both classes, that number can be subtracted from the original sum:

$$130\% - 45\% = 85\%$$

The 15% remaining would be those students who did not enroll for either class.

Ans is D.

37. A mother and father have seven sons and each son has two sisters. How many people are in the family?  
 a) 21                      b) 23                      c) 11                      d) 9
38. What comes next? A, A1, 111A, 311A, ?  
 a) 13211A                      b) 31112A                      c) 13211B                      d) 31221A

Each item is a description of the previous item

A

1A - means there was one A in the previous item

111A - means there was one 1 and one A in the previous item

311A - means there was three 1's and one A in the previous item.

So the next in sequence will be 13211A which means

one 3, two 1's, and one A

39. Who is the tallest?  
*A is taller than B*  
*C is shorter than A*  
*D is taller than B*  
*D is shorter than A*  
*E is taller than A*  
 a) A                      b) D                      c) B                      d) E
40. 25, 32, 27, 36, ....?  
 a) 29                      b) 40                      c) 27                      d) 45
41. 53472, 2435, 342, ...?  
 a) 42                      b) 22                      c) 24                      d) 23
42. Who didn't win Ramon Magsaysay award from Bangladesh?  
 a) Syed Rizwana Hasan                      b) Abdullah Abu Syeed  
 c) Dr. Muhammad Yunus                      d) Dr. Debapriya Bhattacharya
43. The single largest source of income in the National Budget 2012-2013?  
 a) taxes on income                      b) import duty                      c) domestic financing                      d) VAT
44. Who is not a financier of Padma Bridge?
45. How many gold medals won by the American swimmer, Michael Phelps in all Olympics?  
 a) 20                      b) 22                      c) 18                      d) 16
46. The Bangladeshi American scientist who achieved four milestones in genomic-sequencing, the genome of Papaya, Rubber, Jute, and Fungus is  
 a) Dr. Muhammad Zafar Iqbal                      b) Dr. M Shamsheer Ali  
 c) Dr. Jamal Nazrul Islam                      d) Dr. Maqsoodul Alam
47. Which manufacturer promotes the brand "RUCHI"

48. Which company holds the major share of Grameenphone?  
 a) HRC                      b) Square                      c) ACI                      d) Partex  
 a) Singtel   b) Grameen Bank   c) NORAD                      d) Telenor
49. Which one is not a stock market index of Chittagong stock market?  
 a) CSCX                      b) CSE 30                      d) CASPI                      d) Telenor
50. Which country is not a member of G-20?  
 a) Turkey                      b) Singapore                      c) Saudi Arabia                      d) CSE 20
51. 'অল্পপ্রাণ' কোন সমাস?  
 a) কর্মধারায়                      b) বহুব্রীহি                      c) তৎপুরুষ                      d) প্রাদি
52. কোন বানানটি সঠিক?  
 a) মনোহরিণী                      b) মনোহরিনী                      c) মনোহারিণী                      d) মনঃহারিণী
53. 'সুবন্ত' এর সন্ধি বিচ্ছেদ কি?  
 a) সুব+অন্ত                      b) সুপ+অন্ত                      c) সুভ+অন্ত                      d) সু+অন্ত
54. 'যার উপায় নেই' - এক কথায় -  
 a) অনুপায়                      b) নাচার                      c) অনন্যোপায়                      d) নিরুপায়
55. 'ধম' শব্দটি?  
 a) তৎসম                      b) তদ্ভব                      c) দেশী                      d) বিদেশী

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