

STUDENT COPY

# IBA

Name :

Batch:

**ANALYTICAL LECTURE - 5**

**MIXED PRACTICE**

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1. The new English film "The Avengers Endgame", the movie on 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 "Chuye Dile Mon" the highly acclaimed Bangladeshi film on similar theme. The argument above is based on which of the following assumptions?
  - (A) "Chuye Dile Mon" 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) Heroic stories make best films.
  - (E) The number of people who go to see it can measure the quality of a film.
  
2. 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.
  
3. Many agriculturally intensive areas of the world are beginning to encounter water scarcity problems. As a result, many farmers in these areas are likely to reduce their output as the water supply they need in order to maintain production shrinks. However, one group of farmers in such a region plans to increase their production by implementing techniques for water conservation.
 

Which of the following, if true, would most strongly support the prediction that the group's plan will succeed?

  - (A) Farmers that can gain a larger share of the food market in their regions will be better positioned to control more water resources.
  - (B) Most agricultural practices in areas with water shortages are water intensive.
  - (C) Other regions of the world not facing water shortages are likely to make up for the reduction in agricultural output.
  - (D) Demand for agricultural products in the group's region is not expected to decline.
  - (E) More than half the water used for agriculture in the farmers' region is lost to evaporation or leakage from irrigation channels.
  
4. Safa is over six feet tall. The statement above can be logically deduced from which of the following statements?
  - (A) The average height of the football team is six feet; Safa is in the middle of the team.
  - (B) If Safa was not asked to join basketball team, then she is not tall. Safa was asked to join the basketball team.
  - (C) If Safa is over six feet tall then she can see over the compounds of Zia Hall. She can see over the compounds of Zia Hall.
  - (D) In Dr. Nabila's seminar everyone who is not over six feet tall is seated in the first row, Safa was seated in the second row.
  - (E) Everyone who is over six feet tall is named „Ferdous.“ Friends and associates named Safa „Ferdous.“

5. In a swimming team, all Free-Style swimmers are Olympic winners. No blue eyed swimmer is an Olympic winner. All Olympic winners go on to lucrative professional careers.

If all the above statements are considered true, which of the following must also be true?

- (A) All those who go to professional careers are Free-Style swimmers.
  - (B) Only Free-Style swimmers go on to professional careers.
  - (C) Some blue-eyed swimmers go on to lucrative professional careers.
  - (D) No blue-eyed swimmer is a Free-Style swimmer.
  - (E) Only blue-eyed swimmers don't go on to lucrative careers.
6. Mr. Neelim, who has just celebrated his 87th birthday, attributes his longevity to his lifelong habit of drinking a double shot of Carrew each night and smoking three cigars each morning.

The best way to counter his argument would be to point out that:

- (A) Smoking has been proved to be a causative factor in several life-threatening diseases
  - (B) Other factors besides those mentioned may have caused him to live 87 years
  - (C) Not all centenarians drink alcohol and smoke tobacco
  - (D) Mr. Neelim should not be consuming the substances mentioned without medical advice
  - (E) Alcohol has been shown to kill brain cell
7. Astronomer: Most stars are born in groups of thousands, each star in a group forming from the same parent cloud of gas. Each cloud has a unique, homogeneous chemical composition. Therefore, whenever two stars have the same chemical composition as each other, they must have originated from the same cloud of gas.

Which of the following, if true, would most strengthen the astronomer's argument?

- (A) In some groups of stars, not every star originated from the same parent cloud of gas.
  - (B) Clouds of gas of similar or identical chemical composition may be remote from each other.
  - (C) Whenever a star forms, it inherits the chemical composition of its parent cloud of gas.
  - (D) Many stars in vastly different parts of the universe are quite similar in their chemical compositions.
  - (E) Astronomers can at least sometimes precisely determine whether a star has the same chemical composition as its parent cloud of gas.
8. Manchester United has more points than Arsenal. Chelsea has less points than Tottenham. Arsenal and Liverpool have the same number of points. Liverpool has more points than Chelsea.

If all the above is true, which of the following must also be true?

- (A) Arsenal have fewer points than Tottenham
- (B) Tottenham has more points than Liverpool
- (C) Manchester United has more points than Chelsea
- (D) Tottenham has more points than Manchester United
- (E) Arsenal have fewer points than Chelsea

### Question 9 – 12

The IBA Cultural Committee 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.

9. 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

10. 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

11. 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

12. 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

**Question 13 and 14 are based on the following information:**

A behavioral psychologist interested in animal behavior noticed that dogs who are never physically disciplined (e.g., with a blow from a rolled-up newspaper) never bark at strangers. The psychologist concluded that the best way to keep a dog from barking at strange visitors is to not punish the dog physically.

13. The psychologist's conclusion is based on which of the following assumptions?
- I. The dogs studied never barked.
  - II. Dogs should not be physically punished.
  - III. There were no instances of an unpunished dog barking at a stranger that he had failed to observe.
- (A) I only    (B) II only    (C) III only    (D) II and III only    (E) I, II, and III
14. Suppose the psychologist decides to pursue this project further and studies twenty-five dogs that are known to bark at strangers. Which of the following possible findings would undermine the original conclusion?
- I. Some of the owners of the dogs studied did not physically punish the dog when it barked at a stranger.
  - II. Some of the dogs studied were never physically punished.
  - III. The owners of some of the dogs studied believe that a dog that barks at strangers is a good watchdog.
- (A) I only    (B) II only    (C) I and II only    (D) II and III only    (E) I, II, and III
15. Starting in 1955, all workers had to wear steel helmets if they were employed in Construction Industry.
- From which of the following can the statement above be properly inferred?
- (A) No workers had to wear steel helmets before 1955, but all workers had to wear them after 1955.
  - (B) Construction industry workers were the first to be required to wear steel helmets.
  - (C) Construction industry workers had to wear steel helmets prior to 1955.
  - (D) Some workers may have worn steel helmets before 1955, but all construction industry workers were required to wear beginning in 1955.
  - (E) Workers may have worn some type of helmet before 1955, but later all had to wear steel-type helmets.
16. This year more students passed the SSC examination. The questions must have been easier compared to those in the last year." This argument is most likely based on which of the following assumptions?
- (A) Had the questions not been easier, fewer students would have passed.
  - (B) Quality of students does not vary from year to year.
  - (C) This year there was less criticism from students about the difficulty level of questions.
  - (D) One year's results should be compared with another year's.
  - (E) Educationists are critical these days about the quality of SSC questions
17. 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

18. The manager of a chemical company which produces pesticides assured the residents of a nearby locality that they had conducted tests and found no evidence that the chemicals leaking from their waste disposal sites were harmful to humans. He also added that there was no reason for alarm. We can infer from the above that:
- A) The residents of the locality were alarmed at the leakage
  - B) Further test were being conducted
  - C) The leakage will have an adverse effect on animal life on locality
  - D) The chemical company's activity is only directed by the profit makers
  - E) The local people do not like the company

### Questions 19 – 22

*Seats on a small plane are being assigned to six passengers – N, P, Q, R, S, and T. The eight seats on the plane are in four rows, numbered 1 through 4, and each row has two seats. Seat assignments are made according to the following conditions:*

N must sit alone in a row.

P must sit in the same row as R.

Q cannot sit in the same row as S.

The rows with only one passenger must be row 1 & row 3.

19. Which of the following passengers could be assigned to sit in the same row as Q?  
(A) N                      (B) P                      (C) R                      (D) S                      (E) T
20. If P and R are in row 2, which of the following must be true?  
(A) N is in row 1.                      (B) Q is in row 1.                      (C) Q is in row 4.  
(D) S in in row 3.                      (E) T is in row 4.
21. Which of the following is the total number of passengers eligible to be the passenger assigned to sit in the same row as T?  
(A) 1                      (B) 2                      (C) 3                      (D) 4                      (E) 5
22. If Q and T are assigned to sit together in a row, which of the following passengers could be assigned to sit in row 3?  
(A) P                      (B) Q                      (C) R                      (D) S                      (E) T

**Instruction:** Mark the appropriate answer as per the following conditions: [Question 22 – 27]

- (A) Statement (1) alone is sufficient, but statement (2) is not sufficient.
- (B) Statement (2) alone is Sufficient, but statement (1) is not sufficient.
- (C) Both statements together are sufficient, but neither statement alone is sufficient.
- (D) Each statement alone is sufficient.
- (E) Statement (1) & (2) together are not sufficient.

### Questions 23 – 27

23. Each employee on a certain task force is either a manager or a director. What percentage of the employees are directors?
- (1) Average salary for manager is \$5,000 less than average of all employees.
  - (2) Average salary of directors is \$15,000 greater than average salary of all employees.

24. If Rokon saved \$600 of his earnings last month, how much did Rokon earn last month?
- (1) Rokon spent  $\frac{1}{2}$  of his earnings last month for living expenses and saved  $\frac{1}{3}$  of the remainder.  
 (2) Of his earnings last month, Rokon paid twice as much as he saved
25. The product of three distinct positive integers is equal to the square of the largest of the three numbers, what is the product of the two smaller numbers?
- (1) The average (arithmetic mean) of the three numbers is  $\frac{34}{3}$ .  
 (2) The largest number of the three distinct numbers is 24.
26. A box contains only red sifs, white sifs, and blue sifs. If a sif is randomly selected from the box, what is the probability that the sif will be either white or blue?
- (1) The probability that a sif will be blue is  $\frac{1}{5}$   
 (2) The probability that a sif will be red is  $\frac{1}{3}$ .
27. Is the number of members of Club X greater than the number of members of Club Y?
- (1) Of the members of Club X, 20% are also members of Club Y.  
 (2) Of the members of Club Y, 30% are also members of Club X.

### Questions 28 – 30

*Oeshi is about to change her Facebook password. She decides to choose a 7 character long alphanumerical password. The conditions are as follows.*

All the letters used in the password are vowels

The digits used in the password range from 1-8

The 1<sup>st</sup>, 4<sup>th</sup> and 7<sup>th</sup> characters of the password are letters.

No letter or digit in the password is used more than once.

The 1<sup>st</sup> character of the password is the m<sup>th</sup> alphabet where m is divisible by 7

The other letters used in the password are the n<sup>th</sup> and p<sup>th</sup> alphabets where n and p are not divisible by 5.

The four digits used in the password are consecutive numbers and are arranged in decreasing order, where three of these numbers are prime numbers.

28. What is the first character of the password?

- (A) A                      (B) E                      (C) I                      (D) O                      (E) U

29. What is the sum of the 2<sup>nd</sup> and 6<sup>th</sup> character of the password?

- (A) 7                      (B) 8                      (C) 9                      (D) 10                      (E) 11

30. Which of the following conditions if added to the original conditions would completely determine the password?

- (A) The sum of the four digits is even  
 (B) The sum of the first and the last digit used in the password is odd  
 (C) The vowel E is not used in the password  
 (D) The 7<sup>th</sup> character of the password can also be used as a Pronoun  
 (E) None of the Above