Indian Institute of Management Kozhikode
Globalizing Indian Thought

IIMK - Kochi Campus

EMAT SAMPLE QUESTION PAPER

QUANTITATIVE ABILITY

1. The base of a right angled triangle is 12 and the three sides are in Arithmetic Progression (A.P.). What is the exact length of hypotenuse if its value is greater than 15?
   - A. 20
   - B. 15
   - C. 27
   - D. 25

2. Six line segments of length 2, 3, 4, 5, 6, 7 units are given. How many triangles can be formed by these lines?
   - A. $^6C_3$
   - B. $^6C_3 - 5$
   - C. $^6C_3 - 6$
   - D. $^6C_3 - 7$

3. A woman sold 100 apples at average rate of Rs. 7.40; she sold some at the rate of Rs. 3 .35 and the rest at Rs. 7.85. How many were sold at the first rate?
   A. 45
   B. 21
   C. 10
   D. 12

4. Pipe A fills a tank of 700 litres capacity at the rate of 40 litres a minute. Another pipe B fills the same tank at the rate of 30 litres a minute. A pipe at the bottom of the tank drains the tank at the rate of 20 litres a minute. If pipe A is kept open for a minute and then closed and pipe B is kept open for a minute and then closed and then pipe C is kept open for a minute and then closed and the cycle repeated, how long will it take for the empty tank to overflow?
   A. 42 minutes
   B. 39 minutes
   C. 40 minutes 33 seconds
   D. None of these

5. A manufacturer undertakes to supply 2000 pieces of a particular component at Rs. 25 per piece. According to his estimates, even if 5% fail to pass the quality tests, then he will make a profit of 25%. However, as it turned out, 50% of the components were rejected. What is the loss to the manufacturer?
   A. Rs. 12,000
   B. Rs. 13,000
   C. Rs. 14,000
   D. Rs. 15,000

6. Mr. Abhik can type a document in 3 hours and Ms. Bhramar can do the job in 4 hours. If both work together to finish it, how much time it would approximately take to type the document?
   A. 1 hours 45 minutes
   B. 3 hours 30 minures
   C. 1 hour 43 minutes
   D. 1 hour 47 minutes

7. ΔABC and ΔPQR are similar triangles such that ∠A = 32° and ∠R = 65°, then ∠B is :
   A. 83°
   B. 32°
   C. 65°
   D. 97°

8. Sir Donald Bradman got out of 0 in the last test innings he batted. If he had made just 4 runs before getting out, his test batting average would have been 100. As it is it is only 99.94. How many innings had Sir Donald Bradman batted in?
   A. 67
   B. 81
   C. 70
   D. Insufficient data

9. One third of the passengers of a train got down at a station but 96 passengers boarded the train in the same station. At the second station, half of the passengers got down but 12 passengers boarded. When the train arrived at the third station, there were 248 passengers in the train. What was the number of passengers in the train at first?
   A. 560
   B. 564
   C. 568
   D. 572

10. If $\dfrac{a+b-c}{a+b} = \dfrac{b+c-a}{b+c} = \dfrac{c+a-b}{c+a}$ and $a+b+c \neq 0$, then the relation between a, b and c is
   A. a + b - c = 0
   B. b + c - a = 0
   C. c + a - b = 0
   D. a = b = c

11. A vendor sells 60 percent of apples he had and throws away 15 percent of the remainder. Next day he sells 50 percent of the remainder and throws away the rest. What percent of his apples does the vendor throw?
   A. 17
   B. 23
   C. 77
   D. 73

12. The class leader of a kindergarten class (with 14 students) is 6 years old and the oldest student of the same class is 3 years older. If the ages of these two are excluded, the average age of the remaining students is one month less than the average age of the whole class. What is the average age of the class?
   A. 3 years
   B. 4 years
   C. 5 years
   D. 6 years

13. Vertices of a quadrilateral ABCD are A (0, 0), B (4, 5), C (9, 9) and D (5, 4). What is the shape of the quadrilateral?
   A. square
   B. rectangle (not square)
   C. rhombus
   D. parallelogram (not rhombus)

14. A 6% stock yields 8%. The market value of the stock is:
   A. Rs. 48
   B. Rs. 75
   C. Rs. 96

D. Rs. 133.33

15. In a forest having 1000 animals, 700 are four legged, 200 are two legged and the remaining have no legs. What is the average number of legs that the 1000 animals have?
    A. 3.2
    B. 3.0
    C. 2.8
    D. 2.9

DATA INTERPRETATION AND LOGICAL REASONING

16. If SYSTEM is written as SYSMET and NEARER is written as AENRER, then FRACTION will be coded as
    A. Carfnoit
    B. Carftion
    C. Noitfrac
    D. Fracnoit

17. There are five books A, B, C, D and E placed on a table. If A is placed below E, C is placed above D, B is placed below A and D is placed above E, then which of the following books touches the surface of the table?
    A. C
    B. B
    C. A
    D. E

Directions: Question 18 and 19 - are based on the logical reasoning contained in brief statements or passages. There could be more than one possible answer. However, you are to select the best answer; that is, the response that most accurately and completely answers the question. You should not make assumptions that cannot be supported by the statements or passages.

18. The cost of producing radios in Country Q is ten percent less than the cost of producing radios in Country Y. Even after transportation fees and tariff charges 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.
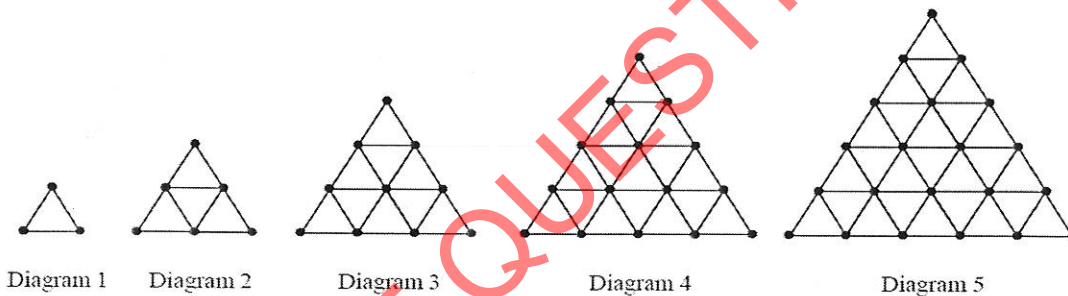
    The statements above, if true, best support which of the following assertions?
    A. Labour costs in Country Q are ten percent below those in Country Y.
    B. Importing radios from Country Q to Country Y will eliminate ten percent of the manufacturing jobs in Country Y.
    C. The tariff on a radio imported from Country Q to Country Y is less than ten percent of the cost of manufacturing the radio in Country Y.
    D. The fee for transporting a radio from Country Q to Country Y is more than ten percent of the cost of manufacturing the radio in Country Q.

19. More and more computer software that is capable of correcting not just spelling, but also grammar and punctuation is being developed. Therefore, it is increasingly unnecessary for working reporters and writers to have a complete knowledge of the principles of English grammar and punctuation. Consequently, in training journalists, less emphasis should be placed on the principles of grammar so that students and professors can concentrate on other important subjects.

Which one of the following, if true, most seriously weakens the argument given for the recommendation above?
    A. The effective use of software that corrects grammar and punctuation requires an understanding of grammatical principles.
    B. Much of the software that corrects grammar and punctuation is already in use.
    C. Development of more complex ethical guidelines for reporters and writers has meant that professors and students in journalism schools must allow time for teaching such issues.
    D. Most of the software that is capable of correcting grammar and punctuation can be run on the types of computers available to most media outlets.

Diagram 1   Diagram 2   Diagram 3   Diagram 4   Diagram 5

The diagram above has a pattern of triangle of dots. Each diagram is composed of a set of triangles shown in diagram 1. Answer to the following:

20. Number of dots in the 8th diagram is
    A. 36
    B. 44
    C. 55
    D. 45

21. Number of triangles (size of diagram 1) in the 8th diagram is
    A. 60
    B. 62
    C. 64
    D. 68
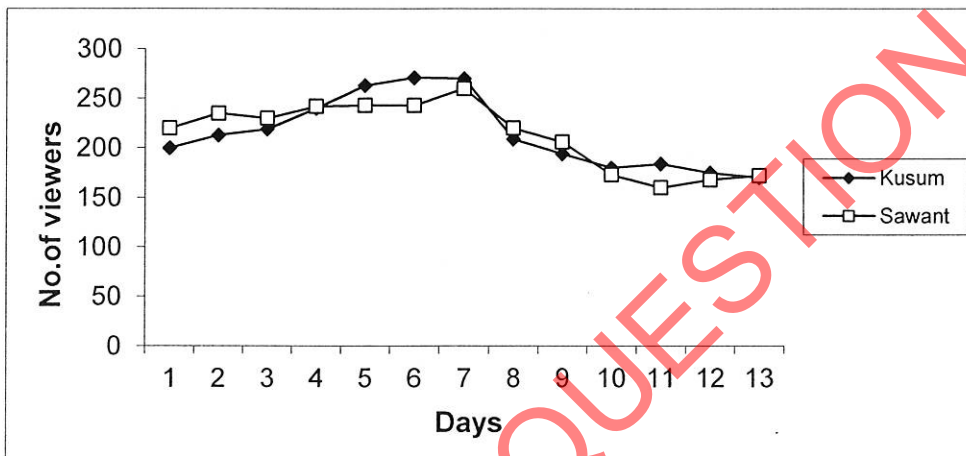
22. The number of dots in the nth diagram is $(n2+3n+2)$. The value of k is
    A. 1
    B. 0.5
    C. 1.5
    D. 2

23. The number of triangles of all possible triangular shapes in the 4th diagram is
    A. 20
    B. 22
    C. 24
    D. None of these

Answer the following questions based on the graph below.

The number of people who came to see the movie *Anjaana* in first thirteen days in the theatres Kusum and Sawant are indicated by the graph shown below.

24. The largest number of viewers for both the theatres combined was on:
    A. The 6th day
    B. The 7th day
    C. The 5th day
    D. None of the above

25. On how many days the number of viewers in Kusum was more than that in Sawant?
    A. 6 days
    B. 5 days
    C. 4 days
    D. 3 days

26. Which of the following statement(s) are true?
    A. The average number of viewers in the first five days in Sawant was more than that in Kusum
    B. The average number of viewers in the last five days in Kusum was more than that in Sawant
    C. Both the statements (a) and (b) are correct
    D. Both the statements (a) and (b) are wrong

27. What is the rate of change in the average number of viewers in the first and second half of the fortnight?
- A. Less than 5%
- B. Between 5% and 10%
- C. Between 10% and 15 %
- D. More than 15%

Answer the following questions based on the passage below.

In an exam, there are five benches, numbered 1 through 5 from front to back. Each bench accommodates up to two persons, seated side by side. Six people — T, G, L, M, P and J — are writing the examination.

L is sharing the bench with someone.
M is not sharing a bench and is seated immediately behind an empty bench.
T is not sharing a bench with either G or P.
G is in either the third or fourth bench.

28. Which of the following groups of students could occupy the second bench?
- A. T and G
- B. L and M
- C. J and T
- D. J, G, and P

29. If P is in the second bench, how many different combinations are possible for the third bench?
- A. two
- B. three
- C. four
- D. five

30. Which one of the following statements CANNOT be true?
- A. Neither T nor G is sharing a bench with another student
- B. Neither M nor J is sharing a bench with another student.
- C. T is sharing a bench, and J is sharing a bench.
- D. T is sharing a bench, and G is sharing a bench.

VERBAL ABILITY

Select the most appropriate word(s) from the choices below and fill up the blanks:

31. The number of families living in poverty _____ by another five percent by the time she leaves office.
- A. Will have dropped
- B. Will drop
- C. Will be dropping
- D. Dropped

32. Despite the _____ of many of their colleagues, some scholars have begun to emphasize "pop culture" as a key for_____ the myths, hopes, and fears of contemporary society.
   A. enthusiasm - symbolizing
   B. skepticism - deciphering
   C. antipathy – involving
   D. discernment – evaluating

33. The office wore a _____ look on Friday after the company downsized it staff.
   A. grisly
   B. tropical
   C. macabre
   D. lugubrious

34. By the time the troops _____, the city _____ deserted.
   A. Arrived, had been
   B. Arrived, was
   C. Had arrived, had been
   D. Did arrive, was

35. Bus _____ are going to increase.
   A. fees
   B. rates
   C. bills
   D. fares

36. In some 19th century novels you see the very poor conditions people lived in that can only be described as _____ misery.
   A. Dejected
   B. Object
   C. Reject
   D. Abject

Select the most appropriate analogy from the choices below:

37. INVINCIBLE : SUBDUED
   A. inconsistent : expressed
   B. bolted : séparated
   C. impervious : damaged
   D. imprudent : enacted

38. VINDICTIVE: MERCY
   A. transient : fleeting
   B. elated : happy
   C. cajole : coax
   D. skeptical : trustfulness

39. A person who is bad in spelling. (Out of the given alternatives, choose the one which can be substituted for the words or sentence).
    A. pedant
    B. cacographist
    C. linguist
    D. calligraphist

40. The leader must have the lion's share of the booty. (Choose the exact meaning of the Idiom/Phrase).

    A. the worthy part
    B. the smaller part
    C. the larger part
    D. the stronger part