



PART – A

Directions (Q. Nos. 1-2); These questions are based on the information given below:
Seven persons a, b, c, d, e, f and g are sitting in a row (not necessarily in the same order) facing North, such that :

- i. only two persons sit between f and g and g sits second to the left of b;
- ii. d sits third to the left of c ; and
- iii. e sits exactly between g and b, and b sits at the extreme right end of the row.

1. How many persons sit between f and e ?

- A) One B) Two C) Three D) Four

2. Who amongst the following sits exactly in the middle of the line ?

- A) a B) c C) e D) g

3. Find the missing character (?) in the following question.

1	2	3
11	7	5
120	45	?

- A) 15 B) 16 C) 17 D) 18

4. Two statements are given in the following question, followed by two conclusions numbered I and II. You have to take the given two statements to be true even if they seem to be at variance from commonly known facts. Read the conclusions and then decide which of the given conclusions logically follows from the two given statements, disregarding known facts. Give answer.

- A) if only conclusion I follows
B) if only conclusion II follows
C) if neither I nor II follows
D) if both conclusions I and II follow

Statements

- I. Some teachers are followers.
II. Some followers are famous.

Conclusions

- I. Some teachers are famous.
II. Some followers are teachers.



PART – B

26. Which of the following is true when a coin flip experiment is repeated 12 times ?
- A) Probability of all heads is greater than the probability of all tails.
 - B) Probability of HHHHHHHHHHHH equals the probability of HTHTHTHTHTHT.
 - C) Number of heads will equal the number of tails.
 - D) Probability of HHHHHHHHHHHH is less than the probability of HTHTHTHTHTHT.
27. The weight of postal envelopes follows a normal distribution (mean of 2.0 gm and standard deviation of 0.50 gm). What is the probability that two randomly chosen envelopes will both weigh less than 1.0 gm ?
- A) 0.0456
 - B) 0.0228
 - C) 0.0005
 - D) 0.4772
28. A statistician calculates the probability of an event equal to -0.215. Then it is for sure that
- A) The statistician has made a mistake
 - B) The event is highly probable to happen
 - C) The probability of the event not happening is 0.5
 - D) The event is never going to happen
29. In sampling with replacement, which of the following is true ?
- A) None of the values used in calculating the next event's probability change
 - B) Both the numerator and denominator for the next event's probability change
 - C) The denominator for the next event's probability changed
 - D) The numerator for the next event's probability changes
30. Probability of two randomly selected cards from a set of two red and two black cards being not of same colour is
- A) $\frac{2}{3}$
 - B) $\frac{1}{2}$
 - C) $\frac{1}{3}$
 - D) None of these
31. If (G, \cdot) is a group such that $(ab)^{-1} = a^{-1}b^{-1}$, for all a, b belonging to G , then G is
- A) abelian group
 - B) commutative semi group
 - C) non-abelian group
 - D) monoid
32. The set of integers Z with the binary operation “*” defined as $a * b = a + b + 1$ for a, b belonging to Z , is a group. The identity element of this group is
- A) 1
 - B) 0
 - C) -1
 - D) 2