

Time Allowed : 2½ hours

General Instructions :

Attempt all questions from Section A and any four questions from Section B.
All working, including rough work, must be clearly shown, and must be done on the same sheet as the rest of the answer.

Omission of essential working will result in loss of marks.

The intended marks for questions or parts of questions are given in brackets [].
Mathematical tables are provided.

SECTION - A (40 Marks)
(Attempt all questions from this Section)

Question 1 : Choose the correct answers to the questions from the given options: [15]

- (i) A consumer bought a T.V. from a dealer at a discount of 20% on the marked price of ₹40,000. If the rate of GST is 18%, then the tax paid by the consumer is :
 (a) ₹5760 (b) ₹2880 (c) nil (d) ₹7200
- (ii) The discriminant of $2x^2 - 5x + 1 = 0$ is :
 (a) 25 (b) 33 (c) 17 (d) 15
- (iii) If $(x - 2)$ is a factor of $x^2 + ax + 10$, then the value of a is :
 (a) 7 (b) -7 (c) 4 (d) -5
- (iv) The order of the matrix $\begin{bmatrix} 7 \\ 5 \\ -6 \end{bmatrix}$ is :
 (a) 1×3 (b) 3×1 (c) 3×0 (d) 1×1
- (v) The n th term of the AP 15, 10, 5, ... is :
 (a) $5n - 20$ (b) $20 - 5n$ (c) $20 + 5n$ (d) $10 + 5n$
- (vi) The reflection of the point $P(1, -2)$ in the line $y = -1$ is :
 (a) $(-3, -2)$ (b) $(1, -4)$ (c) $(1, 4)$ (d) $(1, 0)$
- (vii) In the figure, $AB \parallel PQ$, $CQ = 6$ cm, $CB = 14$ cm and $AB = 7$ cm. The length of PQ is :
 (a) 3 cm
 (b) 3.5 cm
 (c) 4 cm
 (d) 4.2 cm
- (viii) If $P(A)$ and $P(\text{not } A)$ are complementary events and $P(A) = 0.15$, then $P(\text{not } A) = ?$
 (a) 0.35 (b) 0.85 (c) 0.3 (d) cannot be determined
- (ix) If $25 - 4x \leq 16$, then, the smallest value of x , when $x \in \mathbb{R}$ is :
 (a) 2.25 (b) 2.5 (c) 3.5 (d) 3
- (x) The total surface area of the adjoining figure is:
 (a) 880 cm^2 (b) 110 cm^2
 (c) 440 cm^2 (d) 210 cm^2



Math Paper 2013

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