

Topics : Fundamentals of Mathematics, Complex Number, Points & Straight Lines

Type of Questions		M.M., Min.
Single choice Objective (no negative marking) Q.1,	(3 marks, 3 min.)	[3, 3]
Multiple choice objective (no negative marking) Q.2,3	(5 marks, 4 min.)	[10, 8]
Fill in the Blanks (no negative marking) Q.4,5	(4 marks, 4 min.)	[8, 8]
Subjective Questions (no negative marking) Q.6	(4 marks, 5 min.)	[4, 5]

- If $(0.5)^\alpha > (0.5)^\beta$, where $\alpha, \beta \in \mathbb{R}$, then
 (A) $\alpha > \beta$ (B) $\alpha < \beta$
 (C) only possibility $\alpha = \beta = 0$ (D) depends upon sign of α & β
- The simultaneous equations, $y = x + 2|x|$ & $y = 4 + x - |x|$ have the solution set given by:
 (A) $\left(\frac{4}{3}, \frac{4}{3}\right)$ (B) $\left(4, \frac{4}{3}\right)$ (C) $\left(-\frac{4}{3}, \frac{4}{3}\right)$ (D) $\left(\frac{4}{3}, 4\right)$
- If $z = 1 + i$ then z^{10} reduces to :
 (A) a purely imaginary number (B) an imaginary number
 (C) a purely real number (D) a complex number
- The point (11, 10) divides the line segment joining the points (5, -2) and (9, 6) in the ratio :
 (A) 1 : 3 internally (B) 1 : 3 externally (C) 3 : 1 internally (D) 3 : 1 externally
- The points (0, -1), (6, 7), (-2, 3), (8, 3) are the vertices of a rectangle. **[True / False]**
- The point on y-axis equidistant from the points (2, 3) and (-4, 1) is.....

Answers Key

1. (B) 2. (C)(D) 3. (A)(B)(D) 4. (D)
5. True 6. $(0, -1)$