

Topics : Fundamentals of Mathematics, Binomial Theorem

Type of Questions

M.M., Min.

Single choice Objective (no negative marking) Q.1,2,3

(3 marks, 3 min.)

[9, 9]

Multiple choice objective (no negative marking) Q.4,5

(5 marks, 4 min.)

[10, 8]

Fill in the Blanks (no negative marking) Q.6

(4 marks, 4 min.)

[4, 4]

Subjective Questions (no negative marking) Q.7

(4 marks, 5 min.)

[4, 5]

- If $|r - 6| = 11$ and $|2q - 12| = 8$ then, the minimum value of $\frac{q}{r}$:

(A) -2 (B) $\frac{17}{10}$ (C) $\frac{-1}{5}$ (D) $\frac{2}{5}$
- If the number 397A is divisible by 6 and the number 2358B is divisible by 4 then the number of possible ordered pair of (A, B) is , (where A, B are digits)

(A) 2 (B) 5 (C) 6 (D) 3
- If $z = \frac{2+i}{4i+(1+i)^2}$, then \bar{z} is equal to

(A) $\frac{1}{6} + \frac{i}{3}$ (B) $-\frac{1}{6} + \frac{i}{3}$ (C) $\frac{1}{6} - \frac{i}{3}$ (D) $-\frac{1}{6} - \frac{i}{3}$
- If 2576a456b is divisible by 15, then

(A) a may take the value 5 (B) b may take the value 0
(C) a may take the value 4 (D) a may take the value 6
- In the expansion of $(x + y + z)^{25}$

(A) every term is of the form ${}^{25}C_r \cdot {}^rC_k \cdot x^{25-r} \cdot y^{r-k} \cdot z^k$
(B) the coefficient of $x^8 y^9 z^9$ is 0
(C) the number of terms is 325 (D) none of these
- The solution set of the equation $\sqrt[4]{|x - 3|^{x+1}} = \sqrt[3]{|x - 3|^{x-2}}$ is _____.
- $\frac{(x-2)(x-4)(x-7)}{(x+2)(x+4)(x+7)} > 1$

Answers Key

1. (A) 2. (C) 3. (A) 4. (A)(B)(C)
5. (A)(B) 6. 2, 4, 117. $(-\infty, -7) \cup (-4, -2)$

