

Topic : Straight Lines

Type of Questions

M.M., Min.

Single choice Objective (no negative marking) Q.1,2,3,4,5

(3 marks, 3 min.)

[15, 15]

Subjective Questions (no negative marking) Q.6

(4 marks, 5 min.)

[4, 5]

Match the Following (no negative marking) Q.7

(8 marks, 8 min.)

[8, 8]

- B & C are fixed points having co-ordinates (3, 0) and (-3, 0) respectively. If the vertical angle BAC is 90° , then the locus of the centroid of the $\triangle ABC$ has the equation :
 (A) $x^2 + y^2 = 1$ (B) $x^2 + y^2 = 9$ (C) $9(x^2 + y^2) = 1$ (D) $9(x^2 + y^2) = 4$
- The coordinates of the midpoints of the sides of a triangle ABC are D(2, 1), E(5, 3) and F(3, 7). Equation of median of the triangle ABC passing through F is
 (A) $10x + y - 37 = 0$ (B) $x + y - 10 = 0$ (C) $x - 10y + 67 = 0$ (D) none of these
- The co-ordinates of the orthocentre of the triangle bounded by the lines, $4x - 7y + 10 = 0$; $x + y = 5$ and $7x + 4y = 15$ is :
 (A) (2, 1) (B) (-1, 2) (C) (1, 2) (D) (1, -2)
- The family of straight lines $3(a + 1)x - 4(a - 1)y + 3(a + 1) = 0$ for different values of 'a' passes through a fixed point whose coordinates are
 (A) (1, 0) (B) (-1, 0) (C) (-1, -1) (D) none of these
- The co-ordinates of a point P on the line $2x - y + 5 = 0$ such that $|PA - PB|$ is maximum, where A is (4, -2) and B is (2, -4) will be :
 (A) (11, 27) (B) (-11, -17) (C) (-11, 17) (D) (0, 5)
- Given vertices A(1, 1), B(4, -2) and C(5, 5) of a triangle, find the equation of the perpendicular dropped from C to the interior bisector of the angle A.

7. Match the column

Column - I

Column - II

(A) Area of the region enclosed by $2|x| + 3|y| \leq 6$ is

(p) 12

(B) OPQR is a square and M, N are the mid points of the sides PQ and QR respectively. If the ratio of the areas of the square and the triangle OMN is $\lambda : 6$, then λ is equal to

(q) 2

(C) If slope of the straight line through the point (1, 2), whose

(r) 4

distance from the point (3, 1) has the greatest value, is $\frac{m}{6}$,

then m is equal to

(D) Area of $\triangle ABC$ is 20 sq. units where points A, B and C are (4, 6), (10, 14) and (x, y) respectively. If AC is perpendicular to BC, then number of positions of C is

(s) 16



Answers Key

1. (A) 2. (A) 3. (C) 4. (B) 5. (B)

6. $x = 5$ 7. $(A) \rightarrow (p), (B) \rightarrow (s), (C) \rightarrow (p), (D) \rightarrow (r)$

