Time: 1 Hour Maximum Marks: 20M

Class Xth Mathematics

Coordinate Geometry

Q1- Find the value of a so that the point (3,a) lies on the line represented by 2x – 3y + 5 = 0.

(1M)

Q2- Find the distance between the points (a cosθ, 0) and (0, a sinθ). (1M)

Q3- (1M)

The point which divides the line segment joining the points (8, – 9) and (2, 3) in ratio 1 : 2 internally lies in the

(a) I quadrant **(b)** II quadrant

(c) III quadrant **(d)** IV quadrant

Q4- (1M)

If $A\left(\frac{m}{3}, 5\right)$ is the mid-point of the line segment joining the points Q (– 6, 7) and R (– 2, 3), then the value of m is

(a) -12 **(b)** -4

(c) 12 **(d)** -6

Q5- If A(-2, -1), B(a,0), C(4,b) and D(1,2) are the vertices of a parallelogram, find the values of a and b. (2M)

Q6- (2M)

If the distances of P(x, y) from A(5, 1) and B (– 1, 5) are equal, then prove that $3x = 2y$

Q7- Determine the ratio in which the line 3x + y – 9 = 0 divides the segment joining the points (1,3) and (2,7). (3M)

Q8- The line joining the points (2,1) and (5,-8) is trisected at the points P and Q. Find the coordinates of P and Q. If point P lies on the line 2x – y + k = 0. Find the value of k. (4M)

Q9- (4M)

Find the ratio in which the segment joining the points (1, – 3) and (4, 5) is divided by x-axis ? Also find the coordinates of this point on x-axis.