

# **SHIKSHA CLASSES**

Subject: Geometry Question Paper Total Marks: 20
Class: X 5. Co-ordinate Geometry Time: 1 Hour

#### Q.1: A) Choose the correct alternative from the following questions.

- 1) Seg AB is parallel to Y axis and coordinates of point A are (1, 3) then co-ordinates of point B can be ......
  - a) (3, 1)
- b) (5,3)
- (3,0)
- d) (1, -3)
- 2) Distance of point (-3, 4) from the origin is .....
  - a) 7
- b) 1
- c) 5
- d) -5

B) Solve the following question.

Find the slope of the line whose inclination is 45°.

### Q.2 A) Attempt any ONE of the following.

2

1

1) Find the slopes of the lines passing through the points, L(-2,-3) and M(-6,-8)

$$L(-2, -3) = (x_1, y_1)$$

$$M(-6, -8) = (x_2, y_2)$$

Slope of line 
$$LM = \frac{1}{2}$$

$$= \frac{-8 - (-3)}{-6 - (-2)} = \boxed{\boxed{}}$$

$$=\frac{5}{4}$$

2) Find the distance between the points A(2,3) and B(4,1)

# Q.2 B) Attempt any ONE of the following.

2

- 1) If A (3,5), B (7,9) and point Q divides seg AB in the ratio 2:3 then find co-ordinates of point Q.
- 2) Find the co-ordinates of a point on y-axis which is equidistant from M(-5, -2) and N(3, 2).

# Q. 3 A) Attempt any ONE of the following.

3

- 1) Verify, whether points P(6, -6), Q(3, -7) and R(3, 3) are collinear.
- 2) Find the value of K, if the points A(2,1), B(k,3) and c(-3,-4) are collinear.

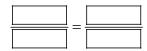
Let 
$$A(2, 1) = (x_1, y_1)$$

$$B(k, 3) = (x_2, y_2),$$

$$C(-3, -4) = (x_3, y_3)$$

The given points are collinear

 $\therefore$  Slope of line AB = Slope of line BC



$$\frac{3-1}{k-2} = \frac{-4-3}{-3-k}$$

$$\frac{2}{k-2} = \frac{-7}{-3-k}$$

$$-2k + 7k = 14 + 6$$

$$5k = 20$$

# Q. 3 B) Attempt any ONE of the following.

Point p is the centre of the circle and AB is a diameter Find the co-ordinates of point B if co-ordinates of point A and P are (2, -3) and (-2, 0) respectively.

3

4

3

2) Show that A(-4, -7), B(-1, 2), C(8, 5) and D(5, -4) are the vertices of a parallelogram.

# Q. 4: Attempt any ONE of the following.

- 1) The line seg AB is divided into five congruent parts at P, Q, R and S such that A -P -Q-R-S-B. If point Q (12, 14) and S(4,18) are given find the coordinates of A, P, R, B.
- 2) A (-3, -4), B (-5, 0), C (3,0) are the vertices of  $\triangle ABC$ . Find the co-ordinates of the circumcenter of  $\triangle ABC$ .

# Q.5: Attempt any ONE of the following.

- 1) Find the type of the quadrilateral if points A(-4,-2), B(-3, -7), C(3, -2) and D(2,3) are joined serially.
- 2) Find the co-ordinates of the points of trisection of the line segment AB with A (2,7) and B (-4, -8)

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