BHARATH COACHING CENTRE

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| 10th CBSE | Co – Ordinate Geometry | Total: 50 |
| Maths | | Time: 1.30 hrs |

SECTION – A 5 x 1 = 5

1. If abscissa of a point is zero, then it lies on:
2. ΔABC is a right angled triangle in which A (0, 2) and B (2, 0) are given. Then, coordinates of C are:
3. Points (3,0), (0,4) and (-3, 0) are:
4. To locate a point P on AB such that PB= $\frac{1}{4}$AB, line segment AB should be divided in the ratio:
5. If the points (7, -2), (5,1) and (3,k) are collinear, then the value of k is:

SECTION – B 5 X 2 = 10

6. Find the perimeter of the triangle formed by the points (0, 0), (1, 0) and (0, 1).
7. Find the points on the x-axis which are at a distance of $2\sqrt{5}$ from the point (7,-4). How many such points are there?
8. Find the distance between the points $P\left(\frac{\sin\theta}{2}, 0\right)$ & $Q\left(0, \frac{\cos\theta}{2}\right)$.
9. Find the ratio in which the point $\left(\frac{-2}{7}, \frac{-20}{7}\right)$ divides the join of points (-2, -2) and (2, -4).
10. Find the center of the circle passing through (-3, -1), (-1, 3) and (6,2),

SECTION – C 5 X 3 = 15

11. Name the type of triangle PQR formed by the points P ($-\sqrt{2}$, $\sqrt{2}$), Q($\sqrt{2}$,- $\sqrt{2}$) and R($\sqrt{6}$, +$\sqrt{6}$).
12. If A (-3, 2), B (p, q) and C (-1, 4) are the vertices of an isosceles triangle ABC in which AB=BC, show that p + q =1.
13. If the points P (p, 3), Q (6, 1), R (8, 2) and S (9, 4) are the vertices of a parallelogram PQRS, find the value of p.
14. The points A, B, C are collinear and AB=BC. If the coordinates of A, B, C are (3, a), (1,3) and (b,4) respectively, find the values of a and b.
15. If P(x, y), Q (3, 4), R (-5,-6) are collinear then show that 5x = 4y - 1.

SECTION – D 4 X 5 = 20

16. Show that the point (1, 7), (4, 2), (-1, 1) and (-4, 4) are the vertices of a square.
17. Find the area of a parallelogram ABCD if three of its vertices are A (2, 4), B (2+ $\sqrt{3}$, 5) and C(2, 6).
18. A (1, 0), B (5, 3), C (2, k), D (-2, 4) are the vertices of a quadrilateral ABCD. Find the values of k, if the area of quadrilateral is 25 sq. units.
19. Find the area of the triangle PQR formed by joining the mid-points of the sides of the triangle whose vertices are A (1,-2), B (3, 2), C (-1, 4). Also, find area of ΔABC.