**Half mark and one-mark questions**

1. Find the centroid of the triangle whose vertices are (3, 4), (-7, -2) and (10, -5)?
2. Find the distance between the points (0, 0) and (a, b)?
3. Find the midpoint of the line segment joining the points (-5, 5) and (5, -5)?
4. If the slope of the line passing through the points (2, 5) and ( 5, 8) is represented by tan θ (where 00 < θ < 900), then find angle θ?
5. A(0, 3), B(k, 0) and AB = 5, find the positive value of ‘k’?
6. Find the distance between the points (1, 5) and (5, 8)?
7. What is the other end point of the diameter of a circle, who’s centre is (1, 2) and one end point of the diameter is (3, 4)?
8. Determine ‘x’ so that 2 is the slope of the line passing the points (-2, 4) and (x, -2)?
9. Find the coordinates of the point, which divides the join of (-1, 7) and (4, -3) in the ratio 2:3?
10. Where does the points (0, -3), (0, 7), (0, 6) and (0, -9)?
11. Find the radius of the circle whose centre is (3, 2) and passes through (-5, 6)?
12. Find the midpoint of the line segment joining (sin² θ, sec² θ) and (cos² θ, tan² θ)?
13. What is the slope of X – axis?
14. Two consecutive vertices of a square are (0, 0) and (3, 4). Then find the area of the square?
15. Find the distance between the points (sin 00, cos900) and (tan² 600, sec² 600)
16. What is the distance of the point (4, -5) from X – axis?
17. If a line passes through the points (3, 4) and (3, -6) then

1) the line is parallel to X – axis

2) the line is parallel to Y – axis

3) slope of the line is not defined

4) slope of the line is zero

A) 1 and 3 are true B) 2 and 4 are true

C) 1 and 4 are true D) 2 and 3 are true

1. Find the midpoint of the line segment joining the points (log2 8, log5 25) and (log10 10, log10 100)?
2. If the point (x, y) lies in Q2, then in which quadrant the point (-x, y) lie?
3. What is the angle between the lines x + 3 =0 and y – 5 = 0?
4. If origin is the centroid of a triangle whose vertices are (3, 2), (-6, Y) and (3, -2) then find ‘y’?
5. Find the coordinates of the point, which divides the line segment joining (2, 0) and (0, 2) in the ratio 1;1?

**Two marks questions**

1. Show that the points A(4, 2), B(7, 5) and C(9, 7) are collinear?
2. A(3, 6), B(3, 2) and C(8, 2) are the vertices of a rectangle ABCD. Plot the points on the graph sheet. Find the coordinates of the fourth vertex D by using the graph?
3. The distance between the points (8, x), and (x, 8) is 2 units. Find the value of ‘x’?
4. Two vertices of a triangle are (3, 2) and (-2, 1) and its centroid is . Find the third vertex of the triangle?
5. Find the angle made by the line passing through the points (5, 3) and (-1, -3) with the positive direction of the X – axis?
6. Determine the ‘x’, if the slope of the line joining the two points (4, x) and (7, 2) is ?
7. In the diagram on a lunar eclipse, the position of the sun, earth and moon are shown by (-4, 6), (k, -25) and (5, -6) respectively. Then find the value of ‘k’?
8. Find the coordinates of the point divide the line segment joining (2, 3) and (-4, 0) in the ratio 2:3?
9. Find the area of the triangle whose vertices are (-5, -1), (3, -5) and (5, 2)?
10. Find the coordinates of the point A where AB is the diameter of a circle, whose centre is (2, -3) and B is (1, 4)?
11. If A (-1, 3), B (1, -1) and C (5, 1) are the vertices of a triangle ABC, then find the length of the median through the vertex A?
12. Write the coordinates of the point on X – axis which is equidistant from the points (-3, 4) and (2, 5)?
13. In what ratio Y – axis divides the line segment joining the points (4, -5) and (-3, 7)?
14. If (k, 2k), (3k, 3k) and (3, 1) are collinear, then find ‘k’?
15. The centroid of the triangle formed by (7, x), (y, -6) and (9, 10) is at (6, 3) then find the values of ‘x’ and ‘y’?
16. If (1, 2), (4, y), (x, 6) and (3, 5) are the vertices of a parallelogram taken in order the find x and y?
17. In what ratio the point (-4, 6) divide the line segment joining the points (-6, 10) and (3, -8)?
18. Check whether (5, -2), (6, 4) and (7, -2) are the vertices of an isosceles triangle?
19. Write a relation between x and y such that the point (x, y) is equidistant from the points (-2, 8) and (-3, -5)?
20. If x – 2y + k = 0 is median of the triangle whose vertices are at points A(-1, 3), B(0, 4) and C(-5, 2), find the value of ‘k’?
21. The two opposite vertices of a square are (-1, 2) and (3, 2). Find the area of the square?
22. Find distance between the points (a sin θ, 0) and (0, a cos θ)?

**Four marks questions**

1. If A(-5,7), B(-4, -5), C(-1, -6) and D(4, 5) are the vertices of a quadrilateral, then find the area of the quadrilateral ABCD?
2. Find the coordinates of the points of trisection of the line segment joining the points (-3, 3) and (3, -3)?
3. If the points P(-3, 9), Q(a, b) and R(4, -5) are collinear and a + b = 1, then find the values of a and b?
4. The points C and D are on the line segment joining A(-4, 7) and B(5, 13) such that AC = CD = DB. Then find the coordinates of the points C and D?
5. The area of the triangle is 18sq. units, whose vertices are (3, 4), (-3, -2) and (p, -1), then find the possible value(s) of ‘p’?
6. Show that the points A(-1, -2), B(4, 3), C(2, 5) and D(-3, 0) in that order form a rectangle?
7. Find the ratio in which X – axis divides the line segment joining the points (2, -3) and (5, 6). And also find the intersecting point on X – axis?
8. Find the area of Rhombus whose vertices are taken in order are (-1, 1), (1, -2), (3, 1) and (1, 4)?
9. Find the area of the triangle formed by joining the mid points of the sides of the triangle, whose vertices are (0, -1), (2, 1) and (0, 3). Find the ratio of this area to the area of the given triangle?
10. Find the coordinates of the points which divides the line segment joining A(-2, 2), and B(2, 8) into four equal parts?
11. Find the area of the triangle formed by the points (0,0), (4, 0) and (4, 3) by using Heron’s formula?
12. If A and B are (-2, -2) and (2, -4), find the coordinates of the point p such that AP = AB and p lies on the line segment AB?
13. Find the coordinates of the triangle whose vertices are (x1, y1), (x2, y2) and (x3, y3)?
14. Can you draw a triangle with vertices (1, 5), (5, 8), (13, 14)? Give reason?
15. If (7, 3),(6, y),(x, 2) and (9, 4) are vertices of a parallelogram, then find the values of x and Y?