Section A 1 mark each

Q1. Distance between A(-a, b) and B(a, - b) is
(a) $\sqrt{a^2 + b^2}$ (b) $\sqrt{a+b}$ (c) $\sqrt{(a+b)^2}$ (d) None of these

Q2. The coordinates of midpoints of a line segment CD are (5,6). If coordinates of C are (3, 4). Coordinates of D are
(a) (3, 4) (b) (4, 3) (c) (5, 4) (d) None of these

Q3. The points A (9, 0), B (9, 6), C (–9, 6) and D (–9, 0) are the vertices of a
(a) square (b) rectangle (c) rhombus (d) trapezium

Q4. The area of a triangle with vertices A (4, 0), B (7, 0) and C (8, 4) is
(a) 14 (b) 28 (c) 8 (d) None of these

Q5. The perpendicular bisector of the line segment joining the points A (1, 5) and B (4, 6) cuts the *y*axis at
(a) (0, 13) (b) (0, –13) (c) (0, 12) (d) None of these

Section B 2 marks each

Q6. A circle has its centre at the origin and a point A (5, 0) lies on it. The point B (6, 6) lies outside the circle. State true or false and justify

Q7. Find b for points (b, 1), (1, - 1) and (11, 4) to be collinear

Q8. Do the following points form a quadrilateral? A (– 3, 5), B (3, 1), C (0, 3), D (– 1, – 4).

Section C 3 marks each

Q9. The line segment joining the points (3, - 4) and (1, 2) is trisected at points M and N. If the coordinates of M and N are (m, - 2) and $(\frac{5}{3}, n)$ respectively, find the values of m and n.

Q10. Using coordinate geometry prove midpoint of hypotenuse is equidistant from the three vertices of the right triangle.

Q11. If (– 4, 3) and (4, 3) are two vertices of an equilateral triangle, find the coordinatesof the third vertex, given that the origin lies in the interior of the triangle.

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