

SWOT INSTITUTE

CONIC SECTIONS XI-TEST

Time : 1 hr.

M.M 40

1. In the following, find the equation of the circle with centre (1, 1) and radius $\sqrt{2}$
2. In the following, find the centre and radius of the circles.
 $x^2 + y^2 - 8x + 10y - 12 = 0.$
3. Find the equation of the circle passing through the points (2, 3) and (-1, 1) and whose centre is on the line $x - 3y - 11 = 0.$
4. Find the equation of a circle with centre (2, 2) and passes through the point (4, 5).
5. In the following, find the coordinates of the focus, axis of the parabola, the equation of the directrix and the length of the latus rectum
 $x^2 = 6y.$
6. In the following, find the equation of the parabola that satisfies the given conditions
 - (i) Vertex (0, 0) ; focus (3, 0)
 - (ii) Vertex (0, 0) passing through (2, 3) and axis is along x-axis.
7. In each of the following, find the coordinates of the foci, the vertices the length of major axis, the minor axis, the eccentricity and the length of the latus rectum of the ellipse.
 - (i) $\frac{x^2}{25} + \frac{y^2}{100} = 1$
 - (ii) $36x^2 + 4y^2 = 144.$
8. In each of the following, find the equation for the ellipse that satisfies the given conditions :
 - (i) Vertices (0, ± 13), foci (0, ± 5)
 - (ii) Foci ($\pm 3, 0$), $a = 4.$
9. In each of the following, find the coordinates of the foci and the vertices, the eccentricity and the length of the latus rectum of the hyperbola
 $16x^2 - 9y^2 = 576.$
10. In each of the following, find the equation of the hyperbola satisfying the given conditions
 - (i) Vertices ($\pm 7, 0$), $e = \frac{4}{3}.$
 - (ii) Foci (0, $\pm \sqrt{10}$), passing through (2, 3)