Name: Date:

CHOOSE THE CORRECT OPTION FROM QUES 1 TO 19

Q01. Find the length of latus rectum of $25x^2 + 4y^2 = 100$.
(a) 3/5 units   (b) 1/5 units   (c) 8/5 units   (d) None of these

Q02. Find the equations of the directrix & the axis of the parabola $3x^2 = 8y$.
(a) $3y - 4 = 0, x = 0$ (b) $3x - 4 = 0, y = 0$ (c) $3y - 4x = 0$ (d) None of these

Q03. Find the coordinates of the foci of the ellipse $x^2 + 4y^2 = 100$.
(a) F($\pm5\sqrt{3}$, 0)   (b) F($\pm3\sqrt{5}$, 0)   (c) F($\pm4\sqrt{5}$, 0)   (d) None of these

Q04. Find the eccentricity of the hyperbola: $3x^2 - 2y^2 = 6$.
(a) e = $\sqrt{(5/2)}$ (b) e = $\sqrt{5}/2$ (c) e = $\sqrt{(2/5)}$ (d) None of these

Q05. Find the length of latus rectum of $x^2 = -22y$.
(a) 11   (b) - 22   (c) 22   (d) None of these

Q06. Find the length of axes of: $3x^2 - 2y^2 = 6$.
(a) $2\sqrt{2}$ & $2\sqrt{5}$ units   (b) $2\sqrt{2}$ & $2\sqrt{3}$ units   (c) $2\sqrt{5}$ & $2\sqrt{2}$ units   (d) None of these

Q07. Find the length of the latus rectum of $3x^2 + 2y^2 = 18$?
(a) 2 units   (b) 3 units   (c) 4 units   (d) None of these

Q08. Find the length of the latus rectum of the parabola $3y^2 = 8x$.
(a) 4/3 units   (b) 8/3 units   (c) 2/3 units   (d) None of these

Q09. The equation $x^2 + y^2 - 12x + 8y - 72 = 0$ represent a circle find its centre?
(a) (−6,−4)   (b) (6,−4)   (c) (6, 4)   (d) (−6, 4)

Q10. Find the equation of the parabola with focus F (4,0) & directrix x = −4.
(a) $y^2 = 32x$ (b) $y^2 = -16x$ (c) $y^2 = 8x$ (d) $y^2 = 16x$

Q11. Find the coordinates of the foci of $x^2/8 + y^2/4 = 1$.
(a) F1(2,0) & F2(−2,0)   (b) F1(−2,0) & F2(2,0)   (c) F1(−2,0) & F2(−2,0)   (d) None of these

Q12. Find the coordinates of the vertices of $x^2 - y^2 = 1$.
(a) A(−1,0), B(−1,0)   (b) A(−1,0), B(1,0)   (c) A(1,0), B(−1,0)   (d) None of these

Q13. Find the eccentricity of the hyperbola $4x^2 + 9y^2 = 1$.
(a) e = $\sqrt{5}/3$ (b) e = $-\sqrt{5}/3$ (c) e = $\sqrt{3}/5$ (d) 3/$\sqrt{5}$

Q14. Find the length of the latus rectum of the parabola $9x^2 + y^2 = 36$
(a) 1/3 units   (b) 1/5 units   (c) 11/3 units   (d) 1/6 units

Q15. Find the length of minor axis of $x^2 + 4y^2 = 100$
(a) 10 units   (b) 12 units   (c) 14 units   (d) 8 units

Q16. Find the centre of the circles $x^2 + (y - 1)^2 = 2$
(a) (1,0)   (b) (0,1)   (c) (1, 2)   (d) None of these

Q17. Find the radius of circles $x^2 + (y-1)^2 = 2$

   (a) 2   (b) 2   (c) $2\sqrt{2}$ (d) None of these

Q18. Find the equation of a circle with centre (P,Q) & touching the y-axis.

   (a) $x^2 + y^2 - 2bx + 2ay + b^2 = 0$ (b) $x^2 + y^2 + 2bx - 2ay + b^2 = 0$

   (c) $x^2 + y^2 - 2bx + 2ay + b^2 = 0$ (d) None of these

Q19. Find the equation of a circle with centre (P,Q) & touching the y-axis.

   (a) $x^2 + y^2 + 2Qy + Q^2 = 0$ (b) $x^2 + y^2 - 2px + 2Qy + Q^2 = 0$

   (c) $x^2 + y^2 - 2px + 2Qy + Q^2 = 0$ (d) None of these

Q01. Show that the equation $x^2 + y^2 - 6x + 4y - 36 = 0$ represent a circle, also find its centre n radius?

Q02. Find the equation of an ellipse whose foci are (±8,0)& the eccentricity is 1/4.

Q03. Find the equation whose vertices are (0, ±10) & e = 4/5

Q04. Find the equation of hyperbola whose length of latus rectum is 36 & foci are(0, ±12)

Q05. Find the equation of a circle drawn on the diagonal of the rectangle as its diameter, whose sides are x = 6, x = −3, y = 3 & y = −1.

Q06. Show that the equation $6x^2 + 6y^2 + 24x - 36y - 18 = 0$ represents a circle. Also find its centre & radius.

Q07. Find the equation of the parabola with focus at F (5,0) & directrix is x = −5.

Q08. Find the equation of the hyperbola with centre at the origin, length of the transverse axis 18 & one focus at (0,4)

Q09. Find the equation of an ellipse whose vertices are (0,±13) & the foci are (0,±5)

Q10. Find the equation of the ellipse whose foci are (0,±3)& length of whose major axis is 10.

Q11. Find the equation of the hyperbola whose foci are at (0,±B)& the length of whose conjugate axis is $2\sqrt{11}$.

Q12. Find the equation of the hyperbola whose vertices are (0,±3)& foci are (0,±8)

Q13. Find the equation of the ellipse for which e = 4/5 & whose vertices are (0,±10).

Q14. Find the equation of the ellipse, the ends of whose major axis are (±7,0) & the ends of whose minor axis are (0,±2)

Q15. Find the equation of the parabola with vertex at the origin & y + 5 = 0 as its directrix. Also, find its focus

Q16. Find the equation of ellipse whose vertices are (0,13)& the foci are (0, ±5)

Q17. Find the equation of the hyperbola whose foci are (±5,0) & the transverse axis is of length 8.

Q18. Find the equation of a circle, the end points of one of whose diameters are A(−3, 2)&B(5,-3).

Q19. If eccentricity is 1/5 & foci are (±7,0). Find the equation of an ellipse.

Q20. Find the equation of the hyperbola where foci are (±5,0)& the transverse axis is of length 8.

Q21. Find the equation of the hyperbola with centre at the origin, length of transverse axis 6 & one focus at (0,4)

Q22. Find the equation of the ellipse, the ends of its major axis are (±3,0) & at the ends of whose minor axis are (0,±4).

Q23. Find the equation of the parabola with focus at F (4,0) & directrix x = −3

Q24. Find the coordinates of the focus & vertex, the equations of the directrix & the axis & length of latus rectum of the parabola x = −8y

Q25. Find the length of major & minor axis- coordinate's of vertices & the foci, the eccentricity & length of latus rectum of the ellipse $16x^2 + y^2 = 16$.

Q26. Find the lengths of the axis , the coordinates of the vertices & the foci the eccentricity & length of the let us rectum of the hyperbola $25x^2 − 9y^2 = 225$.

Q27. Find the equation of the hyperbola with centre at the origin, length of the transverse axis 8 & one focus at (0,6)

Q28. Find the area of the triangle formed by the lines joining the vertex of the parabola $x^2 = 12y$ to the ends of its latus rectum.

Q29. A man running in a race course notes that the sum of the distances of the two flag posts from him is always 12 m & the distance between the flag posts is 10 m. find the equation of the path traced by the man.

Q30. Find the equation of a circle, the end points of one of whose diameters are A(2,−3) & B(−3,5).

Q31. An equilateral triangle is inscribed in the parabola $y^2 = 4ax$ so that one angular point of the triangle is at the vertex of the parabola. Find the length of each side of the triangle.

Q32. Find the equation of the hyperbola whose foci are at (0, ±√10)& which passes through the points (2,3)

Q33. Find the length of axes & coordinates of the vertices of the hyperbola $(x^2/49) − (y^2/64) = 1$

Q34. Find the equation of the curve formed by the set of all these points the sum of whose distance from the points A(4,0,0) & B(−4,0,0) is 10 units.

Q35. Find the equation of the hyperbola whose foci are at (0, ±√10) & which passes through the point (2,3).

Q36. Find the length of axes & coordinates of the vertices of the hyperbola ($y^2/9$) − ($x^2/16$) = 1

Q37. Find the eccentricity of the hyperbola $(y^2/9) − (x^2/16) = 1$

Q38. If y = 2x is a chord of the circle $x^2 + y^2 − 10x = 0$, find the equation of the circle with this chord as a Diameter.

Q39. Find the equation of the ellipse with centre at the origin, major axis on the y–axis & passing through the points (3,2) & (1,6).

Q40. Prove that the standard equation of an ellipse is(x^2/a^2) + (y^2/b^2)= 1 Where a & b are the lengths of the semi major axis & the semi- major axis respectively & a > b.