





CLASS : XIth DATE : SUBJECT : MATHS DPP NO. : 1

Topic :- CONIC SECTION				
1. axis	The circle $x^2 + y^2 + 4$	x -	پر 7 پ	y + 12 = 0 cuts an intercept on y-
	s of length a) 3	b) 4	c) 7	d) 1
2. oth	If the eccentricities of the ellipse $\frac{x^2}{4} + \frac{y^2}{3} = 1$ and the hyperbola $\frac{x^2}{64} - \frac{y^2}{b^2} = 1$ are reciprocals of each ner, then b^2 is equal to			
oui	a) 192	b) 64	c) 16	d) 32
3. The ellipse $x^2 + 4y^2 = 4$ is inscribed in a rectangle aligned with the coordinate axes, which is turn in inscribed in another ellipse that passes through the point (4, 0). Then, the equation of the ellipse is a) $x^2 + 12y^2 = 16$ b) $4x^2 + 48y^2 = 48$ c) $4x^2 + 64y^2 = 48$ d) $x^2 + 16y^2 = 16$				
4. 1, y	The Cartesian equation of the directrix of the parabola whose parametric equations are $x = 2t$ $y = t^2 + 2$, is			tric equations are $x = 2t +$
	a) $y = 2$	b) $y = 1$	c) $y = -1$	d) $y = -2$
5.	The line $x - 1 = 0$ is the directrix of the parabola $y^2 - kx + 8 = 0$. Then one of the value of k is			
	a) $\frac{1}{8}$	b) 8	c) 4	d) $\frac{1}{4}$
6.	The equation of the axes of the ellipse $3x^2 + 4y^2 + 6x - 8y - 5 = 0$, are			
	a) $x + 3, y = 5$	b) $x + 3 = 0, y - 5 = 0$) c) $x - 1 = 0, y = 0$	d) $x + 1 = 0, y - 1 = 0$
7. Locus of the mid points of the chord of ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$, so that chord is always touching the circle $x^2 + y^2 = c^2$, $(c < a, c < b)$ is				
		$(b^4x^2 + a^4y^2)$	b) $(a^2x^2 + b^2y^2)^2 = c$ d) None of the above	$x^2(a^4x^2+b^4y^2)$
8. The length intercepted by the curve $y^2 = 4x$ on the line satisfying $dy/dx = 1$ and passing through point (0, 1) is given by				

- point (0, 1), is given by
 - a) 1 b) 2 c) 0 d) None of these

9. Two vertices of an equilateral triangle are (-1,0) and (1,0) and its third vertex lies above the x-axis. The equation of its circumcircle, is

a)
$$x^{2} + y^{2} - \frac{1}{\sqrt{3}}y - 1 = 0$$

b) $x^{2} + y^{2} + \frac{2}{\sqrt{3}}y - 1 = 0$





c) $x^2 + y^2 - \frac{2}{\sqrt{3}}y - 1 = 0$ d) None of these

10. The tangents to $x^2 + y^2 = a^2$ having inclinations α and β intersect at *P*. If $\cot \alpha + \cot \beta = 0$, then the locus of P is

a)
$$x + y = 0$$
 b) $x - y = 0$ c) $xy = 0$ d) None of these

- 11. The parametric representation (2 + t², 2 t + 1) represents
 a) A parabola with focus at (2,1)
 b) A parabola with vortex at (2,1)
 - b) A parabola with vertex at (2,1)
 - c) An ellipse with centre at (2,1)
 - d) None of these

12. Product of the perpendicular from the foci upon any tangent to the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ (a < b) is equal to

10

a) 2*a*

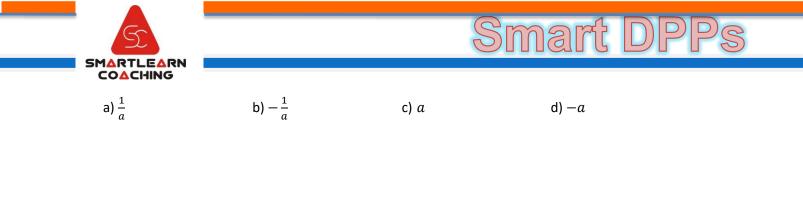
- b) a^2
- c) b^2 d) ab^2
- 13. The equations of the sides *AB*, *BC*, *CA* of a $\triangle ABC$ are x + y = 1, 4x y + 4 = 0 and 2x + 3y = 6. Circles are drawn on *AB*, *BC*, *CA* as diameter. The point of concurrence of the common chord is
 - a) Centroid of the triangle b) Orthocenter c) Circumcentre d) Incentre
- 14. The sum of the distances of a point (2, -3) from the foci of an ellipse $16 (x 2)^2 + 25 (y + 3)^2 = 400$ is
 - a) 8 b) 6 c) 50 d) 32

15. If the equation of a given circle is $x^2 + y^2 = 36$, then the length of the chord which lies along the line 3x + 4y - 15 = 0 is

- a) $3\sqrt{6}$ b) $2\sqrt{3}$ c) $6\sqrt{3}$ d) None of these
- 16. The normal chord of a parabola $y^2 = 4ax$ at (x_1, x_1) subtends a right angle at the
 - a) Focus
 - b) Vertex
 - c) End of the latusrectum
 - d) None of these

17. The equation of the circle which has a tangent 2x - y - 1 = 0 at (3,5) on it and with the centre on x + y = 5, is

- a) $x^{2} + y^{2} + 6x 16y + 28 = 0$ b) $x^{2} + y^{2} - 6x + 16y - 28 = 0$ c) $x^{2} + y^{2} + 6x + 6y - 28 = 0$ d) $x^{2} + y^{2} - 6x - 6y - 28 = 0$
- 18. The equation of the tangent to the parabola $y^2 = 9x$ which goes through the point (4, 10), is a) x + 4y + 1 = 0 b) 9x + 4y + 4 = 0 c) x + 4y + 36 = 0 d) 9x - 4y + 4 = 0
- 19. The length of the chord of the circle $x^2 + y^2 + 4x 7y + 2 = 0$ along the *y*-axis, is a) 1 b) 2 c) 1/2 d) None of these
- 20. What is the slope of the tangent drawn to the hyperbola xy = a, $(a \neq 0)$ at the point (a, 1)?



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