ECAT Pre General Science Mathematics Chapter 23 Conic Section Online Test

Sr	Questions	Answers Choice
1	The number of real tangents that can be drawn to the ellipse $3x^2+ 5y^2= 32$ passing thro. (3, 5) is	A. 0 B. 1 C. 2 D. Infinite
2	The two different parts of the hyperbola are called its	A. Vertices B. Directrices C. Nappes D. Branches
3	The line through the centre and perpendicular to the transverse axis is called the	A. Major axis B. Minor axis C. Focal axis D. Conjugate axis
4	The vertices of the ellipse $x^2+ 4y^2= 16$ are	
5	The end points of the major axis of the ellipse are called its	A. Foci B. Vertices C. Co - vertices D. None of these
6	The axis of the parabola $y^2= 4ax$ is	A. X = 0 B. Y = 0 C. X = y D. X = -y
7	The conic is a parabola if	A. e < 1 B. e > 1 C. e = 1 D. None of these
8	The perpendicular bisector of any chord of a circle	A. Passes through the centre of the circle B. Does not pass through the centre of the circle C. May or may not pass through the centre of the circle D. None of these
9	A line segment whose end points lie on a circle is called	A. The secant of the circle B. The arc of the circle C. The chord of the circle D. The circumference of the circle
10	The equation of the normal to the circle $x^2+ y^2= 25$ at (4, 3) is	A. 3x - 4y =0 B. 3x - 4y =5 C. 4x + 3y = 5 D. 4x + 3y = 25
11	The point (x_1, y_1) lies outside the circle $x^2+ y^2+ 2gx + 2fy + c =0$ if	
12	The circle $(x - 2)^2+ (y + 3)^2= 4$ is not concentric with the circle	A. (x - 2)²+ (y + 3) ²= 9 B. (x + 2)²+ (y - 3) ²= 4 C. (x + 2)²+ (y - 3) ²= 8 D. (x - 2)²+ (y + 3) ²= 5
13	If x + y + 1 = 0 touches the parabola $y^2=\lambda x$, then λ is equal to	A. 2 B. 4 C. 6 D. 8
14	The parabola $y^2= x$ is symmetric about	A. x-axis B. y-axis C. Both x and y-axis D. The line y = x
15	If (a, b) is the mid-point of a chord passing thro' the vertex of the parabola $y^2= 4x$, then	A. a = 2b B. 2a = b C. a²= 2b

		D. 2a = b²
16	If t is the parameter for one end of a focal chord of the parabola $y^2 = 4ax$, then its length is	
17	The point on $y^2 = 4ax$ nearest to the focus has its abciassae equal to	A. -a B. a C. a/2 D. 0
18	The radius of the circle $(x - 1)^2 + (y + 3)^2 = 61$ is	A. 8 B. 4 C. 64 D. None of these
19	Question Image	
20	The constant distance of all points of the circle from its centre is called the	A. Radius of the circle B. Secant of the circle C. Chord of the circle D. Diameter of the circle
21	If a cone is cut by a plane perpendicular to the axis of the cone, then the section is a	A. Parabola B. Circle C. Hyperbola D. Ellipse
22	If the st. line $3x + 4y = K$ touches the circle $x^2 + y^2 - 10x = 0$ then the value of K is	A. -1 or 20 B. -10 or 40 C. -2 or 20 D. 2 or 20
23	A square is inscribed in the circle $x^2 + y^2 - 2x + 4y + 3 = 0$. Its sides are parallel to the co-ordinate axes. Then one vertex of the square is	
24	The equation of a line parallel to the tangent to the circle $x^2 + y^2 = 16$ at the point (2, 3) and passing thro' the origin is	A. 2x + 3y = 0 B. 2x - 3y = 0 C. 3x + 2y = 0 D. 3x - 2y = 0
25	The line $3x - 4y = 0$	A. Is a tangent to the circle x² + y² = 25 B. Is a normal to the circle x² + y²=25 C. Does not meet the circle x² + y² = 25 D. Does not pass thro' the origin
26	Question Image	A. 2 b B. 2 a C. 2 ab D. a + b
27	A circle is a limiting case of an ellipse whose eccentricity	A. Tends to a B. Tends to b C. Tends to 0 D. Tends to a + b
28	Question Image	A. An ellipse B. A parabola C. A circle D. A hyperbola
29	The latus rectum of the ellipse $5x^2 + 9y^2 = 45$ is	A. 10 / 3 B. 5 / 3 C. 3 / 5 D. 3 / 10
30	The equation $ax^2 + 2hxy + by^2 + 2gx + 2fy + c = 0$ represents an ellipse if	