ECAT Pre General Science Mathematics Chapter 23 Conic Section Online Test

Sr	Questions	Answers Choice
1	The slope of the normal at the point $(at^2, 2at)$ of the parabola $y^2 = 4ax$ is	A. $1/t$ B. t C. $-t$ D. $-1/t$
2	The line $y = 2x + c$ is a tangent to the parabola $y^2 = 16x$ if c equals	A. -2 B. -1 C. 0 D. 2
3	The equation of the parabola with directirx $x = 2$ and the axis $y = 0$ is	A. $y^2 = 8x$ B. $y^2 = -8x$ C. $y^2 = 4x$ D. $y^2 = -4x$
4	The equation of the directrix of the parabola $x^2 = 4ay$ is	A. $x + a = 0$ B. $x - a = 0$ C. $y + a = 0$ D. $y - a = 0$
5	The eccentricity of the parabola $y^2 = -8x$ is	A. -2 B. 2 C. -1 D. 1
6	The length of the tangent from (2, 1) to the circle $x^2 + y^2 + 4y + 3 = 0$ is	
7	The equation of the chord of the circle $x^2 + y^2 - 4x = 0$ whose mid-point is (1, 0) is	A. $y = 2$ B. $y = 1$ C. $x = 2$ D. $x = 1$
8	The line $Ax + By + C = 0$ will touch the circle $x^2 + y^2 = \lambda\ when$	A. $C^2 = \lambda(A^2 + B^2)$ B. $A^2 = \lambda(A^2 + C^2)$ C. $B^2 = \lambda(A^2 + C^2)$ D. None of these
9	Circumcentre of the triangle, whose vertices are (0, 0), (6, 0) and (0, 4) is	A. (2, 0) B. (3, 0) C. (0, 3) D. (3, 2)
10	The equation $x^2 + y^2 = 0$ represents	A. A circle B. A degenerate circle C. An empty set D. A st. line
11	Question Image	
12	Question Image	A. 1 B. 5 C. 7 D. 9
13	Question Image	A. A parabola B. An ellipse C. A hyperbola

		D. A circle
14	A rectangular hyperbola whose centre is C is cut by any circle of radius r in four points P, Q, R and S. Then $CP^2 + CQ^2 + CR^2 + CS^2 =$	A. r^2 B. $2r^2$ C. $3r^2$ D. $4r^2$
15	Question Image	
16	The line $y = 4x + c$ touches the hyperbola $x^2 - y^2 = 1$ if	
17	The eccentricity of the conic $9x^2 - 16y^2 = 144$ is	A. 4/5 B. 5/4 C. 4/3 D. 3/4
18	A chord passing through the centre of the circle is called	A. the secant of the circle B. the tangent of the circle C. the arc of the circle D. the diameter of the circle
19	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
20	Question Image	A. 6 C. 20 D. 0
21	Question Image	A. 184 D. none of these
22	Question Image	
23	Question Image	
24	Question Image	
25	Question Image	
26	Question Image	
27	Question Image	
28	Question Image	
29	Question Image	
30	Question Image	D. none of these