ECAT Mathematics Online Test

Sr	Questions	Answers Choice
1	The eccentricity of ellipse becomes zero, then it takes the form of:	A. a parabols B. a straight line C. a circle D. None of these
2	The lotus of intersection of perpendicular tangents to the parabola $y^2 = 4ax$ is:	A. Axis of the parabola B. Focal chord of the parabos C. The tangent at vertex of the parabola D. a directrix of the parabola
3	The eccentricity of parabola is:	A. 1 B. 0 C. Greater than 1 D. Less than 1
4	Co-ordinate of a point on the parabola $y^2 = 8x$ whose focal distance is 4 are:	A. (2 , 4) B. (-2 ,-4) C. (-2, 4) D. (2,-4)
5	Coordinates of the focus of the parabola $x^2 - 4x -8y-4=0$ are:	A. (0,2) B. (,0,1) C. (2,0) D. (1,2)
6	Which shape of the following objects are approximately parabolic ares?	A. Light reflectors B. Force C. Weight of the pendul D. None of these
7	Latus rectum = 4 x _____	A. focal distance of the vertex B. Chord C. Focus D. 1/2
8	If $\varrho > 1$, then the conic, is:	A. Ellipse B. Parabola C. Hyperbola D. None of these
9	the latus rectum of the parabola $x^3 = -4ay$ is:	A. x = a B. y = -a C. x = -a D. y = 0
10	the curve of the parabola $y^2 = -4ax$ is symmetric with respect to	A. x -axis B. y - axis C. Botha x and y- axis D. None of thes
11	The point which is closet to the focus of a parabola is:	A. vertex B. Chord C. Focus D. Directix
12	The parabola $y2 + 2y + x = 0$ lie in _____ quadrant.	A. First B. Second C. Third D. Fourth
13	The axis of the parabola $x^2 = 4ay$ is:	A. y = 0 B. x = 0 C. x = -a D. y = a
14	What is the axis of the parabola $y^2 = 4ax$?	A. x = 0 B. y = 0 C. x = a D. y = 0
15	The conic is a parabola, when:	A. ϱ > 1 B. ϱ < 1 C. $\varrho = 1$

#	Question	Options
16	If the vertex of the parabola is the origin and directrix is x+5 = 0 . then its latus rectum is:	A. 10 B. 5 C. 0 D. 20
17	The distance of point P(x,y) from focus in a parabola $y^2 = 4ax$, is:	A. 2a B. a C. x + a D. x-a
18	a chord passing through the focus of a parabola is called a:	A. Focal chord B. Latus rectum C. Tangent D. Directrix
19	y=0 of the parabola $y^2 = 4ax$ is the	A. equation of directirx B. Equatio of the tangent C. Equation of axis D. equation of latus rectum
20	I f the focus is F (0,-a) and directrix is the line v=a, then equation of the parabola is:	A. $x^2 = 4ay$ B. $y^2 = 4ax$ C. $y^2 = -4ax$ D. $x^2 = 4ax$
21	A line joining two distinct points on a parabola is called a _____ of the parabola.	A. Chord B. Tangent C. Lust rectum D. directrix
22	If the focus lies on the y-axis with coordinates f(0,a) and directrix of the parabola is y = -a, the equation of parabola is:	A. $y^2 = -4ax$ B. $x^2 = 4ay$ C. $x^2 = -4ay$ D. $y^2 = 4ax$
23	ℓ is a	A. variable B. Positive constant C. Positive variable D. Directrix
24	The line through the focus and perpendicular to the directrix is called _____ of the parabola	A. axis B. focal chord C. tangent D. latus rectum
25	The vertex of the equation $y^2 = 4ax$ is:	A. (2, -2) B. (1,1) C. (0 , 0) D. (2 , 2)
26	If (0,4) and (0,2) are vertex and focus of the parabola respectively, the the equation of the parabola is:	A. $x^2 = 4y -32$ B. $x^2 = 8y -32$ C. $y^3 = 16 x$ D. x2 + 8y =32
27	The point where the axis meets the parabola is called	A. Directrix B. Foucu C. Chord D. Vertix
28	The exact value of $\cos^{-1}(-1) + \cos^{-1}(1) =$	A. π B. -π C. π/2 D. π/3
29	The exact value of cos-1 (0) is	A. π/2 B. -π/2 C. 3π D. π-π/6
30	$\cos^{-1} 12/13 =$	A. $\tan^{-1} 3/5$ B. $\cot^{-1} 13/12$ C. $\sec^{-1} 13/12$ D. $\sin^{-1} 5/13$