ECAT Computer Science Entry Test

Sr	Questions	Answers Choice
1	An ellipse slides between two lines at right angles to one another. The locus of its centre is :	A. a parabola B. an ellipse C. a circle D. a hyperbola
2	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
3	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
4	The eccentricity of parabola is:	A. 1 B. 0 C. Greater than 1 D. Less than 1
5	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)
6	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)
7	Which shape of the following objects are approximately parabolic ares?	A. Light reflectors B. Force C. Weight of the pendul D. None of these
8	Latus rectum = 4 x _____	A. focal distance of the vertex B. Chord C. Focus D. 1/2
9	If$_e$> 1 , then the conic, is:	A. Ellipse B. Parabola C. Hyperbola D. None of these
10	the latus rectum of the parabola $x^3 = -4ay$ is:	A. x = a B. y = -a C. x = -a D. y = 0
11	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
12	The point which is closet to the focus of a parabola is:	A. vertex B. Chord C. Focus D. Directix
13	The parabola y2 + 2y + x = 0 lie in _____ quadrant.	A. First B. Second C. Third D. Fourth
14	The axis of the parabola $x^2 = 4ay$ is:	A. y = 0 B. x = 0 C. x = -a D. y = a
15	What is the axis of the parabola $y^2 = 4ax$?	A. x = 0 B. y = 0 C. x = a

		D. y = 0
16	The conic is a parabola, when:	A. e > 1 B. e < 1 C. e = 1 D. e = 0
17	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
18	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
19	a chord passing through the focus of a parabola is called a:	A. Focal chord B. Latus rectum C. Tangent D. Directrix
20	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
21	I f the focus is F (0,-a) and directrix is the line v=a, then equation of the parabola is:	A. x² = 4ay B. y² = 4ax C. y² = -4ax D. x² = 4ax
22	A line joining two distinct points on a parabola is called a _____ of the parabola.	A. Chord B. Tangent C. Lust rectum D. directrix
23	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. y² = -4 ax B. x² = 4ay C. x² = -4ay D. y² = 4ax
24	e is a	A. variable B. Positive constant C. Positive variable D. Directrix
25	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
26	The vertex of the equation y^2 = 4ax is:	A. (2, -2) B. (1,1) C. (0 , 0) D. (2 , 2)
27	If (0,4) and (0,2) are vertex and focus of the parabola respectively, the the equation of the parabola is:	A. x² = 4y -32 B. x² =8y -32 C. y³ = 16 x D. x2 + 8y =32
28	The point where the axis meets the parabola is called	A. Directrix B. Foucu C. Chord D. Vertix
29	The slope of the normal at (5 cos, 0, 5 sin 0) to the circle. x^2+y^2 = 25 is:	A. tan□ B. cos□ /sin□ C. -cot□ D. - tan□
30	The slope of the normal at (4,3) to the circle x^2+y^2=25 is	A. 3/4 B. -3/4 C. 4/3 D. -4/3