**CHAP 6**

1) The intersection of a cone with a plane gives

1. Point
2. Line
3. Conic Section
4. Two points

Answer: C

2) The conic sections are described today by

1. Linear Equation
2. Bi-Quadratic equations
3. Quadratic equations
4. Cubic equations

Answer: C

3) The standard conic section are

1. Circle
2. Parabola
3. Ellipse / hyperbola
4. All A, B, C are true

Answer: D

4) The degenerate conic sections are

1. a point
2. two coincident lines
3. a pair of lines
4. All A, B, C are true

Answer: D

5) The equation 3x2 – 4xy + 5y2 = 0 is called

1. Quadratic
2. Linear
3. Explicit
4. Homogeneous

Answer: D

6) The two lines represented by the equation

8x2 + 41xy - 8y2 = 0are

1. Parallel
2. Non Parallel
3. Perpendicular
4. Coincident

Answer: C

7) If the two lines represented by the equation

ax2 + 2hxy + by2 = 0 are perpendicular then,

1. a = b
2. h = ab
3. a + b = 0
4. h = a + b

Answer: C

8) The angle between the pair of lines represented by , 3x2 – 4xy – 3y2 = 0 is

1. π/2
2. π/3
3. π/4
4. π/6

Answer: A

9) The pair of lines represented by y2 – 36 = 0 are

1. Parallel
2. Perpendicular
3. Non parallel
4. Coincident

Answer: A

10) The center of the circle represented by the equation (x – 1)2 + (y – 2)2 = 4 is

1. (0, 0)
2. (1, 1)
3. (1, 2)
4. (1, - 2)

Answer: C

11) The radius of the circle, represented by the equation x2 + 2x + 1 + y2 + 4y + 4 = 16 is

1. 16
2. 8
3. 11
4. 4

Answer: D

12) The length of the diameter of the circle represented by the equation 2x2 + 2y2 – 8 = 0, is

1. 8
2. 4
3. 2
4. 16

Answer: B

13) The length of the chord of the circle defined by

x2 + 4x + 4 + y2 + 6y + 9 = 9, passing through the center is

1. 9
2. 3
3. 6
4. 4

Answer: C

14) The circumference of the circle represented by

x2 + 2x + 1 + y2 + 2y + 1 = 25 is

1. 2π
2. 25π
3. 10π
4. 5π

Answer: C

15) The length of the chord of the circle

x2 – 2x + 1 + y2 – 6y + 9 = 9 passing through the point (1, 3) is

1. 9
2. 6
3. 3
4. 18

Answer: B

16) If length of a chord of the circle x2 – 2x + 1 + y2 + 2y + 1 = 25 is 10, then it will pass through the point

1. (-1, 1)
2. (1, -1)
3. (1, 5)
4. (5, 1)

Answer: B

17) The equation of the circle given in the figure is



1. (x + 1)2 + (y + 2)2 = 4
2. (x - 1)2 + (y - 2)2 = 9
3. (x - 1)2 + (y - 2)2 = 2
4. (x - 1)2 + (y - 2)2 = 4

Answer: D

18) In the figure the length of the chord AB is



1. 4
2. 5
3. 6
4. 8

Answer: C

19) The circumference of the circle given in the figure is



1. 6π
2. 4π
3. 2π
4. 8π

Answer: A

20) If a point P is outside the circle then from this point we can draw

1. one tangent to the circle
2. two tangents to the circle
3. three tangents to the circle
4. no tangent to the circle

Answer: B

21) the equation of the circle given in the figure is



1. x2 + y2 = 10
2. (x – 5)2 + y2 = 25
3. (x + 5)2 + y2 = 25
4. x2 + (y - 5)2 = 25

Answer: B

22) The circumference of the circle given in the figure is



1. 6π
2. 9π
3. 3π
4. 12π

Answer: A

23) If g2 + f2 – c = 0 then the circle reduces to

1. a line
2. a point
3. two points
4. none of these

Answer: B

24) In the equation of a circle the coefficient of x2 and y2 are

1. Positive
2. Negative
3. Equal
4. Unequal

Answer: C

25) The equation of a circle is an equation of

1. Second degree in x
2. Second degree in y
3. First degree in x and y
4. Second degree in x and y

Answer: D

26) In the equation of a circle there is no term involving

1. x
2. y
3. xy
4. x2

Answer: C

27) The equation 3x2 + 3y2 – 213x + 97y + 329 = 0 represents a

1. Line
2. Circle
3. Ellipse
4. Parabola

Answer: B

28) In the figure the measure of ∠ 1 is



1. 45o
2. 60o
3. 90o
4. 120o

Answer: C

29) The equation of the tangent to the circle x2 + y2 = 8 at the point (2, 2) is

1. 2x + y = 8
2. x – y = 4
3. x + y = 2
4. 2x + y = 4

Answer: A

30) If x2 + y2 = 4 represents a circle then the point (-2, 0) lies

1. Inside the circle
2. Outside the circle
3. On the circle
4. None of these

Answer: C

31) If a body is moving with a uniform angular speed around a circular path then the linear velocity of the body is directed along

1. The circular path
2. The normal to the path
3. The tangent to the path
4. None of these

Answer: C

**9. Conic Section II, Parabola, Ellipse and Hyperbola**

1) If the conic is a parabola then the value of eccentricity is

1. 0
2. 1
3. less than 1
4. greater than 1

Answer: B

2) If e = 1 then the conic is a

1. Circle
2. Parabola
3. Ellipse
4. Hyperbola

Answer: B

3) If e < 1 then the conic is

1. a circle
2. a parabola
3. an ellipse
4. a hyperbola

Answer: C

4) If e > 1 then the conic is

1. a circle
2. a parabola
3. an ellipse
4. a hyperbola

Answer: D

5) Locus of points in a plane, the distance of each of which from a fixed point is equal to its distance from a fixed straight line in the plane is called

1. a circle
2. a parabola
3. an ellipse
4. a hyperbola

Answer: B

6) Locus of points in a plane, the distance of each of which from a fixed point is less than its distance from a fixed line in the plane is called

1. a circle
2. a parabola
3. an ellipse
4. a hyperbola

Answer: C

7) Locus of points in a plane, the distance of each of which from a fixed point is greater than its distance from a fixed line in the plane is called

1. a circle
2. a parabola
3. an ellipse
4. a hyperbola

Answer: D

8) the vertex of the parabola y2 = - 8x is

1. (-2, 0)
2. (2, 0)
3. (0, 0)
4. (0, -2)

Answer: C

9) The axis of the parabola x2 = - 4y is

1. x-axis
2. y-axis
3. x and y-axis
4. none of these

Answer: B

10) The equation of the axis of the parabola y2 = 16x is

1. x – y = 0
2. x + y = 0
3. x = 0
4. y = 0

Answer: D

11) The equation of the latus rectum of the parabola

y2 = -16x is

1. x = 4
2. y = -4
3. y – 4 = 0
4. x + 4 = 0

Answer: D

12) the equation of the parabola given in the figure is



1. x2 + 8y = 0
2. y2 = - 8x
3. y2 = 8y
4. x2 = 8y

Answer: A

13) the length of the latus rectum of the parabola given in the figure is



1. 3
2. – 12
3. 6
4. 12

Answer: D

14) The equation of the parabola given in the figure is



1. x2 = - 16y
2. x2 = 16y
3. y2 = - 16x
4. y2 = 16x

Answer: C

15) The length of the latus rectum of parabola given in the figure is



1. 4
2. 8
3. 2
4. –8

Answer: B

16) the equation of the latus rectum of the parabola given in the figure is



1. x = 5
2. y –5 = 0
3. x = -5
4. y = -5

Answer: B

17) The coordinates of the focus of the parabola

(x – 3)2 = 4(y – 2) is

1. (0, 3)
2. (0, 2)
3. (3, 3)
4. (3, 2)

Answer: C

18) The coordinates of the vertex of the parabola

(x – 5)2 = 4(y – 4) is

1. (0, 5)
2. (0, 4)
3. (4, 5)
4. (5, 4)

Answer: D

19) The equation of the axis of the parabola

(x – 3)2 = 2(y + 4) is

1. x = -3
2. x – 3 = 0
3. y + 4 = 0
4. y = 4

Answer: B

20) The equation of the Directrix of the parabola

(x – 3)2 = 4(y – 2) is

1. x = 1
2. y = 2
3. y – 1= 0
4. y = -1

Answer: C

21) The equation of the latus rectum of the parabola

(x +1)2 = 4(y – 2) is

1. y – 3 = 0
2. y = -3
3. x = 3
4. x = -3

Answer: A

22) the equation of the tangent at the vertex of the parabola (x + 3)2 = 4(y – 2) is

1. x = -3
2. y = 0
3. y – 2 = 0
4. y = -2

Answer: C

23) The coordinates of the vertex of the parabola

(y – 3)2 = 4(x – 1) is

1. (0, 0)
2. (3, 1)
3. (1, 3)
4. (-3, -1)

Answer: C

24) The equation of the circle whose diameter is the latus rectum of the parabola x2 = 4y is

1. (x – 2)2 + (y – 1)2 = 4
2. x 2 + (y – 1)2 = 2
3. x 2 + (y + 1)2 = 4
4. x 2 + (y – 1)2 = 4

Answer: D

25) In the ellipse  the length of the major axis is

1. 3
2. 2
3. 6
4. 9

Answer: C

26) In the ellipse  the length of minor axis is

1. 3
2. 6
3. 9
4. 4

Answer: B

27) In an ellipse the mid point C of the major axis is called

1. The center of the ellipse
2. Focus of the ellipse
3. Vertex of the ellipse
4. Second focus

Answer: A

28) The curve of the parabola y2 = 4ax is symmetrical with respect to

1. Origin
2. X-axis
3. Y-axis
4. Both the axis

Answer: B

29) The curve of the ellipse  is symmetrical about

1. the x-axis
2. the y –axis
3. the origin
4. all A, B, C are true

Answer: D

30) In the ellipse, the value of eccentricity is

 A) 

 B) 

 C) 

 D) 

Answer: D

31) If one of the foci of an ellipse is S(1, 0), then the distance between the two foci is (center of the ellipse lies at the origin)

1. 3
2. 2
3. 4
4. 

Answer: B