### UNIT I Plane Curves and Freehand Sketching

1. Which of the following is incorrect about Ellipse?
a) Eccentricity is less than 1
b) Mathematical equation is $X^2/a^2 + Y^2/b^2 = 1$
c) If a plane is parallel to axis of cone cuts the cone then the section gives ellipse
d) The sum of the distances from two focuses and any point on the ellipse is constant

**Answer: c**

2. Which of the following constructions doesn't use elliptical curves?
a) Cooling towers
b) Dams
c) Bridges
d) Man-holes

**Answer: a**

3. The line which passes through the focus and perpendicular to the major axis is _____
a) Minor axis
b) Latus rectum
c) Directrix
d) Tangent

**Answer: b**

4. Which of the following is not belonged to ellipse?
a) Latus rectum
b) Directrix
c) Major axis
d) Asymptotes

**Answer: d**

5. Mathematically, what is the equation of ellipse?
a) $x^2/a^2 + y^2/b^2 = -1$
b) $x^2/a^2 - y^2/b^2 = 1$
c) $x^2/a^2 + y^2/b^2 = 1$
d) $x^2/a^2 - y^2/b^2 = 1$

**Answer: c**

6. In general method of drawing an ellipse, a vertical line called as _____ is drawn first.
a) Tangent
b) Normal

c) Major axis
d) Directrix

**Answer: d**

7. If eccentricity of ellipse is 3/7, how many divisions will the line joining the directrix and the focus have in general method?
a) 10
b) 7
c) 3
d) 5

**Answer: a**

8. In the general method of drawing an ellipse, after parting the line joining the directrix and the focus, a _____ is made.
a) Tangent
b) Vertex
c) Perpendicular bisector
d) Normal

**Answer: b**

9. An ellipse has _____ foci.
a) 1
b) 2
c) 3
d) 4

**Answer: b**

10. If information about the major and minor axes of ellipse is given then by how many methods can we draw the ellipse?
a) 2
b) 3
c) 4
d) 5

**Answer: d**

11. In arcs of circles method, the foci are constructed by drawing arcs with centre as one of the ends of the _____ axis and the radius equal to the half of the _____ axis.
a) Minor, major
b) Major, major
c) Minor, minor
d) Major, minor

**Answer: a**

12. If we know the major and minor axes of the ellipse, the first step of drawing the ellipse, we draw the axes _____ each other.
a) Parallel to
b) Perpendicular bisecting
c) Just touching
d) Coinciding

**Answer: b**

13. Loop of the thread method is the practical application of _____ method.
a) Oblong method
b) Trammel method
c) Arcs of circles method
d) Concentric method

**Answer: c**

14. Which of the following is incorrect about Parabola?
a) Eccentricity is less than 1
b) Mathematical equation is $x^2 = 4ay$
c) Length of latus rectum is 4a
d) The distance from the focus to a vertex is equal to the perpendicular distance from a vertex to the directrix

**Answer: a**

15. Which of the following constructions use parabolic curves?
a) Cooling towers
b) Water channels
c) Light reflectors
d) Man-holes

**Answer: c**

16. Which of the following is not belonged to ellipse?
a) Latus rectum
b) Directrix
c) Major axis
d) Axis

**Answer: c**

17. Which of the following is Hyperbola equation?
a) $y^2 + x^2/b^2 = 1$
b) $x^2 = 1ay$
c) $x^2/a^2 - y^2/b^2 = 1$
d) $X^2 + Y^2 = 1$

**Answer: c**

18. Which of the following constructions use hyperbolic curves?
a) Cooling towers
b) Dams
c) Bridges
d) Man-holes

**Answer: a**

19. The lines which touch the hyperbola at an infinite distance are _____
a) Axes
b) Tangents at vertex
c) Latus rectum

d) Asymptotes

**Answer: d**

20. Which of the following is the eccentricity for hyperbola?
a) 1
b) 3/2
c) 2/3
d) 1/2

**Answer: b**

21. _____ is a curve generated by a point fixed to a circle, within or outside its circumference, as the circle rolls along a straight line.
a) Cycloid
b) Epicycloid
c) Epitrochoid
d) Trochoid

**Answer: d**

22. _____ is a curve generated by a point on the circumference of a circle, which rolls without slipping along another circle outside it.
a) Trochoid
b) Epicycloid
c) Hypotrochoid
d) Involute

**Answer: b**

23. _____ is a curve generated by a point on the circumference of a circle which rolls without slipping on a straight line.
a) Trochoid
b) Epicycloid
c) Cycloid
d) Evolute

**Answer: c**

24. The straight lines which are drawn from various points on the contour of an object to meet a plane are called as _____
a) connecting lines
b) projectors
c) perpendicular lines
d) hidden lines.

**Answer: b**

25. When the projectors are parallel to each other and also perpendicular to the plane, the projection is called _____
a) Perspective projection
b) Oblique projection
c) Isometric projection
d) Orthographic projection

**Answer: d**