Computer Graphics

MCQ Question bank

1._____is a flexible strip that is used to produce smooth curve using a set of point.

a. Spline

b. Scan-line method

c. Depth-sorting method

d. None of these

2. The sum of the B-spline basis functions for any parameter value is_____.

a. 2

b. 0

c. **1**

d. None of these

3. In parametric equations the value of t lies between_____.

a. 1 and 2

b. 1 and 10

c. **0 and 1**

d. 0 and 3

4. The surfaces that is blocked or hidden from view in a 3D scene are known as_____.

a**. Hidden surface**

b. Frame buffer

c. Quad tree

d. None of these

5. The problem of hidden surface are.

a. Removal of hidden surface

b. Identification of hidden surface

c. **Removal of hidden surface & Identification of hidden surface**

d. None of these

6. Why we need removal of hidden surface.

a. For displaying realistic view

b. For determining the closest visible surface

c. **For displaying realistic view & for determining the closest visible surface**

d. None of these

7. How many types of hidden surface algorithm are.

a. 1

b. **2**

c. 3

d. 4

8. The algorithms of hidden surface are.

a. Object-space method

b. image-space method

c. **Object-space method & image-space method**

d. None of these

9. The method which is based on the principle of comparing objects and parts of objects to each other to find which are visible and which are hidden are called ___.
a. **Object-space method**
b. image-space method
c. Object-space method & image-space method
d. None of these

10. The method which is based on the principle of checking the visibility point at each pixel position on the projection plane are called___.
a. Object-space method
b**. image-space method**
c. Object-space method & image-space method
d. None of these

11. _____curve is one of the spline approximation methods
a**. Bezier**
b. Ellipsoid
c. Shearing
d. None of these

12. When the polynomials are fitted to the path which is not necessarily passing through all control points, the resulting curve is said to _____ the set of control points.
a. **Approximate**
b. Interpolate
c. Approximation
d. None of these

13. When the polynomial sections are fitted so that the curve passes through all the control points, then the resulting curve is said to be _____ the set of control points.
a. approximate
b. **interpolate**
c. approximation
d. none of these

14. The algorithm used for filling the interior of a polygon is called____.
a. **Flood fill algorithm**
b. Boundary fill algorithm
c. Scan line polygon fill algorithm
d. None of these

15. The function of scan line polygon fill algorithm are_____.
a. **Find intersection point of the boundary of polygon and scan line**
b. Find intersection point of the boundary of polygon and point
c. Find intersection point of the boundary of polygon and scan line & Find intersection point of the boundary of polygon and point
d. None of these

16. Bresanham circle algorithm uses the approach of

a. **Midpoint**
b. Point
c. Line
d. None of these

17. The side effect of scan conversion are _____.
a**. Aliasing**
b. Anti aliasing
c. Aliasing & Anti aliasing
d. None of these

18. The process of reducing aliasing is called _____
a. Resolution
b. **Anti aliasing**
c. Sampling
d. None of these

19. By which, we can take a view of an object from different directions and different distances
a**. Projection**
b. Rotation
c. Translation
d. Scaling

20. The purpose of clipping algorithm is to determine which points lie_____the clipping window.
a. Within
b. Outside
c. On
d. **None of these**

21. _____projections are projections onto one of the coordinate planes x=0,y=0 or z=0.
a. **orthographic**
b. axonometric
c. perspective
d. all

22. In_____projection all 3 foreshortening factors are different.
a**. trimetric**
b. dimetric
c. isometric
d. all

23. In_____projection all 3 foreshortening factors are equal.
a. trimetric
b. dimetric
c. **isometric**
d. all

24. The parabolic blended curve is obtained by blending of_____.
a. 4 parabolic curves
b. 2 parabolic curves
c. **3 parabolic curves**
d. 5 parabolic curves

25. Collection of points where the spacing of points is important is called as_____.
a. **curve**
b. polygon
c. parabola
d. none

26. Curves basically divided into_____.
a. blended & nonblended curves
b. cubic & noncubic curves
c. parametric & nonparametric curve
d. **explicit & implicit curves**

27. The non parametric curves have the form_____.
a. blended & nonblended
b. **explicit & implicit**
c. cubic & noncubic
d. all

28. These curves are axis dependent.
a. parametric
b. cubic
c. blended
d**. nonparametric**

29. An example of parametric space curve is_____.
a. parabola
b. **circular helix**
c. straight line
d. hyperbola

30. In parabolic blended curves the overlapping portion lies between_____point.
a. 1 & 2
b. 3 & 4
c. 1 & 4
d. **2 & 3**

31. There are _____ classes of hidden surface algorithms.
a. **Three**
b. Four
c. Two
d. None of these

32. In Bezier curve, the degree of polynomial defining the curve segment is_____the no of defining polygon points.
a. equal
b. twice
c. thirce
d**. one less**

33. In Bezier curve first & last point of curve & polygon are_____.
a. **identical :- not confirm**
b. not matching

c. totally different
d. vary from point to point

34. In B-Spline curves the maximum order of the curve is _____ to the number of vertices of defininf polygon.
a. less than
b. greater than
c. **equal**
d. none of these

35. The degree of B-Spline polynomial is _____ on the number of vertices of defining polygon.
a. 1
b. 0
c. **independent**
d. maximum

36. Bezier curve always passes through _____ control points.
a. **First and last**
b. all
c**.** random
d. few

37. Curves can be described mathematically by nonparametric or parametric equations.
a**. true**
b. false

38. Complex curves can be generated using_____methods.
a. **approximation**
b. interpolation
c. parametric
d. none of these

39. Convex hull property of_____curve is stronger than that for_____curve.
a. bezier curves , b-spline curve
b. cubic spline , bezier curves
c. parabolic blended curves, b-spline curve
d. **b-spline curve , bezier curves**

40. For _____ Curve max. order of curve is equal to the number of defining polygon vertices.
a. bezier curves
b**. b-spline curve**
c. cubic spline
d. parabolic blended curves

41. _____ is the process by which we create illusions of the color that are not present actually. It is done by the random arrangement of pixels.
a. **Dithering**
b. antialiasing
c. halftoning
d. none of these

42. The process of generating a binary pattern of black and white dots from an image is termed as_____.
a. antialiasing

b. **halftoning**
c. rasterization
d. none of these

43. In computer graphics,_____ is a software technique for diminishing jaggies - stair step-like lines that should be smooth.
a. **antialiasing**
b. halftoning
c. rasterization
d. none of these

44. The process of adjusting intensities of the pixels along the line to minimize the effect of aliasing is called_____.
a. **antialiasing**
b. halftoning
c. rasterization
d. none of these

45. Interior or boundary defined regions are either_____ connected or _____ connected.
a. 3, 6
b**. 4, 8**
c. 4, 9
d. 4, 7

46. Algorithm that fills interior defined regions are reffered to as _____ algorithms.
a. boundary defined
b. interior
c**. flood fill**
d. none of these

47. In bresenhams circle generation algorithm, for any given point on the circle there are only _____ possible selections for the next pixel which best represents the circle.
a. two
b. **three**
c. four
d. none of these

48. In bresenhams line generation algorithm, the error term is initialized to_____
a. 0
b. 1
c. -0.5
d. **0.5 :- not confirm**

49. In bresenhams line generation algorithm, every time the new error term is calculated as e= _____
a. e+1
b. e-1
c. **e-m**
d. e+m

50. z-buffer is used to show_____.
a. hidden surface removal
b. **visible surface detection**
c. invisibility

d. all

51. The process of determining which pixels provide the best approximation to the desired line is properly known as_____ .
a. interpolation
b. **rasterization**
c. orientation
d. none of these

52. If both the end points of line are completely to the right of, completely to the left of, completely above or completely below the window, then_____
a. the line is completely interior to the window and hence invisible
b. the line is completely exterior to the window and hence visible
c. the line is completely interior to the window and hence visible
d. **the line is completely exterior to the window and hence invisible**

53. If both the end points of a line are exterior to the window, the line is_____
a**. necessarily completely exterior to the window**
b. necessarily completely interior to the window
c. not necessarily completely exterior to the window
d. cannot predict

54. In Cohen Sutherland algorithm the technique uses a …… bit (digit) code to indicate which of the_____ regions contain the end point of a line.
a. 4, eight
b. **4, nine**
c. 3, nine
d. none of these

55. In Cohen Sutherland algorithm, the…….bit of four bit code is the first bit
a. **leftmost**
b. rightmost
c. middle
d. Second from right

56. When the logical …….. is not zero, the line is in fact totally invisible. However, when the logical ……. is zero, the line may be totally or partially visible or in fact totally invisible.
a. and, or
b. or, or
c. or, and
d. **and, and**

57. The four bit endpoint code for the point which lies below the clipping window is_____.
a. 1000
b**. 0100**
c. 0010
d. 0001

58. The four bit endpoint code for the point which lies above the clipping window is_____.
a. 0110
b. 0100

c. 0010
d. **0001**

59. The four bit endpoint code for the point which lies at top left corner of the clipping window is_____.
a. 1000
b. 0100
c. 0010
d. **none of these**

60. The four bit endpoint code for the point which lies at top right corner of the clipping window is_____.
a. 1000
b. 0100
c. 0010
d**. none of these**

61. In end point code algorithms if the slope of line is_____, it is parallel to the top and bottom edges.
a. one
b. **zero**
c. ½
d. infinity

62. Clipping is the process of extracting a portion of a data base or identifying elements of a scene or picture inside or outside a special region called_____.
a**. clipping region**
b. viewing window
c. display region
d. viewing region

63. The most basic transformation that are applied in three-dimensional planes are
a. Translation
b. Scaling
c. Rotation
d. **All of these**

64. The transformation in which an object can be shifted to any coordinate position in three dimensional plane are called
a. **Translation**
b. Scaling
c. Rotation
d. All of these

65. The transformation in which an object can be rotated about origin as well as any arbitrary pivot point are called
a. Translation
b. Scaling
c**. Rotation**
d. All of these

66. The transformation in which the size of an object can be modified in x-direction ,y-direction and z direction
a. Translation
b. **Scaling**

c. Rotation
d. All of these

67. In which transformation, the mirror image of an object can be seen with respect to x-axis, y-axis ,z-axis as well as with respect to an arbitrary line
a. **Reflection**
b. Shearing
c. Translation
d. None of these

68. How many types of projection are
a. 1
b**. 2**
c. 3
d. 4

69. The types of parallel projection are
a. Orthographic projection and quadric projection
b. **Orthographic projection and oblique projection**
c. Oblique projection and quadric projection
d. None of these

70. A technique by which the vertical and /or horizontal scan frequency of video signal can be changed for different purpose and applications is called_____.
a. **Scan conversion**
b. Polygon filling
c. Two dimensional graphics
d. Anti aliasing

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75. The process of reducing aliasing is called
a. Resolution
b. **Anti aliasing**
c. Sampling
d. None of these

76. By which, we can take a view of an object from different directions and different distances
a. **Projection**
b. Rotation
c. Translation
d. Scaling

77. In orthographic projection, engineering use
a. Top view of an object
b. Front view of an object
c. Side view of an object
d. **All of these**

78. The centre of projection for parallel projectors is at
a. Zero
b. **Infinity**
c. One
d. None of these