1. Which of the following statements define Computer Graphics?
a) It refers to designing plans
b) It means designing computers
c) It refers to designing images
d) None of the mentioned

2. A transformation to alter the size of an object is called:
a) Translation
b) Scaling
c) Rotation
d) Wrap around

3. In the Bresenham's algorithm, error term initialized to:
a) 0
b) 1
c) -1/2
d) None of these

4. What will be the value of initial decision parameter if we intend to draw a line between A(3, 6) and B(4, 9) using Bresenham's algorithm?
a) 6
b) 5
c) 3
d) None of these

5. Which of the following plane is used for 2D transformations?
a) Three-dimensional plane
b) Two-dimensional plane
c) One-dimensional plane
d) Four-dimensional Plane

6. Which of the following is a Computer Graphics application?
a) CAD design b) Computer Vision c) Reverse Engineering d) All of the above

7. If blue is represented as 001 the yellow is represented as:
a) 001
b) 010
c) 101
d) 110

8. In Bresenham's line algorithm, the distance between actual line location and nearest pixel is _____
a) Decision variable
b) Error
c) Both (a) and (b)
d) None of the above

9. In a graphical system, an array of pixels in the picture are stored in which of the following locations?
a) Frame bufferb) Processor
c) Memory
d) All of the mentioned

10. Curves in computer graphics is primarily used for which of the following function?
a) To draw different types of objects onto the screen
b) Zooming out a picture
c) Copying a picture
d) Zooming in a picture

11. _____ types of translation are present in computer graphics.
a) 5
b) 3
c) 4
d) 6

12. Bitmap is a collection of _____ that describes an image.
a) pixels b) algorithms c) bits d) colors

13. The maximum number of points that can be displayed without overlap on a CRT is referred to as:
a) Resolution b) Persistence c) Attenuation d) None of the above

14. Which of the following is defined as the number of pixels stored in the frame buffer of a graphics system?
a) Persistence b) Resolution c) Depth d) None of the mentioned

15. Which of the following is a primary output device of a graphics system?
a) Printer b) Scanner
c) Video monitor d) Neither Scanner nor Video monitor

16. Which of the following is used in graphics workstations as input devices to accept voice commands?
a) Speech recognizers b) Touch panels
c) None of the mentioned d) All of the mentioned

17. The most basic transformation that are applied in 3D planes are:
a) Translation b) Scaling c) Rotation d) All of these

18. LED stands for:
a) Light emitting diode b) Liquid emitting diode
c) Light energy diode d) None of above

19. The midpoint circle drawing algorithm also uses the _____ of the circle to generate?
a) Two way symmetry b) Four way symmetry
c) Eight way symmetry d) Both (a) and (b)

20. Which of the following operations can be used to zoom in or out around any axis on a three-dimensional object from its original position?
a) Rotation b) Shearing c) Scaling d) Translation

21. The amount of memory in frame buffer is called:
a) Bit plane b) Plane c) Bit d) None of these

22. Viewing transformation is the process of mapping a world window in World Coordinates to the Viewport.
a) False b) True

23. Which of the following is defined as the drawing of number of copies of the same image in rows and columns across the interface window so that they cover the entire window?
a) Zooming b) Panning c) Tiling d) Roaming

24. How many axes do 3D graphics consist of?
a) Two axes b) Three axes c) Five axes d) One axis

25. Which of the following is the most commonly used boundary representation for a 3-dimensional graphics object?
a) Volume polygon b) System polygon c) Data polygon d) Surface polygon

26. Which of the following is the process of digitizing a given picture definition into a set of pixel-intensity for storage in the frame buffer?
a) Scan conversion b) True color system
c) Encoding d) Rasterization

27. Which of the following is commonly known as frame buffer on a black and white system with one bit per pixel?
a) Bitmap b) Pix map
c) Multi map d) All of the mentioned

28. Which of the following algorithm is a faster method for calculating pixel positions?
a) Parallel line algorithm b) Mid-point algorithm
c) DDA line algorithm d) Bresenham's line algorithm

29 .Which of the following command is used to change range of axes…..?
a) glutMainLoop() b) glutCreateWindow()
c) gluOrtho2D() d) glutOrtho2D()

30. this command glBegin(GL_QUADS); is used to draw….. shapes
a) Pentagonal b) hexagonal
c) triangular d) quadrilateral

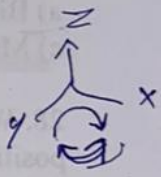
31. What does an aspect ratio mean?
a) Ratio of vertical points to horizontal points
b) Ratio of vertical points to horizontal points and horizontal points to vertical points
c) Number of pixels
d) Ratio of horizontal points to vertical points

32. Which of the following is a correct abbreviation of DDA algorithm?
a) Data differential analyzer
b) Direct differential analyzer
c) Digital difference analyzer
d) Digital differential analyzer

33. The viewing transformation is formed by-
a) Translations
b) Translations and scaling
c) Translations, scaling and reflection
d) Translation, scaling and rotation

34. Minimum memory required for frame buffer when resolution is 800X600 and bit/pixel is 8?
a) 512 KB
b) 1 MB
c) 2 MB
d) 256 KB

35. How many matrices are required to rotate an object about points (x,y) ?
a) 2
b) 3
c) 4
d) 5



36. If direction of rotation is Z-axis, then direction of position of positive rotation is :
a) y to x
b) z to x
c) x to y
d) y to z

37. A process of changing the position of an object in a straight-line path is:
a) Translation
b) Rotation
c) Scaling
d) All of the above

38. Which of the following type of perspective projection is used in drawings of railway lines?
a) Three-point
b) Two-point
c) One-point
d) Perspective projection is not used to draw railway lines

39. Mid -point line and circle drawing algorithm use the sign of
a) Distance parameter
b) Decision parameter
c) Describe point
d) Both (a) and (b)

40. How many matrices are required to rotate an object about a point (x, y)?
a) 2
b) 3
c) 4
d) 5

41. The end point accuracy of DDA line drawing algorithm is _____
a) Good
b) Better
c) Best
d) Poor

42. The best line drawing algorithm among all possible line drawing algorithm is _____
a) DDA
b) Algorithm which uses direct equation of line
c) Bresenham's algorithm
d) None of them

43. How is the line path on the polygon area for a 45% line?
a) Vertical
b) Horizontal
c) Centered
d) None of the mentioned

44. Disadvantage of DDA is:
a) Round of error
b) Subtraction error
c) Addition error
d) Both (a) and (b)

45. Brasenham's algorithm seeks to select the optimum raster locations that represent a :
a) Straight line
b) Curve line
c) Polygon
d) None of these

46. The DDA algorithm is a faster method for calculating pixel positions than direct use of line equation using y=mx+c because:
a) It eliminates floating point addition
b) It eliminates floating point multiplication
c) It eliminates rounding operation
d) None of these

47. In circle drawing algorithm we use –
a) 4 Symmetry
b) 2 Symmetry
c) 8 Symmetry
d) No Symmetry

48. In 2D graphics, if S1 & S2 are two scaling matrix and T1 and T2 are two transition matrices then
a) S1S2=S2S1
b) S1T1=S2T2
c) T2S2=T1S1
d) S1T1=T2S1

49. Which of the following stores the picture information as a charge distribution behind the phosphor-coated screen?
a) Direct-view storage tube
b) Flat panel displays
c) 3D viewing device
d) Cathode ray tube

50. In Bresenham's circle generation algorithms if (x,y) is the current pixel position then the x-value of the next pixel position is :
a) X
b) X-1
c) X+1
d) X+2

51. The basic principle of Bresenham's line algorithm is _____
a) To select optimum raster location
b) To select either ^x or ^y whichever is larger
c) We find on which sides of the line the midpoint lies
d) Both (a) and (b)

52) Which of the following equation is used in 2D translation to move a point(x,y) to the new point (x',y')?
a) $x' = x + t_y$ and $y' = y + t_x$
b) $x' = x - t_x$ and $y' = y - t_y$
c) $x' = x + t_x$ and $y' = y + t_y$
d) $x' = x + t_x$ and $y' = y - t_y$

53. In OpenGL,the size of a point can be set with_____
a) glLineSize()
b) glPointSize()
c) none of these
d) Both a & b

54. In OpenGL ,lines color is set using_____
a) glColor3f()
b) glColor ()
c) glLineSize()
d) none of these

55. In OpenGL,to draw filled polygons use_____
a) glBegin(GL_POLYGON)
b) glBegin(GL_LINE)
c) glBegin(GL_POINTS)
d) none of these

56. In glVertex2i() command, 2 represent _____
a) type of arguments
b) basic of arguments
c) number of arguments
d) none of these

57.GLUT means_____
a) GL User Toolkit
b) GL Utility Toolkit
c) GL Utility Tool
d) none of these

58. _____is called to ensure that all data completely processed & send to display.
a) glFlush()
b) glFlash()
c) glBegin()
d) none of these

59. Which of the following command is used to draw any point …?
a) glVertex2f()
b) glFlash()
c)glBegin(GL_LINES)
d) none of these

60. Which of the following command is used to create window…?
a) glutMainLoop()
b) glutCreateWindow()
c) glutInitWindowSize()
d) glutInitWindowPosition()