

1. Basic geometric transformation include
 - a. Translation
 - b. Rotation
 - c. Scaling
 - d. **All of these**

2. Some additional transformation are
 - a. Shear
 - b. Reflection
 - c. **Both a & b**
 - d. None of these

3. The transformation in which an object is moved in a minimum distance path from one position to another is called
 - a. **Translation**
 - b. Scaling
 - c. Rotation
 - d. Reflection
 - e.

4. The transformation in which an object is moved from one position to another in circular path around a specified pivot point is called
 - a. Translation
 - b. Scaling
 - c. **Rotation**
 - d. Reflection

5. The transformation in which the dimension of an object are changed relative to a specified fixed point is called
 - a. Translation
 - b. **Scaling**
 - c. Rotation
 - d. Reflection

6. The selection and separation of a part of text or image for further operation are called

- a. Translation
- b. Shear
- c. Reflection
- d. **Clipping**

7. The complex graphics operations are

- a. Selection
- b. Separation
- c. **Clipping**
- d. None of these

8. In computer graphics, a graphical object is known as

- a. Point
- b. **Segment**
- c. Parameter
- d. None of these

9. An object can be viewed as a collection of

- a. One segment
- b. Two segment
- c. **Several segments**
- d. None of these

10. Every segment has its own attributes like

- a. Size, visibility
- b. Start position
- c. Image transformation
- d. **All of these**

11. By using the attributes of segment, we can _____ any segment

- a. Change
- b. **Control**
- c. Print
- d. None of these
- e.

12. A two-dimensional array contains the details of all the segments and is called

- a. **Segmentation table**
- b. Segment name
- c. Operation
- d. None of these
- e.

13. We assign all the attributes of a segment under this

- a. **Segment name**
- b. Segment size
- c. Array
- d. None of these

14. The initial size of a segment will be _____

- a. 1
- b. **0**
- c. 2
- d. 3

15. The removal of a segment with its details are called

- a. Alter the segments
- b. **Deletion of segments**
- c. Closing the segment
- d. None of these

16. Deletion of any segment is much _____ than creation of any new segment

- a. Easier
- b. **Difficult**
- c. Higher
- d. None

17. _____ is very important in creating animated images on the screen

- a. **Image transformation**
- b. Morphing
- c. Clipping

d. None of these

18. Which attributes of image transformation change the size of an image corresponding to the x-axis and y-axis

a. SCALE-X

b. SCALE-Y

c. **Both a & b**

d. None of these

19. Which attributes of image transformation change the position of image corresponding to the x-axis and y-axis

a. TRANSLATE-X

b. TRANSLATE-Y

c. **Both a & b**

d. None of these

e.

20. Which attributes of image transformation rotate the image by a given angle

a. TRANSLATE-X

b. TRANSLATE-Y

c. Both a & b

d. **None of these**

21. Which attributes of image transformation rotate the image by a given angle

a. ROTATE-X

b. ROTATE-Y

c. **Both a & b**

d. None of these

22. The graphics method in which one object is transformed into another object are called

a. Clipping

b. **Morphing**

c. Reflection

d. Shear

23. Example of morphing are

- a. Oil takes the shape of a car
- b. A tiger turns into a bike
- c. **Both a & b**
- d. None of these
- e.

24. A many sided figure is termed as

- a. Square
- b. **Polygon**
- c. Rectangle
- d. None

25. The end point of polygon are called as

- a. Edges
- b. **Vertices**
- c. Line
- d. None of these

26. The line segment of polygon are called as

- a. **Edges**
- b. Vertices
- c. Line
- d. None of these

27. How many types of polygon are

- a. One
- b. **Two**
- c. Three
- d. Four

28. What are the types of polygon

- a. Convex polygon
- b. Concave polygon
- c. **Both a & b**
- d. None of these

29.If a line joining any of its two interior points lies completely within it are called

- a. **Convex polygon**
- b. Concave polygon
- c. Both a & b
- d. None of these

30.If a line joining any two of its interior points lies not completely inside are called

- a. Convex polygon
- b. **Concave polygon**
- c. Both a & b
- d. None of these
- e.

31.In which polygon object appears only partially

- a. Convex polygon
- b. **Concave polygon**
- c. Both a & b
- d. None

32. If the visit to the vertices of the polygon in the given order produces an anticlockwise loop are called

- a. Negatively oriented
- b. **Positively oriented**
- c. Both a & b
- d. None of these
- e.

33.If the visit to the vertices of the polygon in the given order produces an clockwise loop are called

- a. **Negatively oriented**
- b. Positively oriented
- c. Both a & b
- d. None of these

34.Which things are mainly needed to make a polygon and to enter the polygon into display file

- a. No of sides of polygon
- b. Vertices points

- c. **Both a & b**
- d. None of these

35. Two types of coordinates are

- a. Positive and negative coordinates
- b. **Absolute and relative coordinates**
- c. Both a & b
- d. None

36. Which approaches are used for determine whether a particular point is inside or outside of a polygon

- a. Even-odd method
- b. Winding number method
- c. **Both a & b**
- d. None of these
- e.

37. The transformation that produces a parallel mirror image of an object are called

- a. **Reflection**
- b. Shear
- c. Rotation
- d. Scaling

38. The transformation that disturbs the shape of an object are called

- a. Reflection
- b. **Shear**
- c. Rotation
- d. Scaling

39. The process of mapping a world window in world coordinate system to viewport are called

- a. **Transformation viewing**
- b. View Port
- c. Clipping window
- d. Screen coordinate system

40. In which transformation the shape of an object can be modified in x-direction, y-direction as well as in both the direction depending upon the value assigned to shearing variables

- a. Reflection
- b. **Shearing**
- c. Rotation
- d. Scaling

41. The process of extracting a portion of a database or a picture inside or outside a specified region are called

- a. Translation
- b. Shear
- c. Reflection
- d. **Clipping**

42. The rectangle portion of the interface window that defines where the image will actually appear are called

- a. Transformation viewing
- b. **View port**
- c. Clipping window
- d. Screen coordinate system

43. The space in which the image is displayed are called

- a. **Screen coordinate system**
- b. Clipping window
- c. World coordinate system
- d. None of these

44. The rectangle space in which the world definition of region is displayed are called

- a. Screen coordinate system
- b. **Clipping window or world window**
- c. World coordinate system
- d. None of these

45. The object space in which the application model is defined

- a. Screen coordinate system
- b. Clipping window or world window
- c. **World coordinate system**
- d. None of these
- e.

46. The process of cutting off the line which are outside the window are called

- a. Shear
- b. Reflection
- c. **Clipping**
- d. Clipping window

47. Some common form of clipping include

- a. curve clipping
- b. point clipping
- c. polygon clipping
- d. **All of these**

48. A composite transformation matrix can be made by determining the _____ of matrix of the individual transformation

- a. Addition
- b. Subtraction
- c. **Product**
- d. None of these

49. Each successive transformation matrix _____ the product of the preceding transformation

- a. **pre-multiples**
- b. post-multiples
- c. both a & b
- d. none of these

50. Forming products of transformation matrices is often referred as

- a. Composition of matrix
- b. Concatenation of matrix
- c. **Both a & b are same**
- d. None of these

51. The alteration of the original shape of an object, image, sound, waveform or other form of information are called

- a. Reflection
- b. **Distortion**

- c. Rotation
- d. None of these

52. Two consecutive translation transformation t_1 and t_2 are

- a. **Additive**
- b. Subtractive
- c. Multiplicative
- d. None of these

53. Two consecutive rotation transformation t_1 and t_2 are

- a. **Additive**
- b. Subtractive
- c. Multiplicative
- d. None of these
- e.

54. Two consecutive scaling transformation t_1 and t_2 are

- a. Additive
- a. Subtractive
- b. **Multiplicative**
- c. None of these

-
1. The graphics can be
 - a. Drawing
 - b. Photograph, movies
 - c. Simulation
 - d. **All of these**
 2. Computer graphics was first used by
 - a. **William fetter in 1960**
 - b. James fetter in 1969
 - c. James gosling in 1991
 - d. John Taylor in 1980
 3. The component of interactive computer graphics are
 - a. A light pen
 - b. Display unit
 - c. Bank of switches
 - d. **All of these**
 4. Personal computer become powerful during the late
 - a. 1960

- b. **1970**
 - c. 1980
 - d. 1950
5. Three dimensional computer graphics become effective In the late
- a. 1960
 - b. **1980**
 - c. 1970
 - d. 1950
6. which environment has been one of the most accepted tool for computer graphics in business and graphics design studios
- a. graphics
 - b. **Macintosh**
 - c. quake
 - d. multimedia
7. Graphics is one of the_____ major key element in design of multimedia application
- a. **Five**
 - b. Three
 - c. Four
 - d. Eight
8. Three dimensional graphics become popular in games designing , multimedia and animation during the late
- a. 1960
 - b. 1970
 - c. 1980
 - d. **1990**
9. The quake , one of the first fully 3D games was released in year
- a. **1996**
 - b. 1976
 - c. 1986
 - d. 1999
10. Types of computer graphics are
- a. **Vector and raster**
 - b. Scalar and raster
 - c. Vector and scalar
 - d. None of these
11. Vector graphics is composed of
- a. Pixels
 - b. **Paths**
 - c. Palette
 - d. None of these
12. Raster graphics are composed of
- a. **Pixels**
 - b. Paths
 - c. Palette
 - d. None of these
13. Raster images are more commonly called
- a. Pix map

- b. bitmap**
 - c. both a & b
 - d. none of these
14. Pixel can be arranged in a regular
- a. One dimensional grid
 - b. Two dimensional grid**
 - c. Three dimensional grid
 - d. None of these
15. The brightness of each pixel is
- a. Compatible
 - b. Incompatible**
 - c. Both a & b
 - d. None of these
16. Each pixel has _____ basic color components
- a. Two or three
 - b. One or two
 - c. Three or four**
 - d. None of these
17. The quantity of an image depend on
- a. No. of pixel used by image**
 - b. No. of line used by image
 - c. No. of resolution used by image
 - d. None
18. Higher the number Of pixels, _____ the image quality
- a. Bad
 - b. Better**
 - c. Smaller
 - d. None of above
19. A palette can be defined as a finite set of colors for managing the
- a. Analog images
 - b. Digital images**
 - c. Both a & b
 - d. None of these
20. Display card are
- a. VGA
 - b. EGA
 - c. Both a & b**
 - d. None of above
21. Display card is used for the purpose of
- a. Sending graphics data to input unit
 - b. Sending graphics data to output unit**
 - c. Receiving graphics data from output unit
 - d. None of these
22. Several graphics image file formats that are used by most of graphics system are
- a. GIF
 - b. JPEG
 - c. TIFF

d. **All of these**

23. The GIF format is much _____ to be downloaded or uploaded over the www

a. Slower

b. **Faster**

c. Medium

d. None of these

24. Once a file is saved in JPEG format ,some data is lost

a. Temporarily

b. **Permanently**

c. Both a & b

d. None

25. EPS image file format is used for

a. Vector graphics

b. Bitmap

c. **Both a & b**

d. None of these

26. TIFF (tagged image file format)are used for

a. Vector graphics

b. **Bitmap**

c. Both a & b

d. None of these

27. EPS means

a. Entire post script

b. Entire post scale

c. **Encapsulated post script**

d. None of these

28. The additive color models use the concept of

a. Printing ink

b. **Light to display color**

c. Printing line

d. None of these

29. The subtractive color model use the concept of

a. **Printing ink**

b. Light to display color

c. Printing line

d. None of these

30. Color apparent in additive model are the result of

a. Reflected light

b. **Transmission of light**

c. Flow of light

d. None of these

31. Color apparent in subtractive model are the result of

a. **Amount of Reflected light**

b. Transmission of light

c. Flow of light

d. None of these

32. Two dimensional color model are
- RGB and CMKY
 - RBG and CYMK
 - RGB and CMYK**
 - None
33. RGB model are used for
- Computer display**
 - Printing
 - Painting
 - None of these
34. CMYK model are used for
- Computer display
 - Printing**
 - Painting
 - None of these
35. The intersection of three primary RGB color produces
- White color**
 - Black color
 - Magenta color
 - Blue color
36. The intersection of primary CMYK color produces
- White color
 - Black color**
 - Cyan color
 - Magenta color
37. The RGB model display a much _____ percentage of the visible band as compared to CMYK
- Lesser
 - Larger**
 - Medium
 - None of these
38. Color depth can be defined by _____ which can be displayed on a display unit
- Bits per pixel**
 - Bytes per pixel
 - Megabyte per pixel
 - None of these
39. Each bit represent
- One color
 - Two color**
 - Three color
 - None
40. RGB true color model has _____ color depth
- 24bit**
 - 32bit
 - 64bit
 - None
41. CMYK true color model has _____ color depth
- 24bit

- b. **32bit**
 - c. 64bit
 - d. None
42. Grey scale images have a maximum color depth of
- a. **8bit**
 - b. 16bit
 - c. 24bit
 - d. 32bit
43. Graphics with limited features is known as
- a. Active graphics
 - b. **Passive graphics**
 - c. Grayscale image
 - d. None of these
44. Computer of present time have much higher memory and _____ storage capacity
- a. Much smaller
 - b. **Much bigger**
 - c. Much slower
 - d. None
45. CRT means
- a. Common ray tube
 - b. **Cathode ray tube**
 - c. Common ray tube
 - d. None
46. Refresh CRT consist of
- a. Glass wrapper
 - b. The phosphor viewing surface
 - c. The electron gun assembly
 - d. **All of above**
47. The amount of time the phosphor produce light or shine is controlled by chemical composition of the phosphor. This is known as
- a. **Persistence**
 - b. Resistance
 - c. Generators
 - d. None
48. The electron beam in a color picture tube is refreshed _____ times in a second to make video realistic
- a. 15 times
 - b. **25 times**
 - c. 35 times
 - d. 45 times
49. DUST means
- a. **Direct view storage tube**
 - b. Domain view storage tube
 - c. Direct view store tube
 - d. None
50. DUST is rarely used today as part of
- a. Input device
 - b. Output device

- c. **Display systems**
 - d. None
51. In DUST , is there refresh buffer
- a. Yes
 - b. No**
 - c. Both
 - d. None
52. The electron beam in DUST is designed to draw directly to
- a. Phosphor
 - b. Storage mesh**
 - c. Glass
 - d. None
53. The second grid in DUST is called
- a. Phosphor
 - b. Storage mesh
 - c. Collector**
 - d. None
54. To increase the energy of these slow moving electron and create a bright picture in DUST , the screen is maintained at a
- a. Low positive potential
 - b. High negative potential
 - c. High positive potential**
 - d. None
55. A major disadvantage of DUST in interactive computer graphics is
- a. Ability to selectively erase part of an image
 - b. Inability to selectively erase part of image from screen**
 - c. Inability to produce bright picture
 - d. None
56. Interactive graphics is useful in
- a. Training pilots
 - b. Computer aided design
 - c. Process control
 - d. All of these**
57. The origin of computer graphics was developed in
- a. 1950**
 - b. 1960
 - c. 1970
 - d. 1990
58. The term business graphics came into use in late
- a. 1950
 - b. 1960
 - c. 1970**
 - d. 1990
59. Computer graphics is used in many DTP software as
- a. Photoshop
 - b. Paint brush
 - c. Both a & b**

- d. None of these
60. Any CRT based display must be refreshing at least _____ times a second
- 20
 - 30**
 - 40
 - 10
61. The standardization is needed
- To make application programs more portable
 - To increase their utility
 - To allow them to use in different application environment
 - All of these**
62. GKS stands for
- Graphics kernel system**
 - Graphics kernel stands
 - Generic kernel system
 - None of these
63. GKS was developed by the
- International standards organization
 - National standard organization
 - Both a & b**
 - None of these
64. The resolution of raster scan display is
- Low**
 - High
 - Medium
 - None
65. Random scan systems are designed for
- Line drawing application**
 - Pixel drawing application
 - Color drawing application
 - None of these
66. Solid pattern in random scan display is ____ to fill
- Difficult**
 - Easy
 - Not fill
 - None of these
67. Raster scan is _____ expensive than random scan
- More
 - Less**
 - Both a & b
 - None
68. Two basic technique for producing color display with a CRT are
- Shadow mask and random scan
 - Beam penetration method and shadow mask method**
 - Random scan and raster scan
 - None of above
69. In beam penetration method of color CRT, two layer of phosphor coated are

- a. Red and blue
 - b. Red and green**
 - c. Blue and green
 - d. None of these
70. In beam penetration method of color CRT, which layer is red and which is green
- a. Outer is red and inner is green**
 - b. Inner is red and outer is green
 - c. Inner is red and inner is green
 - d. None
71. A shadow mask CRT has _____ phosphor color dots at each pixel position
- a. 1
 - b. 2
 - c. 3**
 - d. None of these
72. Which color is produced with the green and red dots only
- a. Blue
 - b. Yellow**
 - c. Magenta
 - d. White
73. Which color is produced with the blue and red dots
- a. Blue
 - b. Yellow
 - c. Magenta**
 - d. White
74. Cyan color is produced when the blue and green are activated
- a. Equally**
 - b. Unequally
 - c. Both a & b
 - d. None
75. Which technique of color CRT is used for production of realistic image
- a. Shadow mask method**
 - b. Beam penetration method
 - c. Both a & b
 - d. None of these
76. In which method of CRT, convergence problem occur
- a. Beam penetration method
 - b. Shadow mask method**
 - c. Both a & b
 - d. None of these
77. Beam penetration method is used in
- a. Random scan system**
 - b. Raster scan system
 - c. Both a & b
 - d. None of these
78. Shadow mask method is used in
- a. Random scan system
 - b. Raster scan system**

- c. Both a & b
 - d. None of these
79. Graphics data is computed by processor in form of
- a. **Electrical signals**
 - b. Analog signals
 - c. Digital signals
 - d. None of these
80. An example of impact device is
- a. Electrostatic printer
 - b. Inkjet printer
 - c. **Line printer**
 - d. Laser printer
81. To generate the characters , which are required
- a. Hardware
 - b. Software
 - c. **Both a & b**
 - d. None of these
82. The method which uses array of dots for generating a character is called
- a. Stoke method
 - b. **Bitmap method**
 - c. Star bust method
 - d. None of these
83. The hardware devices contain
- a. Color printer / black white printer
 - b. Plotters
 - c. **Both a & b**
 - d. None
84. An example of black and white laser printer is
- a. **HP 4000**
 - b. QMS
 - c. Both a & b
 - d. None
85. An example of color printer is
- a. HP 4000
 - b. **QMS**
 - c. Both a & b
 - d. None
86. Non impact use various techniques to combine three color pigment _____ to produce a range of color patterns
- a. **Cyan , magenta and yellow**
 - b. Cyan , white and black
 - c. Cyan , white and yellow
 - d. Black , magenta and yellow
87. Printers produce output by either
- a. Impact method
 - b. Non impact method
 - c. **Both a & b**
 - d. None of these

88. What is name of temporary memory where the graphics data is stored to be displayed on screen
- RAM
 - ROM
 - Frame buffer**
 - None
89. The division of the computer screen into rows and columns that define the no. of pixels to display a picture is called
- Persistence
 - Resolution**
 - Encapsulated post script
 - None
90. LCD means
- Liquid crystal displays**
 - Liquid crystal data
 - Liquid chrome data
 - None
91. LCD are commonly used in
- Calculators
 - Portable
 - Laptop computers
 - All of these**
92. LCD is an _____ device
- Emissive
 - Non emissive**
 - Gas discharge
 - None of these
93. Plasma panel is an ___ device
- Emissive**
 - Non emissive
 - Expensive
 - None
94. Plasma device converts
- Electrical energy into light**
 - Light into electrical energy
 - Light into graphical energy
 - None of these
95. Plasma panel have _____ resolution
- High
 - Good
 - Both a & b**
 - Low
96. Plasma panel are also called
- Liquid crystal display
 - Gas discharge display**
 - Non emissive display
 - None of these
97. The basic graphical interactions are

- a. Pointing
 - b. Positioning
 - c. **Both a & b**
 - d. None
98. GUI means
- a. **Graphical user interface**
 - b. Graphical user interaction
 - c. Graphics uniform interaction
 - d. None
99. Which one is the basic input device in GUI
- a. **Mouse**
 - b. Graphics tablet
 - c. Voice system
 - d. Touch panel
100. Pen or inkjet plotters use the following devices
- a. Drum
 - b. Flat bed
 - c. **Both a & b**
 - d. None of these
-

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

- a. **Sp line**
- b. Scan-line method
- c. Depth-sorting method
- d. None of these

2. The types of sp line curve are

- a. Open sp line
- b. Closed sp line
- c. **Both a & b**
- d. None of these

3. Cubic sp line are

- a. Simple to compute
- b. Provides continuity of curves
- c. **Both a & b**
- d. None of these

4. The parametric form of 3D sp line are

- a. $X=f(t), y=g(t), z=h(t)$
 - b. $X=a_0, y=b_0, z=c_0$
 - c. $F(t)=0, g(t)=0, h(t)=0$
 - d. None of these
5. The value of t lies between
- a. 1 and 2
 - b. 1 and 10
 - c. **0 and 1**
 - d. 0 and 3
6. 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
7. The problem of hidden surface are
- a. Removal of hidden surface
 - b. Identification of hidden surface
 - c. **Both a & b**
 - d. None of these
8. Why we need removal of hidden surface
- a. for displaying realistic view
 - b. for determining the closest visible surface
 - c. **Both a & b**
 - d. None of these
9. How many types of hidden surface algorithm are
- a. 1
 - b. **2**
 - c. 3
 - d. 4
10. The algorithm of hidden surface are

- a. Object-space method
 - b. image-space method
 - c. **Both a & b**
 - d. None of these
11. 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. Both a & b
 - d. None of these
12. 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. Both a & b
 - d. None of these
13. The types of hidden surface removal algorithm are
- a. Depth comparison, Z-buffer, back-face removal
 - b. Scan line algorithm, priority algorithm
 - c. BSP method, area subdivision method
 - d. **All of these**
14. Which surface algorithm is based on perspective depth
- a. Depth comparison
 - b. **Z-buffer or depth-buffer algorithm**
 - c. subdivision method
 - d. back-face removal
15. In which year Z- buffer algorithm are described
- a. 1995
 - b. **1974**
 - c. 1945

d. 1981

16.Z-buffer algorithm are

- a. **Simplest algorithm**
- b. Complex algorithm
- c. Largest algorithm
- d. None of these

17.Which is a tree type of data structure in which every internal node has at most four children

- a. Point quad tree
- b. Edge quad tree
- c. **Quad tree**
- d. None of these

18.The scan line coherence algorithm was developed by

- a. Wylie
- b. Evans
- c. Cat mull
- d. **Both a & b**

19.The array are used with scan line coherence algorithm are

- a. For intensity value
- b. For depth value
- c. **Both a & b**
- d. None of these

20.Scan lines are used to scan from

- a. **Top to bottom**
- b. Bottom to top
- c. Both a & b
- d. None of these

21.The painter algorithm were developed on

- a. **1972 by Newell**
- b. 1972 by Evans
- c. 1974 by Cat mull

d. None of these

22. The painter algorithm are also called

a. Depth sort algorithm

b. Priority algorithm

c. **Both a & b**

d. None of these

23. The painter algorithm are based on the property of

a. Polygon

b. **Frame buffer**

c. Depth buffer

d. None of these

24. The dynamic effect of an image is called

a. Video

b. **Animation**

c. Super sampling

d. None of these

25. The animation can be defined as a collection of images played in

a. Not sequence

b. **Defined sequence**

c. Both a & b

d. None of these

26. When sound is included in the animation, it become

a. Audio

b. **Video**

c. Both a & b

d. None of these

27. Many online animation tools are used to create animation in the form of

a. JPEG image

b. PDF image

c. **GIF image**

d. None of these

28. An example of online animation tools are

a. Macromedia flash

b. GIF works

c. **Both a & b**

d. None of these

29. To produce the motion in the image by placing the elements of the image on different locations, which software are used

a. **Macromedia flash**

b. GIF works

c. Both a & b

d. None of these

30. The name of a visible surface detection algorithm are

a. **Back face detection**

b. Back face removal

c. Ray tracing

d. None of these

31. Which type of quad tree can be defined as an adaptation of a binary tree represented two-dimensional point data

a. **Point quad tree**

b. Edge quad tree

c. Curves quad tree

d. Areas quad tree

32. Which type of quad tree is specifically used to store lines rather than points

a. Point quad tree

b. **Edge quad tree**

c. Curves quad tree

d. Areas quad tree

33. Which quad tree defines a partition of space in two dimensions by dividing the region into four equal quadrants, sub-quadrants and so on

- a. Curves quad tree
- b. Areas quad tree
- c. **Region quad tree**
- d. None

34.The animation graphics can be created by

- a. Hand
- b. Computer assistance
- c. **Both a & b**
- d. None of these

35.The animation can be divided into

- a. One part
- b. **Two parts**
- c. Three parts
- d. Four parts

36.The types of animation are

- a. Traditional animation
- b. Computer animation
- c. **Both a & b**
- d. None of these

37.The types of computer animation are

- a. 2D computer animation
- b. 3D computer animation
- c. **Both a & b**
- d. None of these

38.The depth sorting method reforms surfaces sorting in _____ order of depth

- a. Increasing
- b. **Decreasing**
- c. Both a & b
- d. None of these

39.The problem of discontinuity of lines is known as

- a. Jaggies
- b. Stair-casing
- c. **Both a & b**
- d. None of these

40. A quad-tree is a data structure which is used for graphical representation of

- a. **2D digital picture or object**
- b. 3D picture or object
- c. Both a & b
- d. None of these

41. An octree is a data structure which is used for alternative representation of

- a. 2D digital picture or object
- b. **3D picture or object**
- c. Both a & b
- d. None of these

42. How many data elements for each region in quad-tree data structure

- a. 2
- b. **4**
- c. 6
- d. 8

43. How many data elements for each region in octree data structure

- a. 2
- b. 4
- c. 6
- d. **8**

44. The main property of _____ is that their shape is irregular

- a. **Fractals**
- b. Quad-tree
- c. Rendering
- d. None of these

45. The word fractals is coined by

- a. **Mandelbrot in 1975**
- b. Gosling in 1962
- c. Mandelbrot in 1974
- d. Mandelbrot in 1979

46.The fractals is used to

- a. Generate image of natural object
- b. Viewing of various mathematical system
- c. Viewing of various physical system
- d. **All of these**

47.A process with the help of which images or picture can be produced in a more realistic way is called

- a. Fractals
- b. Quad-tree
- c. **Rendering**
- d. None of these

48.For which purpose ,one needs to apply natural light effects to visible surface

- a. Fractals
- b. Quad-tree
- c. **Rendering**
- d. None of these

49.The basic ray tracing algorithm provides

- a. Transparency
- b. Visible-surface detection
- c. Shadow effect, multiple light source illumination
- d. **All of these**

50.Ray-tracing is an extension of

- a. Ray calling
- b. **Ray casting**
- c. Ray sampling
- d. None of these

51.A fast and simple method for rendering an object with polygon surface is

- a. Constant-intensity shading
 - b. Flat shading
 - c. **Both a & b**
 - d. None of these
-

1. A three dimensional graphics has
 - a. Two axes
 - b. **Three axes**
 - c. Both a & b
 - d. None of these
2. _____ as the most commonly used boundary presentation for a 3-D graphics object
 - a. Data polygon
 - b. **Surface polygon**
 - c. System polygon
 - d. None of these
3. A three dimensional object can also be represented using _____
 - a. Method
 - b. **Equation**
 - c. Point
 - d. None of these
4. An _____ can be considered as an extension of spherical surface
 - a. Bezier
 - b. **Ellipsoid**
 - c. Shearing
 - d. None of these
5. _____ curve is one of the sp line approximation methods
 - a. **Bezier**
 - b. Ellipsoid
 - c. Shearing
 - d. None of these
6. A Bezier curve is a polynomial of degree _____ the no of control points used
 - a. One more than
 - b. **One less than**
 - c. Two less than
 - d. None of these
7. The most basic transformation that are applied in three-dimensional planes are
 - a. Translation
 - b. Scaling
 - c. Rotation
 - d. **All of these**
8. 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
9. 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
10. 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
11. Apart from the basic transformation , _____ are also used
- a. Shearing
 - b. Reflection
 - c. **Both a & b**
 - d. None of these
12. In which transformation ,the shape of an object can be modified in any of direction depending upon the value assigned to them
- a. Reflection
 - b. **Shearing**
 - c. Scaling
 - d. None of these
13. 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
14. How many types of projection are
- a. 1
 - b. **2**
 - c. 3
 - d. 4
15. The types of projection are
- a. **Parallel projection and perspective projection**
 - b. Perpendicular and perspective projection
 - c. Parallel projection and Perpendicular projection
 - d. None of these
16. How many types of parallel projection are
- a. 1
 - b. **2**
 - c. 3
 - d. 4
17. 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
18. _____ are the three dimensional analogs of quad trees
- a. Quadric
 - b. **Octrees**
 - c. Geometry
 - d. None of these
19. By which more complex objects can be constructed
- a. **Quadric surfaces**
 - b. Wire frame model
 - c. Composite transformation
 - d. None of these
20. _____ refers to the common elements of graphics scenes ,often used in graphics package as primitive components
- a. **Quadric surfaces**
 - b. Wire frame model
 - c. Composite transformation
 - d. None of these
21. _____ refer to the shapes created by union, intersection and difference of given shapes
- a. Wire frame model
 - b. Composite transformation
 - c. **Constructive solid geometry methods**
 - d. None of these
22. _____ refer to a model that represent all the dimension of an object external as well as internal
- a. **Wire frame model**
 - b. Constructive solid geometry methods
 - c. Composite transformation
 - d. None of these
23. _____ refers to the result obtained by multiplying the matrix of the individual transformation representation sequences
- a. Wire frame model
 - b. Constructive solid geometry methods
 - c. **Composite transformation**
 - d. None of these
24. The projection in which the projection plane is allowed to intersect the x, y and z-axes at equal distances
- a. Wire frame model
 - b. Constructive solid geometry methods
 - c. **Isometric projection**
 - d. Back face removal
25. In which projection ,the plane normal to the projection has equal angles with these three axes
- a. Wire frame model
 - b. Constructive solid geometry methods
 - c. **Isometric projection**
 - d. Back face removal
26. _____ is a simple object space algorithm that removes about half of the total polygon in an image as about

half of the faces of objects are back faces

- a. Wire frame model
 - b. Constructive solid geometry methods
 - c. Isometric projection
 - d. **Back face removal**
27. By which ,we can take a view of an object from different directions and different distances
- a. **Projection**
 - b. Rotation
 - c. Translation
 - d. Scaling
28. Parallel projection shows the
- a. True image of an object
 - b. True size of an object
 - c. True shape of an object
 - d. all of these
29. Projection rays(projectors) emanate from a
- a. COP(centre of projection)
 - b. Intersect projection plane
 - c. **Both a & b**
 - d. None of these
30. The centre of projection for parallel projectors is at
- a. Zero
 - b. **Infinity**
 - c. One
 - d. None of these
31. 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**
32. The orthographic projection that show more than one side of an object are called
- a. Axonometric projection
 - b. Isometric projection
 - c. **Both a & b**
 - d. None of these
33. The projection that can be viewed as the projection that has a centre of projection at a finite distance from the plane of projection are called
- a. Parallel projection
 - b. **Perspective projection**
 - c. Isometric projection
 - d. None of these
34. The perspective projection is more practical because the distant objects appear
- a. **Smaller**
 - b. Larger
 - c. Neither smaller nor larger
 - d. None of these
35. The equation of scaling transformation will be

- a. $X^1 = x + Tx, y^1 = y + Ty, z^1 = z + Tz$
- b. $X^1 = x.sx, y^1 = y.sy, z^1 = z.sz$
- c. Both of these
- d. None of these
36. The equation of translation transformation will be
- a. $X^1 = x + Tx, y^1 = y + Ty, z^1 = z + Tz$
- b. $X^1 = x.sx, y^1 = y.sy, z^1 = z.sz$
- c. Both of these
- d. None of these
37. Sp line curve can be either
- a. Bezier sp line
- b. B sp line
- c. **Both a & b**
- d. None of these
38. Bezier sp line always passes through
- a. **First and second control point**
- b. Does not pass from First and second control point
- c. Both a & b
- d. None of these
39. The equation for describing surface of 3D plane are
- a. **$Ax + By + Cz + D = 0$**
- b. $Ax + By + Cz = 0$
- c. $Ax + By + D = 0$
- d. $Ax + By + Cz + D = 1$
40. The object refers to the 3D representation through linear, circular or some other representation are called
- a. Quadric surface
- b. **Sweep representation**
- c. Torus
- d. None of these
41. The distance of a line from the projection plane determines
- a. **Its size on projection plane**
- b. Its length on projection plane
- c. Its width on projection plane
- d. Its height on projection plane
42. The further the line from the projection plane, _____ its image on the projection plane
- a. **Smaller**
- b. Larger
- c. Neither smaller nor larger
- d. None of these
43. The Bezier curve obtained from the four control points is called a
- a. Square Bezier curve
- b. **Cubic Bezier curve**
- c. Hectare Bezier curve
- d. Rectangle Bezier curve
44. The shape of a Bezier curve primarily depends upon the
- a. **Position of control points**
- b. Distance of control points

- c. Position of control panel
 - d. None of these
45. The no of control points in a Bezier curve ensures the
- a. Jaggies of curve
 - b. **Smoothness of curve**
 - c. Straightness of curve
 - d. None of these
46. More the control points of a Bezier curve,_____ quality of the curve
- a. **Higher**
 - b. Lower
 - c. Bad
 - d. None of these
47. _____is one of the function that is used to specify a single plane surface
- a. Meta-ball model
 - b. **Fill area**
 - c. Reflection
 - d. None of these
48. Meta-ball is used to describe
- a. Simplest object
 - b. Complex object
 - c. **Composite object**
 - d. None of these
49. Super quadrics is a class of object that contain
- a. Data
 - b. Codes
 - c. **Both a & b**
 - d. None of these
50. When two molecules move apart, which effect on molecular shapes
- a. Stretching
 - b. Snapping
 - c. Contracting
 - d. **All of these**
51. The sweep representation of an object refers to the
- a. 2D representation
 - b. **3D representation**
 - c. Both a & b
 - d. None of these
-

1. Interactive computer graphics uses various kind of input devices such as

- a. Mouse
- b. Graphic tablet
- c. Joystick

- d. **All of these**
2. Input function are used for
- a. Control the data flow from these interactive devices
 - b. Process the data flow from these interactive devices
 - c. **Both a & b**
 - d. None of these
3. A graphics package contains
- a. No of housekeeping task such as clearing a display screen
 - b. No of housekeeping task such as initializing parameters
 - c. **Both a & b**
 - d. None of these
4. The interactive computer graphics involves _____ way communication b/w computer and the user
- a. One
 - b. **Two**
 - c. Three
 - d. four
5. Interactive computer graphics enables a user to customize the graphics in _____
- a. Computer way
 - b. **His own way**
 - c. Both a & b
 - d. None of these
6. User can make any change on image with the use of
- a. Non-interactive graphics
 - b. **Interactive graphics**
 - c. Both a & b
 - d. None of these
7. The application area of computer graphics are
- a. Political
 - b. Education and textbook
 - c. CAD and entertainment

d. **All of these**

8. CAD means

- a. Car aided design
- b. Computer art design
- c. **Computer aided design**
- d. None of these

9. DTP means

- a. Draw top publishing
- b. **Desk top publishing**
- c. Desk town publishing
- d. None of these

10. PCBs can be drawn using the computer graphics

- a. In very efficiently way
- b. In a shorter time
- c. In a larger time
- d. **Both a & b**

11. How many components of Interactive computer graphics are

- a. One
- b. Two
- c. **Three**
- d. four

12. What are the components of Interactive computer graphics

- a. A digital memory or frame buffer
- b. A television monitor
- c. An interface or display controller
- d. **All of these**

13. A display controller serves to pass the contents of

- a. **Frame buffer to monitor**
- b. Monitor to frame buffer
- c. Both a & b

d. None of these

14. The image is passed repeatedly to the monitor _____ in order to maintain a steady picture on the screen

a. 25 times a second

b. 30 times a second

c. **30 or more times a second**

d. None of these

15. To store black and white images, black pixels are represented by _____ in the frame buffer and white pixels by _____

a. Zero and one

b. **One and Zero**

c. Both a & b

d. None of these

16. A 16*16 array of black and white pixels could be represented by _____

a. 64 bytes

b. **32 bytes**

c. 128 bytes

d. 96 bytes

17. The display controller converts 0s and 1s into _____

a. TV monitor

b. **Video signal**

c. Electronics signal

d. None of these

18. The image can be transmitted to the display point by _____

a. Line

b. Segment

c. **Point**

d. None of these

19. Which graphics application provides a proper dialogue box to help the user

a. MS excel

b. **MS Paint**

- c. MS word
- d. None of these

20.The area of computer that is captured by an application is called

- a. **Window**
- b. View port
- c. Display
- d. None of these

21.A basic interactive picture construction technique are

- a. Positioning and pointing, constraints
- b. Grid, gravity field, rubber band method
- c. Sketching, dragging, inking and painting
- d. **All of these**

22.The movement of different attributes of image would make the image dynamic and such a dynamic effect is termed as _____

- a. Picture
- b. **Animation**
- c. Painting
- d. None of these

23.Graphics output devices are

- a. Graphics tablet, mouse
- b. Keyboard
- c. Light pen, joystick
- d. **None of these**

24.Which method are used to get and set the position of a pixel, object or text in active area of a desktop

- a. Drugging method
- b. **Basic positioning method**
- c. Sketching method
- d. Gravity field method

25.The center of display screen is computed as

- a. $X_{\max} .y_{\max}$

b. $X_{\max}/2, y_{\max}/2$

c. $X_{\max}/3, y_{\max}/3$

d. None of these

26. The operation that is used for repositioned the object are called

a. Rubber band method

b. Gravity field

c. **Dragging**

d. None of these

27. Which method are used to construct and position the straight lines, arcs and circles, etc

a. **Rubber band method**

b. Gravity field

c. Dragging

d. None of these

28. Which are used to connect a line to already drawn line

a. Rubber band method

b. **Gravity field**

c. Dragging

d. None of these

29. The rubber band is also applicable to _____ objects

a. **Scale**

b. Scalar

c. Vector

d. None of these

30. The division displayed on screen into row and columns is known as

a. Rubber band method

b. Gravity field

c. Dragging

d. **Grid**

31. The function of a plotter is like a

a. Monitor

- b. Projector
- c. **printer**
- d. None of these

32.A plotter is capable of

- a. Printing a map
- b. Printing a similar images
- c. **Both a & b**
- d. None of these

33._____ ink is used in laser printer

- a. Wet
- b. **Dry**
- c. Both a & b
- d. None of these

34.The cabinet in laser printer in which the ink is filled is called

- a. Cartage
- b. Toner
- c. **Both a & b**
- d. None of these

35.An inkjet printer places_____ of ink onto paper to print an image

- a. **Small droplets**
- b. large droplets
- c. Both a & b
- d. None of these

36.The size of these dot in inkjet printer usually lies between

- a. **50 to60 microns in diameter**
- b. 20 to30 microns in diameter
- c. 30 to40 microns in diameter
- d. 10 to20 microns in diameter

37.The speed of printing in inkjet printer is

- a. Fast

- b. **Slow**
- c. Not fast nor slow
- d. None of these

38.The inkjet printer is mostly common due to their

- a. Low cost
- b. Performance
- c. **Both a & b**
- d. None of these

39.LCD stands for

- a. Liquid core display
- b. **Liquid crystal display**
- c. Liquid crystal diagram
- d. None of these

40.The LCD projector is the output device that is connected to the

- a. Monitor
- b. LCD
- c. **CPU**
- d. None of these

41.The size of the projected contents in LCD projector depends on the distance between

- a. Projector and CPU
- b. **Projector and target screen**
- c. Projector and target memory
- d. None of these

42.An LCD projector displays the contents in _____ manner than a simple monitor

- a. Less flexible
- b. **More flexible**
- c. Inflexible
- d. None of these

43.How many types of LCD projector

- a. 1

- b. 2
- c. 3
- d. 4

44. The types of LCD projector are

- a. Flat panel and laser
- b. **Normal and roof mounted**
- c. Mesh model and curved
- d. None of these

45. The roof mounted projector are fixed on the

- a. Floor
- b. **Roof**
- c. Corner
- d. None of these

46. The roof mounted projector can connect two or more computers or laptops in _____

- a. Serial
- b. **Parallel**
- c. Both a & b
- d. None of these

47. The roof mounted projector are also enabled to take

- a. **Computer data**
- b. Printing data
- c. Both a & b
- d. None of these

48. The roof mounted projector takes computer data via a cable through

- a. Serial port
- b. Parallel port
- c. **Both a & b**
- d. None of these

49. The roof mounted projector are Bluetooth

- a. **Enabled**

- b. Disabled
- c. Both a & b
- d. None of these

50.The flat panel displays are_____ in appearance

- a. **Flat**
- b. Curved
- c. Both a & b
- d. None of these

51.A touch screen display is an

- a. Input device
- b. Output device
- c. **Both a & b**
- d. Neither input nor output

52.The touch screen display shows the results of

- a. Computation
- b. Accept command and data from user for further computation
- c. **Both a & b**
- d. None of these

53.The flat panel display is called an

- a. **LCD monitor**
- b. LED monitor
- c. Both a & b
- d. None of these

54.A graphics tablet works on same principal as

- a. **Light pen**
- b. Monitor
- c. Projector
- d. None of these

55.The voice recognition system takes the command from the user in the form of

- a. Writing

- b. **Voice**
- c. Both a& b
- d. None of these

56. In the voice recognition system, the voice is converted into

- a. Machine code
- b. Byte code
- c. **Electrical signal**
- d. None of these

57. A joystick is a

- a. **Graphics input device**
- b. Graphics output device
- c. Both a & b
- d. None of these

58. A joystick is consisting of a

- a. Pen
- b. **Stick**
- c. Microphone
- d. None of these

59. Joysticks are often used to control

- a. Typing
- b. **Video games**
- c. Voice
- d. None of these

60. The joystick often has _____ fire buttons to trigger some kind of action

- a. One
- b. More
- c. **Both a & b**
- d. None of these

61. In which year, mostly modern joysticks use a USB interface for connection to the personal computer

- a. 2005

- b. 2007
- c. 2006
- d. 2008

62.The light pen is an

- a. **Graphics input device**
- b. Graphics output device
- c. Both a & b
- d. None of these

63.The functioning of a light pen is similar to mouse except that

- a. User can move the pointer
- b. User can select objects on the display screen by pointing to object with the pen
- c. **Both a & b**
- d. None of these

64.A wireless mouse works on

- a. Infra blue radiation
- b. **Infra red radiation**
- c. Infra green radiation
- d. None of these

65.A wireless mouse consists of _____parts

- a. One
- b. **Two**
- c. Three
- d. None of these

66.The parts of wireless mouse is

- a. Cable and a mouse
- b. **USB and a mouse**
- c. CPU and a mouse
- d. None of these

67.The mouse's motion typically translates into

- a. **Motion of a pointer on a display**

- b. Motion of a pointer on a CPU
- c. Both a & b
- d. None of these

68. How many types of keyboard

- a. 1
- b. 2
- c. 3
- d. 4

69. Types of keyboard are

- a. Standard
- b. Gaming and multimedia
- c. Thumb sized
- d. numeric
- e. **all of these**

70. Which are used to achieve the predetermined orientations and alignments of the objects

- a. **Constraints**
- b. Grid
- c. Gravity field
- d. None of these

71. The major constraints are

- a. Horizontal alignment
- b. Vertical alignment
- c. **Both a & b**
- d. None of these

1. 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
2. The method which perform the scan conversion by using large number of delay cells are called
- a. **Analogue method**
 - b. Digital method
 - c. Complex method
 - d. None of these
3. Digital method is also known as
- a. Normal method
 - b. **Buffered method**
 - c. Real time method
 - d. None of these
4. Analogue method is also known as
- a. Normal method
 - b. Buffered method
 - c. **Real time or memory less method**
 - d. None of these
5. Digital method allows a picture to be stored in line or frame buffer with
- a. Same speed
 - b. **Different speed**
 - c. Both a & b
 - d. None of these
6. A pixel may be defined as
- a. **Smallest size object**
 - b. Larger size object
 - c. Medium size object
 - d. None of these
7. A position in plane known as
- a. Line
 - b. **Point**
 - c. Graphics

- d. None of these
8. A line can be represented by
- a. One point
 - b. **Two points**
 - c. Three points
 - d. Four points
9. The process of coloring the area of a polygon is called
- a. **Polygon filling**
 - b. Polygon flow
 - c. Aliasing
 - d. None of these
10. How many types of polygon filling
- a. Two
 - b. One
 - c. **Three**
 - d. Four
11. 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
12. 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. Both a & b
 - d. None of these
13. If the pixel is already filled with desired color then leaves it otherwise fills it. This is called
- a. Flood fill algorithm
 - b. **Boundary fill algorithm**
 - c. Scan line polygon filling algorithm

d. None of these

14. A vector can be defined as

- a. Intersection b/w two point position
- b. **Difference b/w two point position**
- c. Comparison b/w two point position
- d. None of these

15. Bresenham circle algorithm uses the approach of

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

16. The side effect of scan conversion are

- a. **Aliasing**
- b. Anti aliasing
- c. Both a & b
- d. None of these

17. The process of reducing aliasing is called

- a. Resolution
- b. **Anti aliasing**
- c. Sampling
- d. None of these

18. Two basic techniques for anti aliasing in ray tracing algorithm are

- a. Pixel sampling and super sampling
- b. **Adaptive sampling and super sampling**
- c. Pixel sampling and super sampling
- d. None of these

19. The problems of aliasing are

- a. Staircase
- b. Unequal brightness
- c. Picket fence problem

d. **All of these**

20.The technique to minimizing aliasing are

- a. Increased no of resolution
- b. Modify pixel intensities
- c. Super sampling
- d. **All of these**

21.Lower persistence phosphorus is used in

- a. **Animation**
- b. Simple object
- c. Complex object
- d. All of these

22.Lower persistence phosphorus needs _____ refresh rate

- a. Lower
- b. **Higher**
- c. Medium
- d. None of these

23.Higher persistence phosphorus needs _____ refresh rate

- a. **Lower**
- b. Higher
- c. Medium
- d. None of these

24.Higher persistence phosphorus is used in

- a. Animation
- b. Simple object
- c. **Higher complex object**
- d. All of these

25.Phosphorus are of various types depending on

- a. color
- b. persistence
- c. **both a & b**

d. none of these