

## COMPUTER GRAPHICS VIVA QUESTIONS

Q 1. What Is Scan Conversion?

Answer: A major task of the display processor is digitizing a picture definition given in an application program into a set of pixel intensity values for storage in the frame buffer. This digitization process is called scan conversion.

Q 2. Write The Properties Of Video Display Devices?

Answer: Properties of video display devices are persistence ,resolution, and aspect ratio.

Q 3. What Is Rasterization?

Answer: The process of determining the appropriate pixels for representing picture or graphics object is known as rasterization.

Q 4. Define Computer Graphics.

Answer: Computer graphics remains one of the most existing and rapidly growing computer fields. Computer graphics may be defined as a pictorial representation or graphical representation of objects in a computer.

Q 5. Name Any Four Input Devices?

Answer: Four input devices are keyboard, mouse, image scanners, and trackball.

Q 6. Write The Two Techniques For Producing Color Displays With A Crt?

Answer: Beam penetration method, shadow mask method.

Q 7. What Is Vertical Retrace Of The Electron Beam?

Answer: In the raster scan display, at the end of one frame, the electron beam returns to the left top corner of the screen to start the next frame.

Q 8. Short Notes On Video Controller?

Answer: A video controller is used to control the operation of the display device. A fixed area of the system is reserved for the frame buffer, and the video controller is given direct access to the frame buffer memory.

Q 9. What Is Bitmap?

Answer: Some system has only one bit per pixel; the frame buffer is often referred to as bitmap.

Q 10. Differentiate Plasma Panel Display And Thin Film Electroluminescent Display?

Answer: In the plasma panel display, the region between two glass plates is filled with neon gas. In a thin-film electroluminescent display, the region between two glasses plates is filled with phosphor, such as zinc sulfide doped with manganese.

Q 11. What Is Resolution?

Answer: The maximum number of points that can be displayed without overlap on a CRT is referred to as the resolution.

Q 12. What Is Horizontal Retrace Of The Electron Beam?

Answer: In raster scan display, the electron beam return to the left of the screen after refreshing each scan line, is called horizontal retrace of the electron beam.

Q 13. What Is Filament?

Answer: In the CRT, heat is applied to the cathode by directing a current through a coil of wire, is called filament

Q 14. What Is Pix Map?

Answer: Some system has multiple bits per pixel, the frame buffer is often referred to as pix map.

Q 15. Write The Types Of Clipping?

Answer: Point clipping, line clipping, area clipping, text clipping and curve clipping.

Q 16. What Is Meant By Scan Code?

Answer: When a key is pressed on the keyboard, the keyboard controller places a code carry to the key pressed into a part of the memory called the keyboard buffer. This code is called the scan code.

Q 17. List Out The Merits And Demerits Of Penetration Techniques?

Answer: The deserves and demerits of the Penetration strategies areas follows. It is an inexpensive technique. It has most effective 4 colors. The nice of the photo is not accurate while it's miles as compared to different techniques. It can display colour scans in video display units. Poor trouble and so on.

Q 18. List Out The Merits And Demerits Of Dvst?

Answer: The deserves and demerits of direct view storage tubes[DVST] are as follows. It has a flat display. Refreshing of display screen isn't required. Selective or element erasing of screen isn't always feasible. It has negative contrast Performance is inferior to the refresh CRT.

Q 19. What Do You Mean By Emissive And Non-emissive Displays?

Answer: The emissive display converts electrical strength into light strength. The plasma panels, thin film electro-luminescent presentations are the examples. The Non-emissive are optical outcomes to convert the daylight or mild from another source to photograph form. Liquid crystal show is an instance.

Q 20. List Out The Merits And Demerits Of Plasma Panel Display?

Answer: Merits. Refreshing isn't always required. Produce a very steady photo freed from Flicker. Less cumbersome than a CRT. Demerits. Poor decision of as much as 60 d.P.I. It calls for complex addressing and wiring. It is dearer than CRT.

Q 21. What Is Persistence?

Answer: The time it takes the emitted mild from the display to decay one tenth of its unique depth is called as patience.

Q 22. What Is Aspect Ratio?

Answer: The ratio of vertical factors to the horizontal points important to supply length of traces in both directions of the screen is called the Aspect ratio. Usually the aspect ratio is  $\frac{3}{4}$ .

Q 23. What Is The Difference Between Impact And Non-effect Printers?

Answer: Impact printer press formed person faces towards an inked ribbon directly to the paper. A line printer and dot-matrix printer are examples. On-effect printer and plotters use Laser techniques, inkjet sprays, Xerographic technique, electrostatic methods and electro thermal methods to get pix onto the papers. Examples are: Inkjet/Laser printers.

Q 24. Define Pixel?

Answer: Pixel is shortened styles of picture elements. Each display screen point is referred to as pixel or pel.

Q 25. What Is Frame Buffer?

Answer: Picture definition is stored in a reminiscence place referred to as frame buffer or refresh buffer.

Q 26. What Are The Various Attributes Of A Line?

Answer: The line type, width and colour are the attributes of the line. The line kind consist of stable line, dashed strains, and dotted lines.

Q 27. What Is Ant Aliasing?

Answer: The procedure of fixing intensities of the pixels along the road to limit the impact of aliasing is called ant aliasing.

Q 28. What Is Transformation?

Answer: Transformation is the method of introducing changes inside the form length and orientation of the item the usage of scaling rotation mirrored image shearing & translation etc.

Q 29. What Is Translation?

Answer: Translation is the method of changing the placement of an object in a directly-line path from one coordinate location to another. Every factor (x , y) in the object have to underneath move a displacement to (xdone through repositioning the coordinates alongside a circular route, inside the x-y aircraft with the aid of making an angle with the axes. The transformation is given via  $x = r \cos (q + f)$  and Ycompleted by way of repositioning the coordinates alongside a round direction, within the x-y aircraft by means of making an angle with the axes. The transformation is given through: Xtruely slants the object along the X route or the Y direction as required. Ie; this change slants the form of an object along a required plane.

Q 30. What Is Reflection?

Answer: The reflection is truly the transformation that produces a reflected picture of an item. For this use a few angles and features of mirrored image.

Q 31. What is dithering?

Answer: The name dithering is used in different contexts. Primarily, it defines techniques for approximating halftones without reducing resolutions pixel: grid patterns do. But the term is also applied to halftone approximation methods using pixel grids and sometimes it is used to define to color halftone approximation only.

Random values added to pixel intensities to breakup contours are referred to as dither noise.

Q 32. List out the various properties that describe the characteristics of light.

Answer: Reflection

Refraction

Dispersion

Interference

Diffraction

Q 33. What is an animation?

Answer: Computer Animation usually defines any time sequence of visual transformation in a scene. In adding to the dynamic area with translations or rotations, computer-generated animations could exhibit time innovation in object dimension, color, transparency, or surface texture. Animations often transition from one object shape to another.

Q 34. Define Keyframe systems.

Answer: Key-frame systems are specialized animation languages designed to generate the in-between frames from user-specified keyframes. Each object in the scene is described as a set of rigid bodies connected at the joints and with a limited number of degree of freedom. In-between frames are generated from the specification of two or more key frames. Motion paths can be given by kinematic description as a set of spline curves or physically based by specifying the force acting on the object to be animated.

Q 35. What is Fractals?

Answer: Fractals are those who have the property of a shape that has the same degree of roughness no matter how much it is magnified. A fractal appears the same at every scale.

Q 36. What are Morphing and tweening?

Answer: Transformation of object shape from one form to another is known as morphing. Tweening is the process, which applies to animation objects defined by a sequence of points, and that change shape from frame to frame.

Q 37. What are Peano curves?

Answer: A fractal curve can fill the plane and therefore have a dimension of two. Such curves are called Peano curves.

Q 38. What is a Scripting system?

Answer: Scripting systems allow object specifications and animation sequences to be defined with a user input string. From the script, a library of different objects and motions can be constructed.

Q 39. Define refresh/frame buffer.

Answer: Picture definition is saved in a memory area known as the refresh buffer or frame buffer. This memory area keeps the set of intensity values for all the screen points.

Q 40. Define Window and viewport.

Answer: A world-coordinate area selected for display is known as a window. An area on the display device to which a window is mapped is known as a viewport.