BE Semester-V (IT) Question Bank

Computer Graphics and Multimedia

All questions carry equal marks (10 marks)

1.	Write a short note on working of raster scan display system and random scan display system.
2.	Explain working of Video controller.
3.	Explain Shadow mask and beam penetration method.
4.	Explain flat-panel display in detail.
5.	Explain DDA line drawing algorithm with its drawbacks.
6.	Explain bresanham's line drawing algorithms.
7.	Explain midpoint Circle algorithm.
8.	Explain midpoint ellipse algorithm.
9.	Explain Boundary fill and Flood fill algorithm.
10.	Explain Scan line fill polygon filling algorithm.
11.	Explain the following transformation with the matrix representations. Give suitable diagram for illustration. • Translation. • Scaling. • Rotation.
12.	How the rotation of an object about the pivot point is performed?
13.	Prove • 2 Translations are additive • 2 Rotations are additive • 2 Scalings are multiplication
14.	Define the following. • Window • View Port • View up vector • Viewing transformation • Point clipping
15.	Explain Cohen-Sutherland line clipping algorithm.

16.	Explain Liang barsky line clipping algorithm
17.	Explain Sutherland Hodgman polygon clipping algorithm.
18.	Consider a Non-Interlaced raster system with resolution of 1280 By 1024, a refresh rate of 60 Hz, a horizontal retrace time of 5 Microseconds and a vertical retrace time of 500 μs. What is the fraction of the total refresh time per frame spent in horizontal retrace of the electron beam?
19.	Rasterize the line from (-1,1) to (5,-8) using Bresenhams line drawing Algorithm.
20.	Find the reflection of a triangle defined by the vertices A(1,1), B(5,1) and C(1,5) about a line y=2x+10.
21.	Derive transformation matrix for 3D scaling followed by rotation about fixed point
22.	Derive transformation matrix for rotation about a line parallel to one of the principle axis in space.
23.	Differentiate: (A). Hypertext and Hyper media, (B). GIF v/s JPEG
24.	Explain following: (A)Page based authoring tool, (B). Video file formats
25.	Write short note on: (A). Sound editing tool, (B). Animation tools
26.	What is video conferencing? Discuss the challenges related to such facilities
27.	Explain: (A). Standard motions in key frame animation, (B)Image synthesis
28.	Describe the different techniques used in the animation control mechanisms
29.	Explain the terms: Multimedia, Hypermedia, MIDI, MPEG
30.	Explain main properties of multimedia
31.	Explain: Sampling and quantization
32.	Explain: Types of image formats
33.	Rotate a triangle ABC with vertices A(2, 3, 1), B(3, 4, 5) and C(5, 6, 7) about a line Y = 2
34.	Scale the surface A(2, 2, 2), B(4, 4, 4), C(5, 5, 5), D(6, 6, 6) with respect to point (7, 7)
35.	Prove that rotation followed by translation is not same as translation followed by rotation in three dimension

36.	Write a note on: Mobile messaging
37.	Write a note on: Integrated multimedia message and standards
38.	Write a short note on compression and decompression techniques of multimedia file
39.	Explain: Multimedia Data interface standards
40.	Explain in detail: Applications of multimedia