DRONACHARYA COLLEGE OF ENGINEERING, GURGAON

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Important Question of Computer Graphics

Section A

Q.1) Draw the block diagram and explain working of a raster display method. Differentiate between horizontal retrace and vertical retrace.

Q.2) What is Computer Graphics? Write its various applications.

Q.3) Write a short note on

a) Keyboard b) Mouse

c) Joystick d) Trackball

e) Digitizer f) Scanner

g) Printer h) Lighten

Q.4) Discuss and explain Bresenham's algorithm for circle generation.

Q.5) How DDA differs from Bresenham's line drawing algorithm?

Q.6) Explain in detail scanline polygon filling algorithm.

Q.7) Explain midpoint algorithm for circle drawing

Q.8) Explain Boundary fill algorithm.

Q.9) What is the difference between raster scan CRT and vector scan CRT.

Q.10) Explain the step required to fill polygon using flood fill techniques

Section B

Q.1) Write a short note on Window to viewport transformation

Q.2) Explain Sutherland Cohen algorithm for line clipping

Q.3) What is window and viewport?

Q.4) What is clipping? Explain with the help of algorithm.

Q.5) What do you mean by instance transformation? Explain with suitable example.

Q.6) Explain Weiler Atherton Polygon clipping algorithm

Q.7) Explain briefky: 2d Clipping

Q.8) Derive the matrix for 2d rotation about fixed point.

Q.9) Explain multiple windowing.

Q.10) Explain Sutherland Hodgeman Polygon clipping algorithm.

Q.11) What are Composite transformation? Discuss.

Q.12) what do you mean by coordinate system.

Q.13) Explain the transformation used in magnification and reduction with respect to origin.

Section C

Q.1) Discuss the mathematics of planner geometric projection

Q.2) What is parallel projection

Q.3) Write and explain various type of projection.

Q.4) What are the principle vanishing point for standard perspective transformation.

Q.5) Explain briefly

i) 3D Scaling ii) 3D Transformation

Q.6) Write and explain the Warnock's algorithm for visible surface detection

Q.7) Explain depth buffer method for hidden surface detection

Q.8) Explain painters algorithm

Q.9) Explain Zbuffer algorithm

Q.10) Write and explain .can line method for hidden surface removal. How the amount of computation can be reduced in this method?

Q.11) Why we are required hidden surface removal algorithms.

Section D

Q.1) Write a short note on: shading model

Q.2) What are various techniques used for image processing

Q.3)Explain

i) Shadows ii) Transparency

Q.4) What is illumination? Explain any one illumination model.

Q.5) Write short note on Phong Shading model

Q.6) Describe the properties of B Spline curve

Q.7) What do you mean by spline? How it differ from Hermite curves

Q.8) What are Bezier curves? Explain the property of Bezier curves

Q.9) What do you mean by Interpolation? Explain method of interpolation.

Q.10) Differentiate between Bezier curves and B spline curves.

Q.11) How transparency modelling can be used to form real images.

Q.12) What is an image? How quality of an image can be improved by filtering?

Q.13) What operation can be done on image?

Q.14) What is the difference between Computer Graphics and image processing?