B. Tech Degree VI Semester Examination, April 2010

CS 603 COMPUTER GRAPHICS

(2002 Scheme)

Time : 3 Hours Maximum Marks : 100

I. (a) Explain about the various types of graphical input devices giving an example for each. (10)
(b) Explain the Brexaham's line drawing algorithm. (10)

OR

II. (a) Discuss about Raster Scan and Random scan systems. (10)
(b) Explain any one polygon filling algorithm. (10)

III. (a) What are various two dimensional transformations? Explain. (10)
(b) Explain any one algorithm for line clipping. (10)

OR

IV. (a) Explain window to view port transformation. (10)
(b) Explain any one algorithm for polygon clipping. (10)

V. (a) Explain (i) Cubic splines
(ii) Bezier curves (10)
(b) Discuss about octrees and BSP trees. (10)

OR

VI. (a) Explain the different methods to achieve realism in 3D graphics. (10)
(b) Explain B-spline curves. Differentiate between uniform and non-uniform B-spline curves. (10)

VII. Explain the following algorithm for visual surface detection.
(i) Depth buffer method
(ii) Ray casting method. (20)

OR

VIII. Explain the following algorithms for visual surface detection.
(i) Scan line algorithm
(ii) Area subdivision method
(iii) Octree method (20)

IX. (a) Explain phong shading and Goraud shading techniques. (10)
(b) Explain the various steps in animation. (10)

OR

X. Write notes on
(i) HSV color model
(ii) Morphing
(iii) Virtual Reality
(iv) Ray tracing. (20)

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