ECS504

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 110504

Roll No. | | | | | | | | | | |

B.Tech. (Semester-V)

SPL. THEORY EXAMINATION, 2014-15

COMPUTER GRAPHICS

Time : 2 Hours] *[Total Marks : 50*

Note: Attempt all questions.

1. Attempt any two parts of the following: 6×2=12

(a) Write a short notes on the following:

(i) Random and Raster scan display

(ii) Frame Buffer and Video controller

(b) Compare the computation done in Digital Differential Analyzer (DDA) Algorithm with Bresenham's Line Drawing algo.

(c) Explain the Mid Point Circle generating algorithm with an example.

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2. Attempt any two parts of the following: 6×2=12

(a) Differentiate between the Cohen Sutherland line clipping algorithm and Sutherland Hodgman clipping algo with example.

(b) Write a procedure for rotation and translation transformation. Derive reflection matrices for reflection about x-axis.

(c) Explain scan line algorithm with the help of suitable example.

3. Attempt any two parts of the following: 6×2=12

(a) Write Weiler Atherton polygon clipping algo and explain Z-buffer algo.

(b) What are the various back face detection algorithm? Write their advantages and disadvantages.

(c) Explain:

(i) Illumination methods

(ii) Rendering methods

(iii) Aliasing and anti aliasing

(iv) Composite transformation

4. Attempt any two parts of the following: 7×2=14

(a) Make comparison of Bezier curve, hermite and B-spline Algorithm for curve generation.

(b) Write short notes on any two of the following:

(i) 3-D Transformation

(ii) 3-D Projection

(iii) 3-D Clipping

(c) Explain parallel projection, perspective projection and depth curing projection for 3D display methods.

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