15405

M. Tech 3rd Semester Examination

Computer Graphics (NS)

CSE1-631/MT-301

Time : 3 Hours   **Max. Marks : 100**

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt one question from each section. Section E is compulsory. Each question carry equal marks.

SECTION - A

1. (a) Define computer Graphics and list its various application.

    (b) Define Nochol Lee line clipping algorithm   (10+10=20)

2. (a) Explain composite transformation translation for 2D transformation.

    (b) Mid-point ellipse generation algorithm.   (10+10=20)

SECTION - B

3. Explain the following algorithm for Hidden- Surface removal.

    (a) Explain Z buffer algorithm.

    (b) Scanline algorithm.   (20)

4. (a) Explain Depth sorting method.

    (b) What is window to view point mapping?   (10+10=20)

SECTION - C

5. What are the various shading model for polygons? Explain any two of them.   (20)

6. What is visible surface detection methods? Explain Depth buffer and A-buffer method.   (20)

SECTION - D

7. (a) Find the normalization transformation from window whose lower leftcorner is at (0,0) and upper right corner at (6,6) on to the normalized device screen so that aspect ratio are preserved.

    (b) Explain Weil Atherton Polygon clipping.   (10+10=20)

8. (a) Explain the three dimensional display methods.

    (b) Explain Raster scan systems.   (10+10=20)

SECTION - E

9. Explain following terms:

    (i) Explain Back face Detection method.

    (ii) Write notes on Diffuse Reflection.

    (iii) Write short notes on Application of Computer Graphics.

    (iv) What is splines?   (5×4=20)