CBCS SCHEME

USN | | | | | | | | | | 15CS62

Sixth Semester B.E. Degree Examination, Aug./Sept.2020
Computer Graphics and Visualization

Time: 3 hrs. Max. Marks: 80

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 a. List and explain any six application of computer graphics. **(06 Marks)**
b. Explain Refresh Cathod Ray Tube with diagram. **(10 Marks)**

OR

2 a. Develop Bresenhams line drawing algorithm. **(05 Marks)**
b. Write circle drawing algorithm. Given circle radius r = 10, solve the midpoint circle algorithm by determining positions along the circle octant in the first quadrant from x = 0 to x = y. **(11 Marks)**

Module-2

3 a. Classify the polygons and describe fill area primitives with diagrams. **(08 Marks)**
b. Describe about Inside-Outside Tests. **(08 Marks)**

OR

4 a. Explain General Scan Line Polygon fill algorithm. **(08 Marks)**
b. Describe any two of dimensional composite transformation
i) 2D translation ii) 2D fixed point scaling. **(08 Marks)**

Module-3

5 a. Describe 3D translation and scaling. **(08 Marks)**
b. Explain window to viewport transformation. **(08 Marks)**

OR

6 a. Discuss the Cohen Sutherland line clipping with program. **(10 Marks)**
b. Explain RGB color model. **(06 Marks)**

Module-4

7 a. Explain Orthogonal Projections. **(10 Marks)**
b. Discuss the OpenGL visibility Detection functions. **(06 Marks)**

OR

8 a. Explain the Perspective projections. **(06 Marks)**
b. Discuss the Depth buffer method. **(10 Marks)**

Module-5

9 a. Describe the Menus with program. **(06 Marks)**
b. What is the necessity of programming event driven input? Describe window events and keyboard event. **(10 Marks)**

OR

10 a. Explain Rotating square in Animating interactive programs. **(07 Marks)**
b. Write short notes on Bezier surfaces. **(09 Marks)**

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