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(Pages : 2)

Name.....

Reg. No.....

**THIRD SEMESTER M.Sc. DEGREE (REGULAR/SUPPLEMENTARY)
EXAMINATION, NOVEMBER 2023**

(CBCSS)

Computer Science

CSS 3E 01 A—COMPUTER GRAPHICS

(2019 Admission onwards)

Time : Three Hours

Maximum : 30 Weightage

Section A (Short Answer)*Answer any **four** questions.**Each question carries 2 weightage.*

1. Differentiate between Random scan and Raster Scan displays.
2. Outline the working of Floodfill algorithm.
3. Explain an approach for point clipping.
4. Define parallel projection.
5. What is a Spline ? Why is it important in Computer Graphics ?
6. What is GLUT ?
7. How will you specify 2D world reference frame in OpenGL ?

(4 × 2 = 8 weightage)

Section B (Short Essay)*Answer any **four** questions.**Each question carries 3 weightage.*

8. Summarize the working of colour CRT.
9. Explain texture mapping.
10. Summarize Z-buffer algorithm.
11. Summarize 3D viewing pipeline.

Turn over

12. Differentiate between parallel and perspective projections.
13. Explain 2D translation, rotation and scaling transformations.
14. Summarize the working principle of Midpoint Circle drawing algorithm.

(4 × 3 = 12 weightage)

Section C (Essay)

*Answer any **two** questions.*

Each question carries 5 weightage.

15. Summarize OpenGL line and Point functions. Write an OpenGL program implementing DDA algorithm.
16. Discuss Bezier curve and Cubic spline.
17. Derive transformation matrix for general 3D rotation.
18. Explain Cohen Sutherland Line clipping algorithm.

(2 × 5 = 10 weightage)