D 31118   (Pages : 2)   Name..

                                                             Reg. No.....................................

THIRD SEMESTER M.Sc. DEGREE (REGULAR/SUPPLEMENTARY) EXAMINATION, NOVEMBER 2022

(CBCSS)

Computer Science

CSS 3E 01 A—COMPUTER GRAPHICS

(2019 Admission onwards)

Time : Three Hours   Maximum : 30 Weightage

Section A

Answer any **four** *questions.*
Each question carries 2 *weightage.*

1. Compare LED and LCD display devices.

2. Write the significance of homogenous co-ordinates.

3. What is the purpose of rasterization ?

4. Define Projection.

5. What are the limitations of the floodfill algorithm ?

6. Write the function of display processor.

7. What is Clipping ?

$(4 \times 2 = 8 \text{ weightage})$

Section B

Answer any **four** *questions.*
Each question carries 3 *weightage.*

8. How can you represent a spline ?

9. Write the composition matrix for performing a rotation after performing translation of a point.

10. Compare Shearing and Reflection with an example.

11. Illustrate the given statement "Successive Translations are Additive" with an example.

Turn over

12. Perform 60 degree counter clockwise rotation of a point P (1, 5) about a pivot point (2, 3). Find new point P.

13. What is hidden surface removal ?

14. What is the significance of vanishing points in projection ?

$(4 \times 3 = 12$ weightage)

Section C

Answer any **two** *questions.*
Each question carries 5 *weightage.*

15. Write the Mid Point Circle drawing algorithm.

16. Describe any *two* methods for representing 3D objects.

17. Explain Hodgeman-polygon clipping algorithm.

18. Write the openGL program to draw a red colored rectangle.

$(2 \times 5 = 10$ weightage)