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V Semester B.Sc. Degree (CBCSS – OBE – Regular/Supplementary/ Improvement) Examination, November 2023 (2019 – 2021 Admissions) CORE COURSE IN COMPUTER SCIENCE 5B11CSC-C: Computer Graphics

Time: 3 Hours

Max. Marks: 40

PART – A (Short Answer)

Answer all questions.

 $(6 \times 1 = 6)$

- 1. List any two applications of computer graphics.
- 2. What is translation?
- 3. What is projection reference point?
- 4. What do you mean by scan conversion?
- 5. Give the initial decision parameter equation for Bresenhams line drawing algorithm.
- 6. What is bitmap?

PART – B (Short Essay)

Answer any 6 questions.

 $(6 \times 2 = 12)$

- 7. Explain flood fill algorithm.
- 8. What is polygon table?
- 9. Briefly explain 2D transformations.

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- 10. Explain text clipping.
- 11. Give the matrix representation for 2D scaling.
- 12. Define pixel and resolution.
- 13. Write a note on gray scale levels.
- 14. What are polygon meshes?

PART – C (Essay)

Answer any 4 questions.

 $(4 \times 3 = 12)$

- 15. Explain DDA line drawing algorithm.
- 16. Write a note on display devices.
- 17. Describe output primitives.
- 18. Briefly explain window to viewport transformation.
- 19. Explain parallel projection with an example.
- 20. Describe homogeneous coordinates.

PART – D (Long Essay)

Answer any 2 questions.

 $(2 \times 5 = 10)$

- 21. Explain 3D transformations.
- 22. Explain Cohen Sutherland algorithm with examples.
- 23. Describe composite transformations in detail.
- 24. Explain mid-point circle algorithm with examples.