**MAY 2022** **P/ID 17610/PCA3H**

Time : Three hours Maximum : 80 marks

PART A — (10 × 2 = 20 marks)

Answer any TEN questions.

1. What is the purpose of mouse?

2. Give the Cartesian slope-intercept equation for a straight line.

3. Define line function.

4. What is scaling factor in two dimensional transformations?

5. What are the conversions performed in sequence of transformations for window-to-viewport coordinate transformation?

6. What is called curve clipping?

7. Write down the transformation sequence of scaling in three-dimensional transformation.

8. What is Projection?

9. What is A-buffer?

10. Define BSP-tree.

11. What is convex hull?

12. What is called uniform B-spline?

PART B — ($5 \times 6 = 30$ marks)

Answer any FIVE questions

13. Describe about video display devices.

14. Give short note on line function.

15. Write short note on matrix representation and homogeneous co-ordinates.

16. Discuss about Nicholl Lee Nicholl line clippings.

17. Write short note on text clipping.

18. Give short note on back face detection method.

19. Describe about Bezier curves and surfaces.

PART C — ($3 \times 10 = 30$ marks)

Answer any THREE questions

20. Explain line drawing algorithm.

21. Illustrate Window-to-viewport coordinate transformation.

22. Elaborate any two polygon clipping algorithms.

23. Give a detailed note on perspective projection.

24. Elaborate on Spline representation.

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