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COMPUTER GRAPHICS

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Time : Three hours

Maximum : 100 marks

PART A — (6 × 5 = 30 marks)

Answer any SIX questions.

1. Define CG and give its application.
2. Distinguish between line, straight line and points in CG.
3. Explain the normalized device coordinates.
4. Write the line style primitives.
5. Explain the display file structures.
6. Give the polygon representation.
7. Write the 2D transformation matrix.
8. Explain concatenation with examples.
9. Explain mid point sub-division.
10. Define Viewport, Windowing, Window and clipping.

PART B — (4 × 10 = 40 marks)

Answer any FOUR questions.

11. Write the graphics application.
12. Explain the DDA algorithm.
13. Explain the display file interpreter.
14. Explain the concept of filling with pattern.
15. Explain the rotation about arbitrary point.
16. Explain line clipping algorithm.

PART C — (2 × 15 = 30 marks)

Answer any TWO questions.

17. Explain the vector generation algorithm.
18. Write the transformation routines and explain in detail.
19. Discuss the polygon filling concepts.