

Odd Semester, 2020

(Held in March, 2021)

COMPUTER SCIENCE

(Honours)

(CS-502AT)

(Computer Graphics)

Marks : 38

Time : 2 hours

*The figures in the margin indicate full marks
for the questions*

Answer **one** question from each Unit

UNIT—I

1. Explain the following : 4+4=8
 (a) Virtual-reality system
 (b) Raster scan system
2. Write short notes on the following : 4+4=8
 (a) 3-D viewing device technology
 (b) Color CRT monitor

UNIT—II

3. Explain the Bresenham's line drawing algorithm. 8
4. Explain scan-line polygon fill algorithm. 8

UNIT—III

5. Explain, with examples, three basic transformations. 8
6. Find the transformation matrix for general pivot point scaling. 8

UNIT—IV

7. Describe the Liang-Barsky line clipping algorithm. 5
8. Explain one method to clip a line when the clip window is an ellipse. 5

UNIT—V

9. Use Hermite spline algorithm to find five-pixel coordinates to draw a curve passing through (5, 5) and (10, 10). Assume required parameters. 9
10. Suggest one method to improve Bezier curve drawing algorithm. 9

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