2022

(February)

COMPUTER SCIENCE

(Honours)

(Computer Graphics)

(Theory)

[CS–502AT]

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 working principles of raster scan systems. 8

2. Write a short note on four input devices. 8

UNIT—II

3. Compare any two fill-area algorithms. 8

4. Explain different issues involved to maintain geometric properties of a displayed object. 8

UNIT—III

5. Find the 2-D transformation matrix for rotation of a point $p(x, y)$ about the point (0, 0) by an angle in the clockwise direction. 8

6. Find transformation matrix for shear transformation. 8

UNIT—IV

7. Compare any two clipping algorithms. 5

8. Explain the concept of window and viewport with respect to 2-D viewing in computer graphics. 5

UNIT—V

9. Calculate 2-D coordinate points to draw a curve passing through (10, 10), (20, 30), (25, 40) and (40, 10) using either Bezier curve algorithm or Hermite spline algorithm. Assume and specify suitable required parameters. 9

10. Write short notes on parallel projection and perspective projection. 9

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