# COMPUTER GRAPHICS

Paper–PE–CS–A404A

Time Allowed : 3 Hours]          [Maximum Marks : 75

**Note** : Attempt **five** questions in all, selecting at least **one** question from each Unit. All questions carry equal marks.

## UNIT–I

1. Write the Bresenham's circle drawing algorithm and by making use of Bresenham's algorithm find the coordinates of the pixels that lie on a line segment having the endpoints (3, 4) and (6, 9).          15

2. Explain the following:

   (a)  Working of Light pen

   (b)  Beam Penetration CRT.          15

## UNIT–II

3. Explain Port mapping and Transformation with example.          15

4. Explain viewing transformation Pipeline with appropriate example.          15

## UNIT–III

5. Write Liang-Barsky line clipping algorithm. Compare it with C-S line clipping algorithm.          15

6. (a) Differentiate between Curve clipping and Text clipping.

   (b) Write a short note on Vanishing point of an Image and how do you find Vanishing point of an Image ?          15

## UNIT–IV

7. (a) What is the difference between interpolation and approximation splines? Explain.

   (b) Explain Beizer curves and surfaces and its properties.          15

8. Discuss Painter's Algorithm for Visibility problem of distant object in an Image.          15