1. Answer question 1 and any FOUR from questions 2 to 7.
2. Parts of the same question should be answered together and in the same sequence.

NOTE:
Time: 3 Hours Total Marks: 100

1. a) Describe Hypertext and Hypermedia with examples.
   b) What is isometric projection?
   c) What are the main flaws of DDA line algorithm?
   d) Explain text clipping in short.
   e) Compare Phong shading with Gouraud shading model.
   f) What is antialiasing?
   g) What is Synchronized Multimedia Integration Language?

(7x4)

2. a) What are Cubic Hermite Splines? Write its main characteristics.
   b) Compare LCD, LED and TFT display technologies.

(9+9)

3. a) Why in Bezier curve, all control points provides global control over the entire shape of the curve?
   b) Magnify a triangle A (0,0), B(1,1), C(5,2) to twice to its size keeping C fixed.

(9+9)

4. a) Fit a line from (20,10) to (18,30) using Bresenham’s line algorithm.
   b) Explain the functioning and usages of joysticks.

(9+9)

5. a) Explain how to convert a RGB image to JPEG image?
   b) Clip a line P1(4,12) to P2(8,8) using Cohen Sutherland algorithm if window is from (5,5) to (9,9).

(9+9)

6. a) What are the principal vanishing points for the standard perspective projection?
   b) What is the difference in Knots and control points with respect to Non-uniform rational basis spline (NURBS). Write the general form of NURBS using basis function.
   c) What do you mean by normalized device coordinate system?

(6+6+6)

7. a) Discuss the functioning of a flatbed Scanner. What do you mean by ‘ppi’?
   b) Using Mid Point circle algorithm, find out the pixels of circles if centre is at (0,0) and radius is 10. Show all intermediate steps.

(9+9)