Duration: 3 Hrs

Total Marks : 80

N.B.: 1) Question No. 1 is Compulsory.

2) Attempt any three questions, from remaining five questions.

3) Figure to the right indicates full marks

Q.1.	A)	Compare Raster and Random Scan Techniques .	5
	B)	What are the disadvantages of DDA algorithm?	5
	C)	Explain inside outside test used in filling algorithm.	5
	D)	What are Aliasing & Antialiasing? Explain any one Antialiasing method.	5
Q.2.	A)	Explain Liang Barsky line clipping algorithm. Apply this algorithm to the line with coordinates (35,60) and (80,25) against the window (Xmin, Ymin) = (10,10) and (Xmax ,Ymax) =(50,50)	10
	B)	Derive the matrix for 2D rotation about an arbitrary point.	10
Q.3.	A)	Explain the Cohen-Sutherland line clipping algorithm with suitable example.	10
	B)	What is meant by Parallel and Perspective Projections? Derive matrix for Perspective projection.	10
Q.4.	A)	Specify midpoint circle algorithm. using the same ,plot the circle whose radius is 8 units and center is at (10,10)	10
	B)	Explain any one Polygon clipping algorithm	10
Q.5.	A)	Explain Bezier curve with its properties and construct	10
	B)	Explain Gouraud and Phong Shading along with their advantages and disadvantages.	10

Q.6.   Write Short Note on (**Any four**)   20

      (a) Depth Buffer method

      (b) Halftone and Dithering techniques

      (c) Fractals

      (d) Koch Curve

      (e) Area Subdivision method

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