Q.P.Code: 21849

[3 Hours]   [Total Marks: 80]

Please check whether you have got the right question paper.

N.B: (1) Question No.1 is compulsory
        (2) Attempt any three of remaining five questions
        (3) Assume any suitable data if necessary and justify the same

Q 1	a)	What is aliasing and antialiasing?	5
	b)	Write the flood fill approach for 8 connected method.	5
	c)	Explain the concept of halftoning with example.	5
	d)	Prove that two successive rotations are additive	5

Q 2	a)	Plot the points for midpoint ellipse with rx=3 and ry=5 for region 1.	10
	b)	Explain the steps for 2D rotation about arbitrary point.	10

Q 3	a)	Explain Liang Barsky line clipping algorithm. Apply the algorithm to the line with coordinates (30,60) and (60,25) against the window(xmin.ymin)=(10,10) and (xmax,ymax)=(50,50).	10
	b)	Explain Weiler Artherton polygon clipping algorithm with suitable example.	10

Q 4	a)	What is window and viewport? Derive the matrix for viewport transformation.	10
	b)	Explain what is meant by Bezier curve? State the various properties of Bezier curve.	10

Q 5	a)	What is meant by parallel and perspective projection? Derive matrix for perspective projection.	10
	b)	Explain Z Buffer algorithm for hidden surface removal.	10

Q 6		Write short notes on(any two)	
	a)	Koch curve	
	b)	Sweep representation	20
	c)	Gouraud and phong shading	
	d)	Inside Outside test	

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