Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI • EXAMINATION – WINTER 2013

•		ode: 160/03 Date: 02-12-2013	
Γim		Name: Computer Graphics :30 pm to 05:00 pm Total Marks: 70	
	1. 2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a)	List various techniques used for display graphics in computer. Explain CRT display with the help of diagram.	07
	(b)	List and explain various 2D transformations.	07
Q.2	(a)	List and explain various character generation techniques.	07
	(b)	1 0	07
		OR	
	(b)	Discuss mid point circle drawing algorithm with example.	07
Q.3	(a)	Compare DDA line drawing with bresenham's line drawing algorithm.	07
	(b)	Explain YIQ and CMY color models.	07
		OR	
Q.3	(a)	What is polygon clipping? Explain Sutherland Hodgeman polygon clipping algorithm with the help of example.	07
	(b)	What is view port? Explain window to viewport transformation.	07
Q.4	(a)	Explain parallel and perspective projection with the help of diagram.	07
	(b)	Write a short note on Hidden line removal.	07
		OR	
Q.4	(a)	Derive equation for 3-D scaling, 3-D rotation and 3-D translation.	07
	(b)	Explain Cohen Sutherland line clipping algorithm with example.	07
Q.5		Write a note on following (Any four)	14
	(i)	Scan line algorithm	
	(ii)	Beam penetration and shadow mask technique.	
	(iii)	Shearing and reflection	
	(iv)	Raster scan and random scan	
	(v)	Back face detection	
