Seat No.:	Enrolment No
Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER - VI EXAMINATION - WINTER 2015

Date: 08/12/2015

Subj	ect (Code: 160703 Date: 08/12/ 20	015
•	e:2:3	Name: Computer Graphics 30pm to 5:00pm Total Marks: 7	70
HISTI U	1. 2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a) (b)	persistence, horizontal retrace, and scan – conversion.	07 07
Q.2	(a) (b)	 (i) 4 - Connected fill and 8 - Connected fill (ii) Raster - scan and Random scan Explain the concept of two - dimensional viewing pipeline. And obtain the matrix transformation that converts the world coordinates in to viewing coordinates. 	03 04 07
	(b)	OR Obtain the matrix transformations for (i) General pivot – point rotation (ii) Reflection about the line y = x in 2 – dimensions.	03 04
Q.3	(a) (b)	11 6 6	07 04 03
Q.3	(a)	_	04 03
	(b)	Write a comparative detailed note on parallel and perspective projections.	07
Q.4	(a) (b)	surfaces are represented on computer screen. Calculate the positions of points, using the mid – point circle algorithm, on the circle centered at the origin with radius 10 starting with $(0,10)$ up to the line $x=y$.	07 07
Q.4	(a) (b)	with $z - axis$.	07 07
Q.5	(a) (b)	secular reflection. Obtain an illumination model representing all these.	07

OR

Q.5	(a)	Explain the approaches of surface detections: Back -Face and	07
		Z - Buffer.	
	(b)	Explain the RGB and CMY color models.	07
