Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

B. E. - SEMESTER – VII • EXAMINATION – WINTER 2012

Subject code: 170303 Subject Name: Medical Imaging Technology Time: 10.30 am - 01.00 pm		code: 170303 Date: 01/01/2013	
		0.30 am - 01.00 pm Total Marks: 70	
Insti	1. 2.	ions: Attempt any five questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a)	Explain Interaction of X-ray with matter in detail.	07
	(b)	Explain Principle of CT Scan. Explain various generation of it.	07
Q.2	(a)	Define Relaxation process and Explain A-Mode scan in detail.	07
	(b)	Explain Gantry as principle component of CT scan system.	07
		OR	
	(b)	Define Pixel and Voxel and Explain Image Reconstruction technique of CT Scan system.	07
Q.3	(a)	Explain Xeroradiography procedure in detail.	07
	(b)	Explain pulse wave Doppler for blood flow measurement.	07
		OR	
Q.3	(a)	Explain Fluoroscopy in detail.	07
	(b)	Explain color Doppler flow imaging.	07
Q.4	(a)	Write a short note on Rectilinear Scanner.	07
	(b)	Write a short note on SPECT.	07
		OR	
Q.4	(a)	Write a short note on PET Scan.	07
Q.4	(b)	State different types of Coil used in MRI and explain it.	07
Q.5	(a)	Explain in detail Principle of MRI and explain Larmor frequency.	07
	(b)	State and explain Clinical applications of Thermography.	07
		OR	
Q.5	(a)	Explain in detail basic Block diagram of MRI system.	07
	(b)	Explain Image Intensifier and Intensifying screen for X-ray.	07
