

GUJARAT TECHNOLOGICAL UNIVERSITY
BE SEM-VII Examination-Nov/Dec.-2011

Subject code: 170303**Date: 24/11/2011****Subject Name: Medical Imaging Technology****Time: 10.30 am-01.00 pm****Total marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Explain interaction between x-ray and matter. **07**
(b) Explain factors that affect x-ray Emission spectrum. **07**

- Q.2** (a) Write a short note on Xeroradiography. **07**
(b) Write a short note on fluoroscopy. **07**

OR

- (b) Explain mammographic Equipments. **07**

- Q.3** (a) Explain Operational modes of Computed Tomography. **07**
(b) Give difference between X-ray and CT Scan. **05**
(c) What is CT Number? What is the CT number of water? **02**

OR

- Q.3** (a) Explain iterative reconstruction method to obtain attenuation coefficients from measured intensity data in Computed Tomography. **07**
(b) Explain subsystems of Gantry. **07**

- Q.4** (a) Explain A-mode scan of Ultrasonic Imaging system. **07**
(b) Write a short note on color Doppler flow imaging. **07**

OR

- Q.4** (a) Explain M-mode scan of Ultrasonic Imaging system. **07**
(b) Explain Biological Effects of Ultrasound. **07**

- Q.5** (a) Explain Single Photon Emission Computed Tomography. **07**
(b) Write a short note on MRI Coils. **07**

OR

- Q.5** (a) Write a short note on Positron Emission Tomography. **07**
(b) Write a short note on Liquid crystal thermography and microwave thermography. **07**
