

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-VII • EXAMINATION – WINTER • 2014

Subject Code: 170303**Date: 04-12-2014****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)** What is advantage of CT over X ray? Explain different Operation modes of CT Scan Machine. **07**
- (b)** Explain Different Components of X ray Machine. **07**
- Q.2 (a)** Explain Different Biological Effects of Ionizing Radiation. **07**
- (b)** Draw and Explain basic components of Fluoroscopy. **07**
- OR**
- (b)** Short Note: Xeroradiography **07**
- Q.3 (a)** Explain Piezoelectric effect & Ultrasonic Transducers in detail. **07**
- (b)** Enlist different Modes of Ultrasound & explain A mode of Ultrasound with necessary Block Diagram. **07**
- OR**
- Q.3 (a)** Explain color Doppler flow imaging in detail. **07**
- (b)** Enlist different Modes of Ultrasound & explain B mode of Ultrasound with necessary Block Diagram. **07**
- Q.4 (a)** Write a Short Note on Infrared Thermography **07**
- (b)** Write a short Note on Nuclear Radiation Detectors. **07**
- OR**
- Q.4 (a)** Short Note: Gamma Camera **07**
- (b)** Explain Interaction of Nuclear Particles with Matter. **07**
- Q.5 (a)** Short Note: LST **07**
- (b)** Explain Basic Principle and Components of Angio interventional Radiology. **07**
- OR**
- Q.5 (a)** Short Note: Biological Effects of Ultrasound. **07**
- (b)** Short Note: Positron Emission Tomography **07**
