

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-VI • EXAMINATION – WINTER 2013

Subject Code: 160301**Date: 27-11-2013****Subject Name: Diagnostic Instrumentation****Time: 02:30 pm to 05:00 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) Give the block diagram description of Electroencephalograph. **07**
(b) Explain Block diagram of ECG machine and Draw right leg drive circuit. **07**

- Q.2** (a) Write a short note on Tonometer. **07**
(b) Explain ultrasonic blood flow meter. **07**

OR

- (b) Explain construction and working principle of Electromagnetic Blood flow meter. **07**

- Q.3** (a) Give brief note about following terms. **08**
1. Bronchoscopy
2. Laparoscopy
3. Cystoscopy
4. cholecptography
(b) Explain Pure tone Audiometer and Speech audiometer. **06**

OR

- Q.3** (a) Explain block diagram of single channel telemetry system and Give clinical significance of Biotelemetry. **08**
(b) What is spirometer? Explain Basic spirometer. **06**

- Q.4** (a) Explain Diseases related to Kidney and Urinary system and their diagnosis. **07**
(b) Explain Oscillometric blood pressure measurement technique. **07**

OR

- Q.4** (a) Write a short note on Fluoroscopy and Image Intensifier. **08**
Q.4 (b) Explain measurement principles of MRI and PET SCAN. **06**

- Q.5** (a) Explain any method of monitoring Foetal Heart rate. **07**
(b) Explain cardiovascular diagnosis techniques Trade mill and Holter monitoring. **07**

OR

- Q.5** (a) Give brief introduction about barium meal studies and capsule Endoscopy. **07**
(b) Explain various Auditory disorders and Diagnosis. **07**
