

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-VI • EXAMINATION – SUMMER • 2014

Subject Code: 160301**Date: 19-05-2014****Subject Name: Diagnostic Instrumentation****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 the use and application of tread mill test and holter monitoring in cardiovascular diagnosis. **07**
(b) Explain the various volumes and capacities to be measured in spirometry. **07**
- Q.2** (a) What are the different techniques are available for G I track diagnosis? Explain sigmoidoscopy. **07**
(b) Explain the principle and working of pyelography. **07**
- OR**
- (b) List the diseases related to kidney and urinary system. Explain diagnosis technique for any one disease related to kidney. **07**
- Q.3** (a) What are the various systems available for nervous system diagnosis? Explain the EEG technique for nervous system diagnosis. **07**
(b) With block diagram explain the foetal monitoring system **07**
- OR**
- Q.3** (a) Explain sigmoidoscopy and its medical applications. **07**
(b) What are the types of ECG systems? Explain the 12-leads ECG system. **07**
- Q.4** (a) What are the various bioelectrical signals are used for analysis of ocular disorder? Explain applications of refractometry in ocular diagnosis. **07**
(b) Discuss the various types of audiometers and explain the parameters to be measured in audiometry. **07**
- OR**
- Q.4** (a) Explain the system for placement of electrode in EEG acquisition. With block diagram explain the multichannel EEG system. **07**
(b) List the types of blood flow meter and discuss any one in detail. **07**
- Q.5** (a) Discuss the use of endoscopy in gynecological diagnosis. **07**
(b) What is biotelemetry? Discuss the significance of biotelemetry in diagnostic applications. **07**
- OR**
- Q.5** (a) Explain the block diagram and applications of fluoroscopy. **07**
(b) Explain principle and working of echoencephalography. **07**
