

GUJARAT TECHNOLOGICAL UNIVERSITY
BE SEMESTER VI EXAMINATION – WINTER 2014

Subject Code: 160301**Date: 26/11/ 2014****Subject Name: Diagnostic Instrumentation****Time: 02.30pm – 05.00pm****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)** Write a Short Note on Phonocardiography. **07**
- (b)** What is audiogram? Draw the bekesy audiometer diagram & explain in detail. **07**
- Q.2 (a)** Explain the principle of ultrasonic Doppler shift method for blood flow measurement. **07**
- (b)** Explain ECG Machine with Neat Block diagram. **07**
- OR**
- (b)** What is EEG? Explain Multichannel EEG recording system in detail with necessary diagram. **07**
- Q.3 (a)** Explain different components of Endoscopes. **07**
- (b)** Explain A mode of Ultrasound with necessary Block Diagram. **07**
- OR**
- Q.3 (a)** Explain sigmoidoscopy and its medical applications. **07**
- (b)** Explain M mode of Ultrasound with necessary Block Diagram. **07**
- Q.4 (a)** Define X-rays & Discuss the properties of x-rays. Explain the internal construction of rotating anode type x-ray tube with suitable diagram. **07**
- (b)** Write a Technical Note on Auto Refractometer. **07**
- OR**
- Q.4 (a)** Discuss the importance of biotelemetry system in medical diagnosis with its basic block diagram. **07**
- (b)** Enlist different types of Ocular Disorders & Explain Tonometry in detail. **07**
- Q.5 (a)** Enlist Different techniques for BP measurement & explain any one method for Direct BP measurement. **07**
- (b)** Short Note: Wedge Spirometer. **07**
- OR**
- Q.5 (a)** Explain Various Techniques use for Heart Rate Measurement. **07**
- (b)** Explain Following. **04**
1. Cartography & Halter Monitoring
 2. Capsule Endoscopy.
