

GUJARAT TECHNOLOGICAL UNIVERSITY
BE – SEMESTER – VI (OLD).EXAMINATION – WINTER 2016

Subject Code: 160301**Date: 26/10/2016****Subject Name: Diagnostic Instrumentation****Time: 10:30 AM to 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 instrumentation of Echocardiograph with block diagram. **07**
(b) Compare the advantages and risks of PET scan and CT scan imaging techniques. **07**
- Q.2** (a) Explain the construction and applications of Image Intensifier in X-ray machine. **07**
(b) Draw and explain the block diagram of electronic stethoscope. **07**
- OR**
- (b) Draw and explain the block diagram of Electro-sphygmomanometer. **07**
- Q.3** (a) What is Echoencephalograph? Describe the instrumentation used for measurement. **07**
(b) List diseases which can be diagnosed by treadmill test. Explain any two protocols for treadmill test. **07**
- OR**
- Q.3** (a) Enlist the technical specifications for foetal ultrasound probe. What precautions should be considered before application of probes? **07**
(b) Explain the instrumentation for holter monitoring. Name any three automated analysis technics for holter monitoring data. **07**
- Q.4** (a) Explain various modes of Doppler machine and their applications for diagnosis of cardiac anomalies. **07**
(b) Define telemedicine. Draw the generalized block diagram for biotelemetry. **07**
- OR**
- Q.4** (a) Enlist any five GI tract disorders and suggest diagnostic technique to each of the disorder. **07**
(b) Write a technical note on Electronystagmogram (ENG). **07**
- Q.5** (a) Write a technical note on split lamp microscope. **07**
(b) Which diagnostic test is referred for asthmatic patient? Describe the instrumentation in detail. **07**
- OR**
- Q.5** (a) Define nephralgia. Describe the diagnostic instrumentation for nephralgia. **07**
(b) What instrumentation is used for deaf mutism patient? Explain the block diagram of AEP measurement. **07**
