



Reg. No. :

Name :

**Sixth Semester B.Tech. Degree Examination, May 2014
(2008 Scheme)**

08.606 (Elective – II) (b) : BIOMEDICAL INSTRUMENTATION (E)

Time : 3 Hours

Max. Marks : 100

PART – A

Answer **all** questions.

1. Define the terms depolarization, repolarization and after potential.
2. What are the types of electrodes used in EEG recording ?
3. Describe any two methods for temperature measurements.
4. Explain any indirect method for measuring blood flow.
5. Write a note on Einthoven Triangle.
6. Draw the 10-20 electrode system in EEG recording.
7. Why an audio system is available in most EMG systems, unlike ECG and EEG ?
8. Explain the principle of X rays.
9. What are the advantages of ultrasound scanning ?
10. Write a note on shock hazards. **(10×4=40 Marks)**

PART – B

Answer **any one** question from **each** Module. **Each** question carries **20** marks.

Module – I

11. a) Explain the ECG electrodes. What are the investigations can be obtained from ECG waveforms ?
b) Describe any method for measurement of respiration rate.
12. a) Explain in detail one direct and one indirect method of BP measurement.
b) Write a note on Korotkoff sounds.

P.T.O.

**Module – II**

13. With the help of block diagram, explain the working of computer aided ECG machine.
14. What is a bedside monitor ? Draw the detailed block diagram and explain.

Module – III

15. a) Draw block diagram and explain the working of ultrasound scanning.
b) Write down the principle of MRI scanning.
 16. a) Describe the working of cardiac pace makers. What is a demand pacemaker ?
b) How a defibrillator works in emergency for a cardiac patient ?
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