



Reg. No. : .....

Name : .....

**Sixth Semester B.Tech. Degree Examination, March 2017  
(2008 Scheme)**

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

Time : 3 Hours

Max. Marks : 100

**PART – A**

Answer **all** questions.

1. Explain micro electrodes with a neat figure.
2. Explain measurement of blood pressure using sphygmomanometer.
3. Give the waveform showing volume ranges of the intact ventilatory system and explain.
4. Write a note on ultrasonic blood flow meters.
5. What are the different types of electrodes used in biomedical instrumentation ?
6. Give the block diagram of EMG recorder.
7. Explain 10 – 20 electrode system in EEG recording.
8. Give the principle of MRI.
9. Differentiate between macroshock and microshock.
10. Explain any one defibrillator. (10×4=40 Marks)

**PART – B**

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

**Module – I**

11. a) Explain in detail the electrochemical activity of a cell with neat diagram.  
b) How is action potential propagated in a cell ?



12. a) Explain the electrical activity of heart with a neat diagram.
- b) Explain any two transducer for temperature measurement.

**Module – II**

13. With a neat block diagram explain an ECG machine.
14. Explain in detail a bedside monitor with the help of block diagram.

**Module – III**

15. Explain the principle and types of ultrasound imaging.
  16. With a neat diagram explain hemodialysis machine.
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