



Reg. No. :

Name :

Eighth Semester B.Tech. Degree Examination, April 2014
(2008 Scheme)
08.816 : BIOMEDICAL ENGINEERING (T)

Time : 3 Hours

Max. Marks : 100

PART – A



Answer **all** questions. **Each** question carries **4** marks.

1. Explain the circulatory system of human body.
2. What are the different pacing modes used with pacemakers ?
3. List the clinical applications of EEG.
4. Explain the necessity of input guarding.
5. With schematic explain neuronal communication.
6. Define pH. What is the normal pH value of arterial blood ?
7. What are the main components of a bed-side monitor ?
8. Explain the principle of PET.
9. List the applications of X-rays in medicine.
10. Write down the system components in computer tomography. **(10x4=40 Marks)**



PART – B

Answer **any two** questions from **each** Module. **Each** question carries **10** marks.

MODULE – I

11. With block schematic explain the working of electromagnetic blood flow meter.
12. With schematic describe any three types of transducers used in biomedical field.
13. With block diagram explain the principle of operation of a demand pacemaker. **(2×10=20 Marks)**

MODULE – II

14. Draw the block diagram of an EEG machine and describe the function of each block.
15. With schematic explain the principle of operation of a Heart-Lung machine.
16. With block diagram explain the working of a flame photometer. **(2×10=20 Marks)**

MODULE – III

17. With schematic explain the components of a biotelemetry system.
18. a) What are the biological effects of NMR imaging ?
b) With schematic explain M-scan.
19. With block diagram explain the working of X-ray machine. **(2×10=20 Marks)**