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Reg. No. :

Name :

**Eighth Semester B.Tech. Degree Examination, November 2015
(2008 Scheme)
08.816 : BIOMEDICAL ENGINEERING (T)**

Time : 3 Hours

Max. Marks : 100

PART – A



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

1. With neat sketch explain the theory of electrode – skin interface.
2. Define systolic and diastolic blood pressure. Indicate their average values.
3. State and explain all or nothing law.
4. What are the desirable characteristics of transducers used for biomedical application ?
5. Distinguish between central nervous system and peripheral nervous system.
6. Name the organs involved in the process of respiration and write down their function.
7. Differentiate between microshock and macroshock.
8. List the advantages and disadvantages of NMR imaging.
9. Write down the applications of X-rays in medicine.
10. Explain the principle of computed tomography.

(10×4=40 Marks)

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PART – B

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

Module – I

11. With block diagram explain a cardiac pacemaker.
12. Explain the principle of ultrasonic blood flow meter.
13. Draw the block diagram of ECG machine and describe its operation.
(2×10=20 Marks)

Module – II

14. What is the use of auto analyser ? With block diagram explain the working of auto analyzer.
15. With block diagram describe the operation of EEG machine.
16. Illustrate the procedure of hemodialysis with suitable schematic diagram.
(2×10=20 Marks)

Module – III

17. Explain in detail, the applications of telemetry in patient care.
 18. With block schematic, explain a pulse echo ultrasonic imaging system.
 19. What is PET ? Explain its principle of operation and mention its advantages.
(2×10=20 Marks)
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