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**A – 2370**

Reg. No. : .....

Name : .....

**Eighth Semester B.Tech. Degree Examination, April 2016  
(2008 Scheme)  
08.816 : BIOMEDICAL ENGINEERING (T)**

Time : 3 Hours

Max. Marks : 100

**PART – A**

Answer **all** questions :

**(10×4=40 Marks)**

1. Draw and explain heart and circulatory system.
2. What are the applications of ECG signal ?
3. Explain how the blood pressure is measured.
4. What is biometric amplifiers ?
5. Write the short notes on Electrical safety.
6. What are the risks involved in CT imaging ?
7. What are micro and macro hazard ?
8. What is the limitation of X-ray ?
9. What are the components of Biotelemetry system ?
10. What is M-scan used in ultrasonic imaging ?

**P.T.O.**



PART – B

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

MODULE – 1

11. Explain the theory of Electrode skin interface.
12. Write the short notes on (a) ECG (b) EEG and (c) EMG signals.
13. With the block diagram, explain the function of pacemaker.

MODULE – 2

14. Describe (a) Hemodialysis machine (b) Heart-lung machine.
15. Explain how the action potential are propagated through nerves. (2 times)
16. Explain how electromagnetic interference affects the performance of medical electronic equipment.

MODULE – 3

17. Explain with the block diagram how the Computed Tomography images are captured ?
  18. Compare and contrast : CT, MRI and PET scan.
  19. Explain the application of telemetry in patient care.
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