



C09-AEI-603

**3716**

**BOARD DIPLOMA EXAMINATION, (C-09)**  
**OCT/NOV—2013**  
**DAEI—SIXTH SEMESTER EXAMINATION**  
**BIOMEDICAL INSTRUMENTATION**

Time : 3 hours ]

[ Total Marks : 80

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**PART—A**

3×10=30

**Instructions** : (1) Answer **all** questions.  
(2) Each question carries **three** marks.  
(3) Answer should be brief and straight to the point and shall not exceed *five* simple sentences.

1. State the need of biopotential electrodes.
2. List the diagnostic medical equipments.
3. List the applications of EEG.
4. State the principle of direct pressure measurement.
5. Classify different types of pacemaker.
6. State the need of defibrillators.
7. State the production of X-rays.
8. Describe the principle of MRI.
9. State the principle of Tele-medicine.
10. List the effects of micro and macro shocks. 1½+1½

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**PART—B**

10×5=50

- Instructions :** (1) Answer *any five* questions.  
(2) Each question carries **ten** marks.  
(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. Describe the characteristics of human cell.
12. Describe the cardiovascular system.
13. Draw and explain the building blocks of ECG (Electrocardiograph).
14. Explain the working principle of electromagnetic blood flow meter with diagram.
15. Describe the working principle of CT scanner.
16. Explain the description and principle of drop foot simulator.
17. (a) List the computer applications in medicine. 5  
(b) Mention the preventive methods to reduce shock hazards. 5
18. Explain the following : 5+5  
(a) Electrical hand and its applications  
(b) Interaction of X-ray with matter, Compton effect

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