



C16-AEI-502

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BOARD DIPLOMA EXAMINATION, (C-16)

OCT/NOV—2018

DAEI—FIFTH SEMESTER EXAMINATION

BIO-MEDICAL INSTRUMENTATION

Time : 3 hours]

[Total Marks : 80

PART—A

3×10=30

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

1. Define resting five potential.
2. List the electrodes used for EEG measurement.
3. List different types of diagnostic medical equipment.
4. Mention the frequency and amplitude of EMG.
5. Distinguish between direct and indirect methods of blood pressure measurement.
6. List the types of direct blood pressure measurement.
7. List the types of packing mode.
8. State the importance of dialysis.

- * 9. List the advantages of CAT imaging over X-ray imaging.
10. List the preventive measures to reduce shock hazards.

PART—B

10×5=50

Instructions : (1) Answer *any five* questions.

(2) Each question carries **ten** marks.

(3) The answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. (a) Explain the bio-electrical potentials associated with muscle activity.
(b) List different types of electrode used for EMG.
12. Draw the electrocardiogram indicate its amplitude and duration and state their importance.
13. Explain the working principle of an EEG machine with diagrams.
14. Explain the principle of operation of LASER Doppler blood flow meter with diagram.
15. Explain the working of ultrasonic blood flow meter based on Doppler type with diagram.
16. Draw the block diagram of ventricular synchronous demand pacemaker and explain its operation.
- * 17. Explain the working of MRI with block diagram.
18. Explain patient monitoring in ICU and draw the system of management.
