

Q.24 Explain EEG machine with diagram.

Q.25 Write a note on the following.

- 1) Ambulatory Monitoring System
- 2) Role of Biomedical engineer in healthcare system

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Roll No. ....

**3rd Sem / Branch : Medical Electronics**  
**Sub.: Bio-Medical Instrumentation - I**

Time : 3Hrs.

M.M. : 60

**SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 Needle Electrodes generally used in measurement

- |        |                      |
|--------|----------------------|
| a) ECG | b) EEG               |
| c) EMG | d) None of the above |

Q.2 Normal blood glucose level in fasting should be

- |                  |                      |
|------------------|----------------------|
| a) 90-140 mg/dl  | b) 50-80 mg/dl       |
| c) 140-200 mg/dl | d) None of the above |

Q.3 EEG measurement is used for

- |           |            |
|-----------|------------|
| a) Heart  | b) Brain   |
| c) Kidney | d) Muscles |

Q.4 Relaxation phase of Heart Chambers is called

- |                 |              |
|-----------------|--------------|
| a) Fibrillation | b) Platelets |
| c) Systole      | d) Diastole  |

Q.5 The blood vessel that carry the blood away from the heart

- a) Artery                      b) Vein
- c) Aorta                      d) SANode

Q.6 Reference Electrode in EEG measurement is placed on

- a) Right Arm                      b) Chest
- c) Forehead                      d) Right Leg

### SECTION-B

**Note:** Objective/Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Bipolar Electrode.

Q.8 Expand Cns.

Q.9 Expand NIBP.

Q.10 ECG Lead.

Q.11 Normal sPo<sub>2</sub>% range.

Q.12 Bundle of HIS.

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### SECTION-C

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 Explain Muscular System with types and functions.

Q.14 Write a note on Blood Glucose measurement.

Q.15 Discuss different EEG Electrodes used in EEG measurement.

Q.16 Explain Autoclave with its descriptions.

Q.17 What do you mean by radiant warmer. Explain it.

Q.18 Discuss different functions performed by Central nervous system.

Q.19 Explain the different phases of a cardiac cycle with diagram.

Q.20 Write a short note on blood pressure measurement by indirect method.

Q.21 Explain Lithotripter with diagram.

Q.22 What is ECG Simulator. Discuss its importance.

### SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Explain ECG machine in details with diagram.

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