

### SECTION-D

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

Q.23 Explain Autoclave machine in details with diagram

Q.24 Explain EEG machine with diagram.

Q.25 Explain Dialysis unit with diagram.

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### 3rd Sem / Medical Electronics

### Subject : Bio-Medical Instrumentation-I (BMI-I)

Time : 3 Hrs.

M.M. : 60

### SECTION-A

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

Q.1 The term 'Montage' refers to

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

Q.2 One cardiac cycle completes about in

- a) 0.5 sec                                      b) 1.5 sec
- c) 0.8 sec                                      d) 1 sec

Q.3 EMG measurement is used for

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

Q.4 Contraction phase of heart chambers is called

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

Q.5 Heart rate of a healthy person in resting state should be :-

- a) 90 Beats/minute      b) 72 beats / minute
- c) 120 beats / minute      d) 45 beats / minute

Q.6 Reference Electrode in ECG measurement is placed on

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

### SECTION-B

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

Q.7 Biomedical signal

Q.8 SANode

Q.9 Cardiac cycle

Q.10 Unipolar lead

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Q.11 Transducer

Q.12 Expand CSF

### SECTION-C

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

Q.13 Explain cardiac system with diagram.

Q.14 Write a note on Ambulatory Monitoring system .

Q.15 Discuss different ECG Electrodes used in ECG Measurement.

Q.16 Explain Einthoven's Triangle with diagram.

Q.17 Discuss different biomedical signals & their generations

Q.18 Explain central nervous system and its functions.

Q.19 Discuss brain Waves with diagram.

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

Q.21 Write a note on central monitoring system in hospitals.

Q.22 Discuss the effects of artifacts in ECG measurement.

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