

No. of Printed Pages : 4
Roll No.

223234

3rd Sem.
Branch : Medical Electronics
Sub.: Biomedical Instrumentation-I

Time : 3 Hrs. M.M. : 60

SECTION-A

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

- Q.1 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.2 What is the signal amplitude of ECG signal?
a) 0.02-5 mv b) 0.5-1 mv
c) 0-10 mv d) 0-20 mv
- Q.3 Letter T in EEG measurement denotes
a) Temporal Lobe b) Tympanic membrane
c) Trace d) Temper
- Q.4 The material used in limb surface electrode is
a) Gold b) Copper
c) Platinum d) German silver

- Q.5 Which instrument is used for listening heart sounds?
a) Stethoscope b) Endoscope
c) Colonoscope d) Proctoscope
- Q.6 The blood vessel that carry blood away from heart called
a) Artery b) Vein
c) AV Node d) Bundle of HIS

SECTION-B

Note: Objective/Completion type questions. All questions are compulsory. $(6 \times 1 = 6)$

- Q.7 Electrode.
- Q.8 Montage.
- Q.9 Neuromuscular Junction.
- Q.10 Blood Pressure.
- Q.11 Sterilization.
- Q.12 Arrythmia.

SECTION-C

Note: Short answer type Questions. Attempt any eight questions out of ten Questions. $(8 \times 4 = 32)$

- Q.13 List various biomedical signals with their description.

- Q.14 Explain Einthoven's Triangle.
- Q.15 Explain 10/20 Montage Electrode system.
- Q.16 Explain Muscular system & Its classification.
- Q.17 Write a note on Blood Glucose measurement.
- Q.18 Explain Central Monitoring system with diagram.
- Q.19 Explain Autoclave unit with block diagram description.
- Q.20 Write a note on critical care instrumentation.
- Q.21 Explain construction & working of Syringe pump with diagram.
- Q.22 Explain construction & working of Pulse oximeter with diagram.

SECTION-D

Note: Long answer questions. Attempt any two questions out of three Questions. $(2 \times 8 = 16)$

- Q.23 Explain principle and working of Dialysis machine with diagram.
- Q.24 Explain different methods of blood pressure measurement.
- Q.25 Explain principle and working of ECG Machine with diagram.