

Q.24 Write a short note on perspective of Biomedical Engineering.

Q.25 Explain Heart cardiac system.

Q.26 Explain Einthoven's Triangle with diagram.

Q.27 Discuss about the brain & its functions.

Q.28 Write a note on muscular system & its functions.

Q.29 Explain various electrodes used in EEG measurements.

Q.30 Write a short note on blood pressure measurement by direct method.

Q.31 Explain central monitoring system.

Q.32 Explain intravenous cannulae.

Q.33 Explain Apnea Monitor.

Q.34 Explain Conduction system of heart with diagram.

Q.35 Enlist different medical Equipments in different departments in hospital.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

Q.36 Explain EEG & its measurement with block diagram.

Q.37 Explain Lithotripter working with block diagram.

Q.38 Explain Blood glucose level measurement with procedure in details.

(4) (4) 183233/123233/033233

No. of Printed Pages : 4

183233/123233/033233

Roll No.

3rd Sem / Med Eltx

**Subject:- Biomedical Instrumentation - I /
Biomed. Instr. / Basic of Instr.**

Time : 3Hrs.

M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 EEG Electrodes are placed on

- a) Forehead b) Chest
- c) Scalp d) None of the above

Q.2 Blood vessels that carry blood towards heart is called

- a) Artery b) Vein
- c) Neuron d) None of the above

Q.3 ECG measurement is done for

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

Q.4 The term 'MONTAGE' refers to?

- a) EEG b) CT Scan
- c) Blood cell counter d) None of the above

(1) 183233/123233/033233

Q.5 Which limb is used as reference point in EEG measurement

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

Q.6 Normal EEG Frequency range is

- a) 50-500 Hz b) 0.5-50 Hz
- c) 0.05-5 Hz d) 1-200 Hz

Q.7 The downstairs chambers of heart is called

- a) Atria b) Ventricles
- c) Aorta d) None of the above

Q.8 What is Signal Amplitude of ECG signal

- a) 2-5 mv b) 0.1-5 mv
- c) 0-10 mv d) None of above

Q.9 How many heart valves does the heart have

- a) 4 b) 2
- c) 3 d) 6

Q.10 Residual volume refers to which instrument?

- a) X-ray machine b) BP Monitor
- c) Ventilator d) None of the above

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 Expand EEG

Q.12 Expand NIBP

Q.13 Electrode

Q.14 Neuron

Q.15 Expand TMT

Q.16 Heart Rate.

Q.17 Bradycardia

Q.18 Unipolar lead

Q.19 Expand EMG

Q.20 Define Transducer

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 Explain Mechanics of Respiration.

Q.22 Explain Principle, construction and working of Lithotripter with diagram.

Q.23 Write a note on sources of Biomedical signals and their generations.