

- Q.23 Draw and explain resting potential.
- Q.24 Describe defibrillators.
- Q.25 Describe ventilators.
- Q.26 Write a short note on CAT scan.
- Q.27 Discuss specifications of medical instrumentation system.
- Q.28 Explain cardiovascular system of the human being.
- Q.29 Describe bio-electrodes.
- Q.30 Explain glucometer.
- Q.31 Discuss telemedicine.
- Q.32 Describe elements of intensive care unit.
- Q.33 Discuss computer application in bio-medical devices.
- Q.34 Explain pulse oximeter.
- Q.35 Discuss electrode tissue interface.

SECTION-D

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

- Q.36 Draw and explain respiratory system of the human being.
- Q.37 Describe NIBP measurement with suitable diagram.
- Q.38 Explain EEG machine with its Diagram.

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6th Sem / IC, EI Subject:- Bio-Medical Instrumentation

Time : 3Hrs. M.M. : 100

SECTION-A

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

- Q.1 ECG is associated with _____
a) Heart b) Brain
c) Muscles d) None of these
- Q.2 Glucometer is used for measurement of _____
a) % of oxygen in blood
b) blood pressure
c) Blood glucose
d) None of these
- Q.3 Surface electrodes are used for _____
a) ECG b) EEG
c) EMG d) All of these
- Q.4 Respiratory system is constituted by _____
a) Spinal cord & brain b) Heart
c) Lung's d) None of these

Q.5 Pacemaker is a _____ device.

- a) Measurement
- b) Treatment
- c) Diagnostics
- d) None of these

Q.6 In ECG amplitude of P wave is _____.

- a) 0.35 mv
- b) 0.25 mv
- c) 1.60 mv
- d) None of the above

Q.7 The value of resting potential is _____

- a) -60 mv to +100 mv
- b) -60 mv to -100 mv
- c) +20 mv to +30 mv
- d) None of these

Q.8 PICU stands for _____.

- a) Pediatric intensive care unit
- b) Personal intensive care unit
- c) Program intensive care unit
- d) None of these

Q.9 Respiratory system is also called as _____ system

- a) Pneumatic
- b) Hydraulic
- c) Chemical
- d) Electrical

Q.10 Stimulus may be _____.

- a) Auditory
- b) Visible
- c) Both a & b
- d) None of the above

SECTION-B

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

Q.11 Define bio metrics.

Q.12 Cell in resting state is called polarized cell. (True/False)

Q.13 The EMG signal frequency range is 100 Hz to 3 KHz. (True/False)

Q.14 Pre-amplifier has high CMRR. (True/False)

Q.15 The heart rate is controlled by the impulse from the SA node. (True/False)

Q.16 Define accuracy.

Q.17 Define action potential.

Q.18 Define embedded system.

Q.19 _____ System is also called as hydraulic system

Q.20 Expand NIBP.

SECTION-C

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

Q.21 Write a short note on research and clinical instrumentation.

Q.22 Discuss nervous system of human being.