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**3rd Sem. / Medical Electronics**  
**Subject : Bio medical Instrumentation-I**

Time : 3 Hrs.

M.M. : 60

**SECTION-A**

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

- Q.1 Which medical equipment uses in ICU
- a) ECG Machine                      b) Pulse Oximeter
  - c) Patient Monitor                  d) All of the above
- Q.2 Which instrument is used for blood pressure measurement?
- a) Sphygmomanometer   b) Endoscope
  - c) Colonoscope                  d) None of the above
- Q.3 Which is called Natural Pacemaker?
- a) Aorta                                  b) SANode
  - c) AVNode                              d) Bundle of HIS
- Q.4 Letter F in EEG measurement denotes
- a) Frontal Lobe                      b) Tympanic membrane
  - c) Trace                                  d) Temper

- Q.5 Defibrillators is used of
- a) Frontal Lobe                      b) Tympanic membrane
  - c) Trace                                d) Temper
- Q.6 Which is not a blood component?
- a) RBC                                      b) Platelets
  - c) Neuron                                d) Plasma

### Section-B

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

- Q.7 Systolic Blood Pressure.
- Q.8 Normal Blood Pressure Range.
- Q.9 Normal Glucose Range.
- Q.10 Infection.
- Q.11 Sterilization.
- Q.12 Motion Artefacts

### Section-C

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

- Q.13 Explain Human Cardiac system & its working.

- Q.14 Explain ECG Electrodes & cables.
- Q.15 Explain Block diagram description of ECG machine.
- Q.16 Explain block diagram description of EEG machine.
- Q.17 Write a note on Brain Waves.
- Q.18 Explain Patient Monitoring system with diagram.
- Q.19 Explain Intravenous cannula with description.
- Q.20 Write a note on Infusion Pump.
- Q.21 Explain construction & working of Oxygen concentrator with diagram.
- Q.22 Explain construction & working of Radiant warmer with diagram.

### Section-D

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

- Q.23 Explain principle and working of Autoclave Machine with diagram.
- Q.24 Explain different methods of blood pressure measurement.
- Q.25 Explain principle and working of EEG Machine with diagram.