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223245

**4th Sem./ Medical Electronics**  
**Subject : Biomedical Instrumentation - II**

Time : 3 Hrs.

M.M. : 60

**SECTION-A**

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

- Q.1 Which of the following is not an Radiology equipment
- a) Pulse oximeter      b) X-ray machine
  - c) MRI      d) None of the above
- Q.2 Montage is concerns for
- a) ECG      b) Ventilator
  - c) Ultrasound      d) None of the above
- Q.3 Vital capacity is concerns for
- a) ECG      b) Ventilator
  - c) Ultrasound      d) None of the above

- Q.4 Which is not a blood component?
- a) RBC                                      b) Platelets
- c) Neuron                                      d) Plasma
- Q.5 Blood pressure of a healthy person in resting state should be :-
- a) 200/110 mm of Hg    b) 50/20 mm of Hg
- c) 120/80 mm of Hg    d) None of the above
- Q.6 Which of the following is a stress testing device?
- a) Sphygmomanometer
- b) Endoscope
- c) Tread Mill
- d) None of the above

### SECTION-B

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

- Q.7 What is total lung capacity?
- Q.8 What is normal range of percentage of sPo<sub>2</sub>?
- Q.9 What is Minute Volume?
- Q.10 Expand NICU
- Q.11 Expand CPAP
- Q.12 Telemetry

### SECTION-C

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

- Q.13 Write a note on critical care instrumentation.
- Q.14 Enlist different equipments used in ICU.
- Q.15 Write a short note on Monitoring alarm & electric system in ICU.
- Q.16 Write a note on Operating room instrumentation
- Q.17 Explain suction apparatus in details.
- Q.18 What is OT Table. Explain it with diagram.
- Q.19 Explain working and general fault finding in syringe pump
- Q.20 Explain the need and classification of pacemaker.
- Q.21 Explain single channel telemetry system
- Q.22 Write a note on cardiac catheterization.

### SECTION-D

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

- Q.23 Explain need of Defibrillator. Explain Defibrillator with circuit diagram.
- Q.24 Explain artificial ventilation. Also discuss ventilator with diagram.
- Q.25 Explain need of Anesthesia. Explain Anesthesia work station in details.