

- Q.23 Write a short note on Critical care instrumentation.
- Q.24 Explain IABP in details.
- Q.25 Write a brief description on NICU Equipments.
- Q.26 What is OT Table. Explain it with diagram.
- Q.27 What is Suction machine. Explain it with block diagram.
- Q.28 Write a brief description about Electro-Surgery with diagram.
- Q.29 Explain single channel telemetry system.
- Q.30 What is pacemaker. Explain it.
- Q.31 Explain Tread mill Test.
- Q.32 Explain BIPAP.
- Q.33 Write a note on surgical OT Light.
- Q.34 Explain different modes of artificial ventilation.
- Q.35 What is CPAP. Explain it.

#### SECTION-D

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

- Q.36 Explain artificial ventilation. Also discuss ventilator with diagram.
- Q.37 Explain need of Defibrillator. Explain Defibrillator with circuit diagram.
- Q.38 Explain need of Anesthesia. Explain Anesthesia work station in details.

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**4th Sem.**

**Branch : Med. Eltx.**

**Sub.: Biomedical Instrumentation-II/Biomed. Instrumentation**

Time : 3 Hrs.

M.M. : 100

#### SECTION-A

**Note: Multiple type Questions. All Questions are compulsory. (10x1=10)**

- Q.1 Which of the following is not an ICU equipment.
- |                   |                    |
|-------------------|--------------------|
| a) Pulse Oximeter | b) Patient Monitor |
| c) Thermometer    | d) X-Ray machine   |
- Q.2 Minute volume is concerns for
- |               |                      |
|---------------|----------------------|
| a) ECG        | b) Ventilator        |
| c) Ultrasound | d) None of the above |
- Q.3 Defibrillator is used for
- |                             |
|-----------------------------|
| a) Bone density measurement |
| b) Hb measurement           |
| c) Electric shock delivery  |
| d) None of above            |
- Q.4 Which is not a blood component?
- |           |              |
|-----------|--------------|
| a) RBC    | b) Platelets |
| c) Neuron | d) Plasma    |

- Q.5 Respiration rate of a healthy person in resting state should be:-
- 50-100 breaths/minute
  - 12-20 breaths/minute
  - 0-60 breaths/minute
  - None of the above
- Q.6 How many chambers does the Heart have
- 3
  - 4
  - 2
  - 5
- Q.7 Which is not a part of ventilation system
- Breathing circuit
  - Gas supply system
  - Scavenging system
  - None of the above
- Q.8 Which medical equipment used in ICU
- ECG machine
  - Pulse Oximeter
  - Patient monitor
  - All of the above
- Q.9 Which instrument is used for blood pressure measurement?
- Sphygmomanometer
  - Endoscope
  - Colonoscope
  - None of the above

- Q.10 Which is called Natural Pacemaker?
- Aorta
  - SA Node
  - AV Node
  - Bundle of HIS

### SECTION-B

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

- Q.11 Expand ICCU.
- Q.12 Expand SIMV.
- Q.13 Telemedicine.
- Q.14 Expand NIBP.
- Q.15 What is Respiration rate.
- Q.16 Nebulizer.
- Q.17 What is the Normal Glucose level in fasting stage of a healthy person?
- Q.18 What is called Natural Pacemaker of body?
- Q.19 What is normal range of percentage of SPO<sub>2</sub>?
- Q.20 What is Tidal Volume?

### SECTION-C

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

- Q.21 Write a note on Prosthetics & Orthotics.
- Q.22 Explain the working of Syringe Pump.