

- Q.24 Write a note on Operating room instrumentation
- Q.25 Explain suction apparatus in details.
- Q.26 What is OT Table. Explain it with diagram.
- Q.27 Explain working and general fault finding in syringe pump
- Q.28 Explain the need and classification of pacemaker.
- Q.29 Explain single channel telemetry system
- Q.30 Write a note on cardiac catheterization.
- Q.31 Explain telemedicine & its application.
- Q.32 Write a note on artificial heart.
- Q.33 Write a note on surgical OT Light.
- Q.34 Explain PEEP.
- Q.35 Write a note on mechanics of breathing.

#### SECTION-D

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

- Q.36 Explain IABP in details 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.

No. of Printed Pages : 4

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**4th Sem / Med. Eltx.**

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

Time : 3Hrs.

M.M. : 100

#### SECTION-A

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

- Q.1 Which of the following is an Radiology equipment
- a) Pulse oximeter      b) Ventilator
- c) MRI      d) None of the above
- Q.2 'Tidal Volume' is concerns for
- a) EEG      b) Ventilator
- c) Ultrasound      d) None of the above
- Q.3 The term 'Limb' concerns for
- a) ECG      b) Ventilator
- c) Ultrasound      d) None of the above
- Q.4 Which is a blood component?
- a) Artery      b) Platelets
- c) Neuron      d) Vein
- Q.5 Respiration rate of a healthy person in resting state should be:-

- a) 10-80 breaths/min    b) 0-40 breaths/min  
 c) 12-20 breaths/min    d) None of the above
- Q.6 How many heart chambers have  
 a) 3                                      b) 4  
 c) 2                                      d) None of the above
- Q.7 Which is a part of Anesthesia ventilation system  
 a) Breathing circuit    b) Gas supply system  
 c) Scavenging system    d) All of the above
- Q.8 Needle electrode is used to measure  
 a) ECG                                      b) EEG  
 c) EMG                                      d) Both B & C
- Q.9 Which of the following is a stress testing device?  
 a) Sphygmomanometer  
 b) Endoscope  
 c) Tread mill  
 d) None of the above
- Q.10 Which is called power house of a cell?  
 a) Nucleus                                      b) SANode  
 c) Mitochondria                                      d) Golgi Apparatus

## SECTION-B

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

- Q.11 Expand NICU  
 Q.12 Expand CPAP  
 Q.13 Telemetry  
 Q.14 Expand IBP  
 Q.15 What is Residual volume  
 Q.16 Humidifier  
 Q.17 What is the Normal Glucose level in fasting stage of a healthy person?  
 Q.18 What is total lung capacity?  
 Q.19 What is normal range of percentage of SPO<sub>2</sub>?  
 Q.20 What is Minute Volume?

## SECTION-C

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

- Q.21 Write a note on critical care instrumentation.  
 Q.22 Enlist different equipments used in ICU.  
 Q.23 Write a note on Monitoring alarm & electric system in ICU.