

- 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.

No. of Printed Pages : 4  
Roll No. ....

183244/033261

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

- Q.10 Which is called Natural Pacemaker?  
a) Aorta                            b) SA Node  
c) AV Node                        d) 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  $\text{SPO}_2$ ?  
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.