

- Q.33 Explain the need and classification of pacemaker.

Q.34 Explain single channel telemetry system.

Q.35 Write a note on cardiac catheterization.

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## **Section-D**

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

- Q.36 Explain need of Defibrillator. Explain Defibrillator with circuit diagram.

Q.37 Explain artificial ventilation. Also discuss ventilator with diagram.

Q.38 Explain need of Anesthesia. Explain Anesthesia work station in details.

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

Time : 3 Hrs.

M.M. : 100

## **SECTION-A**

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

Q.6 Which of the following is not an Radiology equipment  
a) Pulse oximeter      b) X-Ray Machine  
c) MRI                  d) None of the above

Q.7 Montage is concerns for  
a) ECG                  b) Ventilator  
c) Ultrasound          d) None of the above

Q.8 Vital Capacity of concerns for  
a) ECG                  b) Ventilator  
c) Ultrasound          d) None of the above

Q.9 Which is not a blood component?  
a) RBC                  b) Platelets  
c) Neuron               d) Plasma

Q.10 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

### Section-B

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

- Q.11 Humidifier.  
Q.12 What is the Normal Glucose level in fasting stage of healthy person?  
Q.13 What is total lung capacity?

- Q.14 What is normal range of percentage of SPO<sub>2</sub>?  
Q.15 What is Minute Volume?  
Q.16 Expand NICU.  
Q.17 Expand CPAP.  
Q.18 Telemetry.  
Q.19 Expand IBP.  
Q.20 What is Residual Volume.

### Section-C

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

- Q.21 Explain telemedicine & its application.  
Q.22 Write a note on artificial heart.  
Q.23 Write a note on surgical OT Light.  
Q.24 Explain PEEP.  
Q.25 Write a note on mechanics of breathing.  
Q.26 Write a note on critical care instrumentation.  
Q.27 Enlist different equipments used in ICU.  
Q.28 Write a short note on Monitoring alarm & electric system in ICU.  
Q.29 Write a note on operating room instrumentation.  
Q.30 Explain suction apparatus in details.  
Q.31 What is OT Table. Explain it with diagram.  
Q.32 Explain working and general fault finding in syringe pump.