Q25 Write a short note on pulse sensor. (CO3)

Q.26 Explain Blood Pressure Measurement System. (CO3)

Q.27 Explain Safety Standards. (CO6)

Q.28 Draw and explain ECG machine. (CO4)

Q.29 Write short note on Gross current shock. (CO6)

Q.30 What is the principle of Respiratory System? (CO5)

Q.31 Explain any one type of flow transducer. (CO3)

Q.32 Explain any one type of temperature transducer. (CO3)

Q.33 Illustrate the LVDT type pressure transducer. (CO3)

Q.34 What is Electrode Tissue Interface? (CO2)

Q.35 Name any Two Therapeutic Equipments used in medical Electronics. (CO1)

Section-D

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

Q.36 Draw Block diagram and Explain EEG machine. (CO1)

Q.37 Describe the classification of bio-tranducers. Explain the pulse sensor. (CO3)

Q.38 Write a short note on the following: (CO5,6)

a) Cardiac pacemaker

b) Leakage current

Roll No. .....

4th Sem. Branch: Electronics
Sub : Medical Electronics

Time : 3 Hrs. M.M. : 100

SECTION-A

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

Q.1 Strain gauge is used to measure_____. (CO3)

a) Temperature b) Pressure

c) Height d) Displacement

Q.2 Thermistor is used to measure_____. (CO3)

a) Temperature b) Pressure

c) Height d) Displacement

Q.3 What is the normal pulse rate of Human being? (CO1)

a) 20-40 b) 60-100

c) 100-150 d) above 150

Q.4 Unwanted signal at the output due either to internal sources or to interference is called_____. (CO1)

a) Offset b) Noise

c) Drift d) Threshold

Q.5 LVDT works on the principle of_____ (CO3)

a) Variable resistance b) Variable inductance

c) Variable capacitance d) Variable pressure

Q.6 From equipment point of view, the respiratory system in the human body is a_____system. (CO5)

a) Hydraulic b) Pneumatic

c) Mechanical d) Electrical

Q.7 BIS stands for _____. (CO7)

a) Board of Indian standards

b) Bureau of Indian standards

c) Bureau of International specification

d) Board of international standards

Q.8 Source of Bio electric potential is _____ in nature. (CO2)

a) Electronic b) Electric

c) Ionic d) Mechanical

Q.9 _____ converts bio chemical events into measurables signals. (CO3)

a) Amplifier b) Op-amp

c) Rectifier d) Transducer

Q.10 EMG instrument is useful for making study of_____. (CO4)

a) Cardiovascular function

b) Neuromuscular function

c) Nervous function

d) Immune function

Section-B

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

Q.11 Define Heart Rate. (CO5)

Q.12 Define Bio electric signals. (CO2)

Q.13 Full form of VCG. (CO5)

Q.14 What is the use of sphygmomanometer? (CO1)

Q.15 Name any example of Diagnostic Equipment. (CO1)

Q.16 Define Diagnosis. (CO1)

Q.17 Define Defibrillator. (CO5)

Q.18 What is the full form of MRI? (CO5)

Q.19 Calorimeter is used for_____. (CO3)

Q.20 Define electric shock. (CO6)

Section-C

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

Q.21 How does Photoelectric transducer work? (CO3)

Q.22 Draw and Explain surface electrode. (CO2)

Q.23 Explain the use of Micro processor in Patient Monitoring. (CO5)

Q.24 Describe the working of ultrasonic blood flow meter. (CO3)