Q.25 Describe skin surface electrode in a short note.

Q.26 Explain one type of biomedical electrode.

Q.27 Write a short note on implant materials.

Q.28 Write short note on LVDT.

Q.29 Explain physiological transducers in a short note.

Q.30 Write a short note on ECG electrode working as transducer.

Q.31 Write a short note on transducer used in USG.

Q.32 Explain one type of writing recorder in a short note.

Q.33 Describe passive transducer in a short note.

Q.34 Write a short note on biomedical instrumentation.

Q.35 Write a short note on bio materials.

SECTION-D

Note : Long Answer type question. Attempt any two questions. (2x10=20)

Q.36 Write the definition of Bioelectric potentials and explain various bio potential signals generated in human body.

Q.37 Describe the working principles of ECG electrode with its diagram.

Q.38 Explain in detail any two displacement type sensors.

Roll No.....

4th Sem / Medical Electronics

Subject : Biomedical Sensors & Transducers (BMST)

Time : 3 Hrs. **M.M. : 100**

SECTION-A

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

Q.1 Surface electrodes damage the living tissues.

a) True b) False

Q.2 In floating electrodes metal electrode does not make direct contact with the skin.

a) True b) False

Q.3 Recording electrical activities associated with heart is known as _____.

a) EEG b) EOG

c) EMG d) ECG

Q.4 Needle electrode is used of measure_____.

a) EKG b) EEG

c) EOG d) EMG

Q.5 The ability of the sensor to see small differences in reading is called_____

a) Resolution b) Drift

c) Offset d) Linearity

Q.6 How many kidneys does a human have?

a) One b) Two

c) Three d) Four

Q.7 Type of displacement type sensors are:

a) Capacitive b) Resistive

c) Inductive d) All of these

Q.8 LVTD is a _____ transducer.

a) Displacement b) Photoelectric

c) Thermal d) Chemical

Q.9 The Expanded form of ADC

a) Analog to digital converter

b) Air dose core

c) Aid device core

d) None of these

Q.10 The principal ion that is not involved with the phenomena of producing cell potentials is

a) Sodium b) Potassium

c) Chlorine d) Hydrogen

SECTION-B

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

Q.11 Write one use of transducer.

Q.12 Write name of one electrode.

Q.13 Give one example of sensors.

Q.14 LVDT stands for _____.

Q.15 Write one use of ECG.

Q.16 Write one bio potential single generated in human body.

Q.17 Expand EMG.

Q.18 The full form of DSP is _____.

Q.19 Name one writing recorder.

Q.20 Write one property of USG.

SECTION-C

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

Q.21 Write a short note on the instrumentation amplifier.

Q.22 Explain stethoscope in a short note.

Q.23 Explain the principle of thermistor in a short note.

Q.24 Write a short note on biosensors.