

Q.24 Explain digital signal processing system with diagram.

Q.25 Explain ECG machine with block diagram description.

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**Sem. 2nd/ Medical Electronics**  
**Sub. : Fundamentals of Medical Electronics**

Time : 3 Hrs.

M.M. : 60

**SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 What does EMG record

- a) Blood pressure
- b) Muscle electrical activity
- c) Pulse rate
- d) None of the above

Q.2 Which of the following used for piezoelectric material

- a) Copper
- b) Iron
- c) Lead
- d) Quartz

Q.3 Piezoelectric crystals used in

- a) ECG
- b) EEG
- c) Ultrasound
- d) Defibrillator

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Q.4 Which of following is example of input transducer

- a) Loudspeaker                      b) Motor
- c) Microphone                      d) None

Q.5 Strain gauze is a type of transducer

- a) Sound                                      b) Temperature
- c) Pressure                                      d) Light

Q.6 Which of following is a active transducer

- a) Strain Gauze                      b) Thermocouple
- c) LVDT                                      d) None of above

### SECTION-B

**Note:** Objective/ Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Expand OPD.

Q.8 Electrode.

Q.9 Expand RTD.

Q.10 Montage

Q.11 Expand ECG.

Q.12 Unipolar limb

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### SECTION-C

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 Write a note on classification of hospital department and their functions.

Q.14 Explain role of biomedical engineering in healthcare.

Q.15 Write a note on signals and their classification.

Q.16 Explain model of a biomedical electrode with diagram.

Q.17 Enlist different bio-potential generated in human body.

Q.18 Write a note on special features of bio-electric amplifiers.

Q.19 Explain different pressure transducers with diagram.

Q.20 Explain active and passive transducers.

Q.21 Explain Temperature transducer.

Q.22 Write a note on digital recorders.

### SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Explain EEG recorders with block diagram.

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