

Q.24 Explain EEG & its measurements . Also explain ECG machine Working with block diagram.

Q.25 Explain Principle and working of LVDT with block diagram.

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

223221

**2nd Year / Medical electronics**

**Subject : Fundamentals of Medical Electronics**

Time : 3 Hrs.

M.M. : 60

**SECTION-A**

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

Q.1 Which of the following used to measure blood pressure

- a) Sphygmomanometer      b) EEG
- c) EMG                              d) None of the above

Q.2 Which is called Natural Pacemaker

- a) Aorta                              b) AV Node
- c) SANode                              d) All of the above

Q.3 \_\_\_\_\_ is used for measurement of electrical activity of brain

- a) ECG                              b) EEG
- c) EMG                              d) None of the above

Q.4 What is necessary for providing a common reference measurement

- a) Active Electrode      b) Ground Electrode
- c) Tape Recorder        d) Oscilloscope

Q.5 The filter used for prevention of Noise Interference

- a) High pass                b) Low pass
- c) Notch                    d) None of the above

Q.6 How many electrodes placed in 10 / 20 electrode placement system.

### SECTION-B

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

Q.7 Draw normal waveform pattern of ECG

Q.8 Motion artefact

Q.9 Expand DSP

Q.10 Expand EMG

Q.11 Ultrasound waves

Q.12 Preventive Maintenance

(2)

223221

### SECTION-C

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

Q.13 Explain various Hospital departments & their functioning.

Q.14 Explain basic medical instrumentation system.

Q.15 Write a note on Biomedical organizations.

Q.16 Explain different signal distortion & their types

Q.17 Explain classification of Electrodes.

Q.18 Write a note on Biosensors & smart sensors.

Q.19 Explain EMG with block diagram.

Q.20 Explain Piezo - electric Transducer.

Q.21 Describe optical fibre sensors & their advantages.

Q.22 Write a note on Pressure Transducers.

### SECTION-D

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

Q.23 Explain ECG & its measurements . Also explain ECG machine Working with block diagram.

(3)

223221