

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.E. Sem-IV Examination June- 2010

Subject code: 140302

Subject Name: Physiological Measurement Techniques

Date: 21 / 06 / 2010

Time: 10.30am – 01.00 pm

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Draw a neat labeled diagram of structure of heart and explain ECG waveform. **07**
(b) Short Note: Internal Noise **07**
- Q.2** (a) Draw a neat labeled structure of cell and explain its various organelles. **07**
(b) Short Note: Electrodes for EEG & EMG. **07**
OR
(b) Short Note: Microelectrodes **07**
- Q.3** (a) Explain Block diagram of ECG machine. **07**
(b) Describe structure of muscle fibre and sarcomere. **07**
OR
- Q.3** (a) Explain structure and function of medulla oblongata and pons. **07**
(b) Explain mechanism of respiration. **07**
- Q.4** (a) What is membrane and action potential? How are they recorded? **07**
(b) Define Transducers and classify them. **07**
OR
- Q. 4** (a) Define: 1) IRV **07**
2) Endocytosis
3) VC
4) Tidal Volume
5) EMG
6) Motion Artifact
7) Blood Pressure
(b) Explain Bipolar ECG leads with necessary diagram. **07**
- Q.5** (a) Draw a neat labeled structure of eye and explain it in detail. **07**
(b) Draw and Explain block diagram of EEG machine. **07**
OR
- Q.5** (a) Explain EOG, ERG & EMG. **07**
(b) Explain Inductive interference and shielding. **07**
