

(Following Paper ID and Roll No. to be filled in your Answer Books)

PAPER ID :

Roll No.

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B.TECH.

Theory Examination (Semester-VI) 2015-16

BIOELECTRICITY

Time : 3 Hours

Max. Marks : 100

SECTION A

Q.1 Attempt all parts. Write answer of each part in short. (2 x 10=20)

- (a) What do you mean by bioelectricity generation?
- (b) What do you mean by refractory period?
- (c) What is the difference between ECG and EMG?
- (d) What supplies blood to the AV node?
- (e) Explain the application of microelectrodes.

SECTION B

Q2. Attempt any 5 questions from this section.

(10 x 5=50)

- a) Explain different biopotentials and their characteristics.
- b) Draw and explain electrical equivalent circuit of AXON.
- c) Describe electrical properties of receptors.
- d) Describe 12 lead ECG with neat diagram.
- e) Explain electrical activity of skeletal muscles.
- f) Explain various physiotherapy & analytical instruments.
- g) What are the important bands of frequencies in EEG and state their importance.

SECTION C

Note: Attempt any 2 questions from this section.

(15 x 2=30)

Q:3 Explain with examples propagation of impulses in unmyelinated and myelinated nerve fibre

Q:4 What is Nernst equation? Derive Nernst equation Using Boltzmann factors

Q:5 Write short notes on:

- (a) Motor unit potential.
- (b) Electro-Electrolyte Interface
- (c) Intensity-frequency relationship.

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