

**B.Sc. NEURO ELECTRO PHYSIOLOGY**  
**SECOND YEAR**  
**PAPER II – ELECTRONICS**

*Q.P. Code: 802512*

**Time: Three Hours**

**Maximum : 100 Marks**

**Answer All questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. What are biological potentials? What are the common sources? Name the tests used for testing them.
2. Physiological effect of electrical current, shock hazards from electrical equipment, methods of accident prevention.
3. What is a transistor? Explain with an example of usage in biomedical equipment.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Circuit laws.
2. Principles of averaging.
3. Differences between coaxial and bipolar concentric needles.
4. Draw the block diagram of EMG and explain.
5. Transducer used in bio-medical applications.
6. Operating systems in computers.
7. Semi-conductors.
8. Volume conduction.

**III. Short Answers on:**

**(10 x 3 = 30)**

1. Resistance.
2. Low frequency filters.
3. Integrated circuit.
4. Insulator.
5. A dipole and its electric field.
6. Ohm's law.
7. ERG.
8. Conductivity.
9. Power supply unit.
10. 50 Hz noise.

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