

[LP 0819]

AUGUST 2019

Sub. Code: 2512

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. Explain the working of the EEG machine (please use appropriate diagrams).
2. Describe what is calibration in biomedical equipment, give examples why is calibration important?
3. What are filters in biomedical equipment? Describe the different kinds of filters and give examples of their use.

II. Write notes on:

(8 x 5 = 40)

1. Application of diodes.
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.
4. Importance of capacitor in EEG filter.
5. Explain working principle of NPN transistor.
6. Working principle of transformer.
7. Evoked potential instrumentation.
8. Volume conduction and its importance in EEG.

III. Short Answers on:

(10 x 3 = 30)

1. Principle of Fourier analysis.
2. Bio potential electrodes.
3. Amplifier noise.
4. Phase shift.
5. Rectifier.
6. Bipolar concentric needles.
7. Notch filter.
8. Transducer.
9. Ohm's law.
10. Capacitance.
