

S. B. Roll. No.....

BASIC ELECTRICAL ENGINEERING
2nd Exam/ECE/6803/Nov'24
(For 2023 Batch Onwards)

Duration: 3Hrs.

M.Marks:50

SECTION-A

Q1. Fill in the blanks any nine of the following.

9x1=9

- a. Rechargeable batteries are also known as _____ batteries.
- b. In electrical circuits, series connections involve elements being connected end-to-end, resulting in the same _____ flowing through each element.
- c. Thevenin's theorem allows us to simplify complex networks into a single _____ and a resistor connected in series.
- d. Power consumed by a pure Inductor is _____.
- e. Frequency of D.C voltage is _____.
- f. SI unit of Electrical Energy is _____.
- g. R.M.S. value of current of A.C. is _____.
- h. To improve Power factor of a circuit, a capacitor is connected in _____ to the load.
- i. The power factor of pure resistive load is _____.
- j. The reciprocal of resistance is called _____.
- k. In parallel connections, the _____ is the same at all
- l. Voltmeter is always connected in _____ with the load.

SECTION-B

Q2. Attempt any five questions.

5x4=20

- i. What is the difference between A.C and D.C?
- ii. Write a short note on form factor and peak factor.
- iii. What is constant voltage source and draw characteristics of ideal voltage source?
- iv. Explain R-L series circuit with the help of phasor diagram in detail.
- v. What is power factor? Discuss the significance of power factor.
- vi. Define Conductance, susceptance and admittance.
- vii. Differentiate between primary and secondary cells.

SECTION-C

Q3. Attempt any three questions.

3x7=21

- a. State and explain Thevenin's Theorem.
- b. Explain the construction and working of transformer.
- c. Explain RMS value and derive its formula for a sinusoidal waveform.
- d. Explain RLC series circuit with the help of phasor diagram in detail.
- e. Explain parallel resonance and its condition.

P.S.B.T.E. & I.T.

