

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

BASIC ELECTRICAL ENGINEERING
2nd Exam/ECE/MECHATRONIC/0961/Nov'24
(For 2018 batch onwards)

Duration: 3Hrs.

M.Marks:75

SECTION-A

Q1. Fill in the blanks.

15x1=15

- a. The maximum value of power factor in an a.c. circuit can be _____.
- b. The ratio of r.m.s value to average value is called _____.
- c. In a lead acid battery, electrolyte is _____.
- d. The power factor is the ratio of _____.
- e. Weber is the SI unit of _____.
- f. A device which produces direct voltage continuously is known as a _____.
- g. A network which contains one or more than one source of e.m.f. is known as _____.
- h. The longer the conductor, the _____ is its resistance.
- i. The frequency of d.c is _____.
- j. Unit of resistance is _____.
- k. KVL stands for _____.
- l. Copper material has the _____ resistivity.
- m. In a constant voltage source output voltage remains same as _____ varies.
- n. Admittance is reciprocal of _____.
- o. Specific gravity of electrolyte under fully charged condition is _____.

SECTION-B

Q2. Attempt any six questions.

6x5=30

- i. Explain ideal voltage source.
- ii. Define the term form factor and peak factor.
- iii. Write a short note on working of solar cells.
- iv. Give comparison between electric and magnetic circuit.
- v. What is power factor? Give its importance.
- vi. Explain charging and discharging of Nickel-Cadmium cell.
- vii. What is difference between A.C and D.C?
- viii. Explain faraday's law of electromagnetic induction in detail.

SECTION-C

Q3. Attempt any three questions.

3x10=30

- a. State and explain Thevenin's theorem?
- b. Draw and explain elementary block diagram of hydro power station in detail.
- c. Explain construction and working of Lead Acid battery?
- d. How delta connected network can be converted into star equivalent circuit.
- e. Explain RLC series circuit with the help of phasor diagram in detail.

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

