BACHELOR OF TECHNOLOGY (CBCS) (2021-COURSE)

B. Tech. Sem - II Computer Science & Engineering : WINTER : 2023

SUBJECT : ELECTRICAL TECHNOLOGY

Day : Thursday | Time : 10:00 AM-01:00 PM

Date : 23-11-2023 | **W-24027-2023** | Max. Marks : 60

N.B.

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.

Q.1 Explain following terms with their units **(10)**

i. Magnetic flux
ii. Magnetic flux linkages
iii. Magnetic field strength
iv. Magnetic field intensity
v. Absolute permeability

OR

Q.1 Compare electric and magnetic circuits in detail **(10)**

Q.2 Explicate resonance in series and parallel circuits **(10)**

OR

Q.2 Explain following terms **(10)**

i. Average value
ii. Effective value
iii. Form factor
iv. Peak factor
v. Band width and quality factor

Q.3 Explicate with relevant circuit diagram the method of determining efficiency and regulation of single phase transformer by direct loading method **(10)**

OR

Q.3 Explain various losses in a transformer. Where do they occur? How can the losses in transformer be reduced? **(10)**

Q.4 Explicate general layout of electrical power system with neat sketch. Explain functions of each component. **(10)**

OR

Q.4 Compare single phase and three phase electrical power system. Also explain the concept of phase sequence. How is it used to change the direction of induction motor **(10)**

Q.5 What are various types of DC motors? Explicate with circuit diagram applications of each motor **(10)**

OR

Q.5 Derive EMF equation of a DC generator **(10)**

Q.6 Write a note on care and maintenance of a lead acid battery **(10)**

OR

Q.6 Explain construction working of any fuel cell **(10)**

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