BACHELOR OF TECHNOLOGY (C.B.C.S.) (2021-COURSE)

B. Tech. Sem - II IT :SUMMER- 2022

SUBJECT : ELECTRICAL TECHNOLOGY

Day : Monday
Date : 1/8/2022

S-24113-2022

Time : 10:00 AM-01:00 PM
Max. Marks : 60

N.B.

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

Q.1 Elucidate with neat sketch B H curve **(10)**

OR

Q.1 Explain hysteresis and eddy current loss in detail. Where do they occur in case of a transformer and motor? How to reduce these losses? **(10)**

Q.2 Draw power triangle. Explain apparent power, reactive power, and active power. Write down the equations to calculate these powers **(10)**

OR

Q.2 What is power factor? What are various types of power factors? What are the causes of low power factor **(10)**

Q.3 Explain EMF equation of a single phase transformer with neat sketch of sinusoidal waveform **(10)**

OR

Q.3 Explain following terms **(10)**

i. Faradays law of electromagnetic induction
ii. Voltage ratio
iii. Current ratio
iv. KVA rating

Q.4 Explain star and delta connection of a three phase transformer. Write equations for line current and phase current and line voltage and phase voltage for delta and star connected load **(10)**

OR

Q.4 Draw power triangle, voltage triangle, impedance triangle and admittance triangle and explain **(10)**

Q.5 Derive torque equation of a DC motor **(10)**

OR

Q.5 Explain various methods of starting a single phase induction motor **(10)**

Q.6 What is a fuel cell. What are various types of fuel cell **(10)**

OR

Q.6 Explain various charging methods of batteries **(10)**

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