BACHELOR OF TECHNOLOGY (C.B.C.S.) (2021-COURSE)
B. Tech. Sem - I E& C :SUMMER- 2022
SUBJECT : ELECTRICAL TECHNOLOGY

Day : Thursday
Date : 21-07-2022

S-24086-2022

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 **a)** Explain star to delta conversion with neat diagram. **(05)**
b) Explain Kirchhoff's voltage and current law. **(05)**

OR

a) Explain delta to star transformation with neat diagram. **(05)**
b) Explain maximum power transfer theorem with neat diagram. **(05)**

Q.2 **a)** Explain effective value from factor and peak factor of sinusoidal waveform. **(05)**
b) What are different causes of low power factor? **(05)**

OR

a) Analyze parallel R-L-C circuit. **(05)**
b) Explain resonance in series R-L-C circuit. **(05)**

Q.3 **a)** How to determine efficiency and regulation of single phase transformer? **(05)**
b) Explain construction of 3-phase transformer. **(05)**

OR

a) Draw diagram of auto-transformer and explain in brief. **(05)**
b) Explain Faraday's law of electromagnetic induction. **(05)**

Q.4 **a)** Explain principle of electro mechanical energy conversion. **(05)**
b) Explain different applications of d.c. motor. **(05)**

OR

a) Derive torque equation of d.c. motor. **(05)**
b) Explain principle of operation of single phase induction motor. **(05)**

Q.5 **a)** Explain in brief about safe disposal of batteries. **(05)**
b) Explain construction of Nickel Cadmium battery. **(05)**

OR

a) How to take care and maintenance of lead acid batteries. **(05)**
b) Explain general idea of solar panel and its applications. **(05)**

Q.6 **a)** Explain interconnections between two-port parameters. **(05)**
b) What are ABCD parameters? Explain with equations. **(05)**

OR

a) Explain condition for Reciprocity and symmetry in two port networks. **(05)**
b) What are Z & Y parameters in two port networks? **(05)**

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