

BACHELOR OF TECHNOLOGY (CBCS - 2023)
B. Tech. Sem-II COMPUTER SCIENCE & ENGINEERING : SUMMER : 2024
SUBJECT: ELECTRICAL TECHNOLOGY

Day : Tuesday
Date : 28/05/2024

S-27695-2024

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.
- 3) Assume suitable data **WHEREVER** necessary.
- 4) Draw neat labeled diagrams **WHEREVER** necessary.

- Q.1 a) Define i) EMF ii) Potential difference iii) Voltage (05)
b) Explain Kirchhoff's voltage law with neat diagram. (05)
- OR
- Q.1 a) Write difference between voltage and current sources. (05)
b) Explain principle and operation of batteries. (05)
- OR
- Q.2 a) Explain Maximum Power Transfer Theorem with neat diagram. (05)
b) Solve, if 4 resistances are connected in series, then find it's equivalent. (05)
- OR
- Q.2 a) Explain Superposition Theorem with neat diagram. (05)
b) Solve, if 4 resistances are connected in parallel, then find it's equivalent. (05)
- OR
- Q.3 a) Draw R-L-C series circuit with phasor diagram. (05)
b) Explain and draw impedance diagram. (05)
- OR
- Q.3 a) Explain following terms: (05)
i) Active Power ii) Reactive Power iii) Apparent Power
b) Explain series resonance with neat diagram. (05)
- OR
- Q.4 a) List advantages of 3- phase system. (05)
b) Explain meaning of phase sequence with appropriate waveform. (05)
- OR
- Q.4 a) Explain line and phase values of delta connections. (05)
b) Discuss necessity of 3-phase system. (05)
- OR
- Q.5 a) Explain self and mutual inductance in electric circuit. (05)
b) Discuss principle and operation of single phase transforms. (05)
- OR
- Q.5 a) Define efficiency and regulation of single phase transformer. (05)
b) Draw and explain B-H curve. (05)
- OR
- Q.6 a) Draw and explain basic layout of distribution system. (05)
b) Explain incandescent lamp with neat diagram. (05)
- OR
- Q.6 a) Explain necessity of earthing. (05)
b) Explain different type of tariff in brief. (05)
