

# LNCT UNIVERSITY, BHOPAL

EnrolmentNo. ....

CS-106

B.TECH CS I SEMESTER  
EXAMINATION [JAN-2024]

ELECTRICAL AND ELECTRONIC ENGINEERING

Maximum Marks:70

Time Allowed :3Hours

Note:-Attempt all questions internal choice are given.

## (SECTION -A)

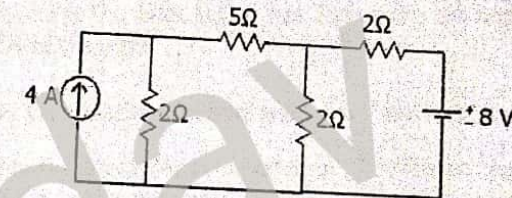
### 1. Short Answer Type Questions(Attempt Any Five) [5x6=30]

- Explain Linear & Non-Linear Circuit.
- Explain Star/Delta & Delta/Star conversion method.
- Explain the term 'Power Factor' and its importance.
- Explain Leakage flux and fringing.
- Define voltage regulation of transformer.
- Explain the term 'Slip' in an induction motor.
- Convert 29.35 into binary number.

## (SECTION -B)

### 2 Long Answer Type Questions(Attempt Any Four) [04x10=40]

- State & explain Thevenin's theorem.
- Find the current flowing through 5 Ohm resistor using no analysis method.



- Two circuits, the impedance of which are given  $Z_1=(10+j15)\Omega$  &  $Z_2=(6-j8)\Omega$  are connected in parallel. If total current supplied is 15A. What is the power taken each branch?
- Derive the condition for maximum efficiency of transform at a given power.
- Explain the constructional features of synchronous machine.
- Verify the De-Morgan's theorem with the help of truth table.