

S. B. Roll. No.....

ELECTRICAL MACHINES
3rd Exam/ECE/6409/Nov'24
(For 2023 Batch)

Duration: 3Hrs.

M.Marks:50

SECTION-A

Q1. Do as directed any nine of the following.

9x1=9

- $kW=kVA \times$ _____
- Wattmeter is an instrument which measures _____
- Transformer step or step down _____
- Transformer is a static machine. (T/F)
- Domestic appliances work on 3-phase supply system. (T/F)
- Large a.c machines are single phase. (T/F)
- 3 phase Induction motor is _____
- Yoke of a d.c machine is made of _____
- Field coils are made of _____
- Function of starter in machine is to _____
- D.C series motor is used for _____
- Single phase Induction motor is self starting motor. (T/F)

SECTION-B

Q2. Attempt any five questions.

5x4=20

- Explain working principle of transformer.
- What are advantages of three phase system over single phase system?
- Explain Faraday's law of electromagnetic induction.
- What is difference between motor and Generator?
- What is function of commutator in d.c generator?
- What is necessity of a starter?
- How will you make a single phase induction motor self starting?

SECTION-C

Q3. Attempt any three questions.

3x7=21

- Explain two wattmeter methods to measure power in three phase unbalanced load.
- Explain working principle of Auto- transformer.
- Explain construction and working of d.c generator.
- Explain construction and working principle of 3 phase induction motor.
- Explain various types of losses in d.c machine.