

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

**ELECTRICAL MACHINES**  
**3<sup>rd</sup> Exam/ECE/6189/Dec'22**  
**(For 2018 Batch Onwards)**

**Duration: 3Hrs.**

**M.Marks:75**

**SECTION-A**

**Q1. Do as directed.**

**15x1=15**

- In a three phase system, the phase difference between two adjacent e.m.f. is \_\_\_\_\_ Electrical.
- Phase sequence is defined as \_\_\_\_\_
- Wattmeter is an instrument which measures \_\_\_\_\_.
- What name is given to the coils across which load is connected?
- How can iron loss be minimized?
- What is generator?
- What is motor?
- What is the function of commutator?
- What is efficiency?
- The armature of D.C. machine is made of \_\_\_\_\_ .
- Losses in D.C. motor are \_\_\_\_\_.
- What is stator?
- What is rotor?
- What is a stepper motor?
- What are the two types of stepper motor?

**SECTION-B**

**Q2. Attempt any six questions.**

**6x5=30**

- What are the advantages of three phase system over single phase system?
- Comparison between star and delta system.
- Explain the construction and working of Transformer.
- What are the losses in Transformer?
- What are the common features of Rotating Electrical Machines?
- Explain Faraday's laws of Electromagnetic induction.
- What are the different types of excitations employed for D.c. generator?
- What are the losses in induction motor?

**SECTION-C**

**Q3. Attempt any three questions.**

**3x10=30**

- Explain two wattmeter methods to measure power in a 3-phase unbalanced load.
- Explain construction and working of Auto transformer.
- Explain working principle and working of Generator.
- Explain different types of D.C. motors.
- Explain starting methods of squirrel cage induction motor.
- Explain the construction working synchronous motors.