Code: A-E223115-A	**I SEMESTER EXAM - 2024-25**	1 x 155
Std.: XI	Sub: Electrical Maintenance - II	Marks: 40
Date:	Roll No.: _____	Time: 2½ hrs.

Q.1 Fill in the blanks attempt any four of the following: (04)

1) The unit of _____ is weber.
   a) magnetic flux b) magnetic field c) Magnetic Axis
2) Generator converts _____ energy into electrical energy.
   a) Mechanical b) Thermal c) Tidal
3) _____ Generator is known as the booster generator.
   a) series b) shunt c) compound
4) The function of a commutator is to convert _____
   a) AC to DC b) DC to AC c) DC to DC
5) The unit of Inductance is _____
   a) Henry b) farad c) Ohms
6) The value of applied EMF is always _____ the applied voltage.
   a) equal to b) less than c) more than.

Q.2 Attempt any six of the following : (12)

1) Define the following terms : a) Magnetic Poles b)Magnetic Axis
2) Explain the concept of electromagnetism.
3) Write any four practical applications of the electromagnet.
4) What is meant by back EMF what is its relation to the applied voltage?
5) Define the following terms a) Amplitude b) Time period
6) Explain Faradays law of electromagnetic induction?
7) What is DC motor? On what principle it works?

Q.3 Attempt any four of the following : (12)

1) Explain with diagram ac circuit containing resistance and inductance in series.
2) What are the different types of DC motors explain any one of them with diagram.
3) Classify the dc generators.
4) A four pole wave wound armature has 500 conductors and flux of 0.02 Web per pole , find the EMF induced in the armature when running at the speed of 800 RPM.
5) An Inductance of 0.2H connected to a 220V, 50Hz, 50Hz supply. Find the current drawn by the circuit.

Q.4 Attempt any three of the following. (12)

1) Explain the construction and working of generation of alternating current.
2) An inductive coil with the resistance of 10 ohms and an inductance of 0.05 Henry is connected to a 230 volt 50 Hertz supply find a) inductive reactance b) Impedance c) current d) power factor.
3) Daw a neat labelled diagram of 3 point starter of a DC shunt motors.
4) Define : a) Power factor b) Impedance c) Zero power factor