

**MODEL QUESTION PAPER - I****Time : 3 Hours****Maximum Marks : 100**

**Part A: 10 Questions are to be answered each carries 3 marks. (10 x 3 = 30)**

**Part B: 5 Questions will be in either or pattern, each question carries 14 marks. (5 x 14 = 70)**

**PART - A**

1. Define Lenz's law.
2. State Fleming's Right Hand Rule.
3. Explain Flemings's Left Hand Rule.
4. What is Back EMF?
5. What is Regulation of transformer.
6. What is all day efficiency?
7. Mention the connections of 3 phase transformer.
8. Mention the various coolings used in transformer.
9. Write the function of brushes.
10. What are the defects in DC armature winding?

**PART - B**

11. A) State Faraday's Laws of Electro magnetic induction  
(OR)

B) Derive the EMF equation of DC generator.

12. A) Explain the principle of operation of Dc motor.

**(OR)**

B) Draw and explain the operation of 3 point starter.

13. A) Explain how to determine the equivalent circuit constants by conducting O.C test and S.C test in single phase transformer.

**(OR)**

B) Derive the EMF equation of Transformer.

14. A) Explain the different connections of three phase transformer.

**(OR)**

B) Explain any three types of cooling used in transformer.

15. A) Explain the defects in commutator and how it is rectified.

**(OR)**

B) Write short notes on preventive maintenance.