

Register No.:

**786**

**April 2023**

***Time – Three hours  
(Maximum Marks: 100)***

- N.B.***
1. Answer all questions under Part-A. Each question carries 3 marks.
  2. Answer all the questions either (A) or (B) in Part-B. Each question carries 14 marks.

**PART – A**

1. What is armature reaction?
2. State Lenz's law.
3. Mention the types of DC motor.
4. What are the losses in D.C. machine?
5. A 230/115 V transformer takes a current of 10 A in its secondary. What will be the primary current?
6. State the advantages of shell type transformer.
7. What are the different types of connection of transformer?
8. Name the four protective devices in a transformer.
9. State the objectives of the plant maintenance.
10. What is meant by earthing?

[Turn over.....

**PART – B**

11. (a) Explain with a neat diagram, the constructional details of DC generator.

(Or)

- (b) Draw and explain No load characteristics of DC generator.

12. (a) Draw and explain the characteristics of DC shunt motor.

(Or)

- (b) Explain the various speed controls methods for DC series motor.

13. (a) Explain the construction and principle of operation of shell type transformer.

(Or)

- (b) Draw and explain the phasor diagram of single phase transformer on leading power factor load.

14. (a) Discuss in detail about grouping of 3 phase transformers.

(Or)

- (b) What are the various methods of cooling in transformer and explain any two of them.

15. (a) Explain in detail the resurfacing process of commutator in DC machines.

(Or)

- (b) List out the various steps involved in transformer oil BDV testing.