

4244

BOARD DIPLOMA EXAMINATION, (C-14)

MARCH/APRIL—2021

DEEE - THIRD SEMESTER EXAMINATION

DC MACHINES

Time : 3 hours]

[Total Marks : 80

PART—A

4×5=20

- Instructions :** (1) Answer *any five* questions.
(2) Each question carries **four** marks.
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. State Flemings Right Hand Rule.
2. Classify DC generators based on excitation.
3. List the various power losses incur in DC generator.
4. Define armature reaction.
5. List the different methods of improving commutation.
6. List the different losses in DC motor.
7. List the applications of DC motors.
8. State the need of speed control of DC motors.
9. State the disadvantages of DC motor speed control by armature control method.
10. List the different methods of testing of DC motors.

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PART—B

15×4=60

- Instructions :** (1) Answer *any four* questions.
(2) Each question carries **fifteen** marks.
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. Explain the working of simple loop generator.
12. Explain the power stahes in DC generators.
13. Explain the open circuit characteristics of DC shunt generator.
14. Explain commutation in DC generator.
15. Draw the circuit of DC series motor and write its voltage and current equation.
16. Explain the electrical characteristics of DC shunt motor.
17. Draw and explain 3-point starter.
18. Explain Brake Test on DC shunt motor.

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