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C14-EE–502

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BOARD DIPLOMA EXAMINATION, (C-14)

MARCH/APRIL—2021

DEEE - FIFTH SEMESTER EXAMINATION

AC MACHINES - II

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. Draw the V-curves and Inverted V-curves model graphs.

2. Draw the phasor diagram of Synchronous Motor with under-excitation and constant load.

3. State the working principle of Three Phase Induction Motor.

4. List the various methods of starting of Three Phase Induction Motors.

5. Compare Synchronous Motor with Induction Motor.

6. State Cross Field Theory in Single Phase Induction Motors.

7. Why the Single Phase Induction Motor is not a Self Starting Motor?

8. List the applications of Single Phase Induction Motors.

9. List the types of Stepper Motors.

10. List the applications of Permanent Magnet Stepper Motors.

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 principle of Synchronous Motor.

12. Explain any one method of starting of Synchronous Motor.

13. Explain the construction of Three Phase Squirrel Cage Induction Motor.

14. Explain the No Load test conducted on Three Phase Induction Motor.

15. Explain the working of Auto Transformer Starter of Three Phase Induction Motor.

16. Explain the Three Phase Induction Motor speed control by Injecting Voltage in rotor circuit.

17. Explain the working of Single Phase Split Phase Induction Motor.

18. State the construction and working of Single Phase AC Series Motor.

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