Register No.:

915

October 2017

Time – Three hours
(Maximum Marks: 75)

[N.B: (1) Q.No. 8 in PART – A and Q.No. 16 in PART – B are compulsory. Answer any FOUR questions from the remaining in each PART – A and PART – B.

(2) Answer division (a) or division (b) of each question in PART-C.

(3) Each question carries 2 marks in PART – A, 3 marks in Part – B and 10 marks in PART – C.]

PART – A

1. Mention the types of alternator rotor.
2. Define short pitched winding.
3. Define leakage reactance.
4. Write any two methods of determining the voltage regulation of alternator.
5. Write the expression for synchronous speed of three phase induction motor.
6. Mention the types of speed control of three phase induction motor.
7. Name the machine which works only at synchronous speed.
8. State any two applications of permanent magnet synchronous motor.

PART – B

9. Define critical speed of alternator.
10. Define distribution factor.
11. What are the advantages of parallel operation of alternator?
12. What is meant by synchronising current?
13. What is the use of circle diagram?
14. What is crawling in induction motor?
15. Mention any three applications of synchronous motor.
16. State the advantages of permanent magnet DC motor.

[Turn over.....

PART – C

17. (a) With the help of a neat diagram explain the constructional details of cylindrical type alternator.

(Or)

(b) State the advantages of hydrogen cooling and its precautions.

18. (a) Explain the synchronous impedance method of determining the voltage regulation of alternator.

(Or)

(b) Explain the synchronising of alternator by bright lamp method.

19. (a) Compare the squirrel cage and slip-ring induction motor.

(Or)

(b) Explain with a neat diagram the working of star-delta starter.

20. (a) Explain the construction and working principle of capacitor start induction motor.

(Or)

(b) Explain any three methods of starting of synchronous motor.

21. (a) Explain the construction and working principle of AC servo motor.

(Or)

(b) Explain the construction and working principle of permanent magnet DC motor.
