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ANNA UNIVERSITY OF TECHNOLOGY, COIMBATORE

B.E. / B.TECH. DEGREE EXANINATIONS : NOV / DEC 2010

REGULATIONS: 2008

THIRD SEMESTER : ECE

080290008 - ELECTRICAL ENGINEERING

Time: 3 Hours **Max. Marks : 100**

PART- A

(20 x 2 = 40 MARKS)

ANSWER ALL QUESTIONS

1. Define pole-pitch.
2. Write the various losses occurring in DC generator.
3. List out the different types of DC motor.
4. What is the necessity for starters in a dc motor?
5. Write down the emf equation of a transformer?
6. Write the condition for maximum efficiency of transformer?
7. Define the regulation and efficiency of a transformer.
8. Define All-Day Efficiency.
9. Why single phase induction motor is not self –starting?
10. Name some methods of starting squirrel cage induction motor.
11. What is the function of slip ring in 3-phase induction motor?
12. Define Cogging of induction motor.
13. What are the characteristic features of synchronous motor?
14. Define pullout torque in synchronous motor.
15. Mention some of the applications of stepper motor.
16. Define the term step angle.
17. List out the types of power generation systems.

18. What do you mean by one line diagram in electric power system?
19. What is the voltage level of a sub transmission system?
20. Name the places where HVDC is used in India.

PART- B

(5 x 12 = 60 MARKS)

ANSWER ANY FIVE QUESTIONS

21. a. Describe with a neat diagram of the construction details of DC machines. (7)
    b. Explain the significance of back emf. (5)
22. Discuss the characteristics of DC generator.
23. Derive the equivalent circuit of a transformer.
24. Explain the principle of operation of three phase induction motor.
25. Explain the construction and principle of operation of a synchronous motor.
26. Write notes on
    a. Reluctance Motor (6)
    b. Stepper Motor (6)
27. a. Discuss about the types of cables used in power systems. (7)
    b. State the EHV transmission systems with the salient features. (5)
28. Explain in detail the various types of insulators and their applications to power transmission.

*****THE END*****