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EE666

Sixth Semester B.E. Degree Examination, Dec. 07 / Jan. 08
Testing and Commissioning of Electrical Equipment

Time: 3 hrs.

Max. Marks:100

Note : Answer any FIVE full questions.

- 1 a. Explain the civil work associated with transformer foundation. (06 Marks)
b. What are the points to be considered in location and site selection for power transformer? (04 Marks)
c. Describe the test setup for impulse testing of power transformer. (10 Marks)
- 2 a. State the characteristics of transformer oil and explain the procedure for maintenance of transformer oil. (10 Marks)
b. Explain in brief the various commissioning tests on power transformer. (10 Marks)
- 3 a. State the various aspects of inspecting the mechanical parts of a machine. (05 Marks)
b. What are the methods of measuring the slip of an induction motor? (05 Marks)
c. State the various steps in the installation and commissioning of Induction motor. (10 Marks)
- 4 a. Explain the significance of balancing of rotor. How is the balancing achieved? (10 Marks)
b. What is the significance of preventive maintenance and servicing of electrical motor? Give the guidelines and activities of preventive maintenance. (10 Marks)
- 5 a. State and explain the procedure of various tests on synchronous machine and their significance. (10 Marks)
b. Explain the purpose of drying out of synchronous machine and procedure of drying out. What should be the value of insulation resistance? (10 Marks)
- 6 a. Explain the sudden 3 ϕ short circuit test on a 3 ϕ synchronous generator and explain how to calculate X'_d, X''_d and X_d from the test. (10 Marks)
b. Explain the function of excitation system and principle of brush less excitation system. (10 Marks)
- 7 a. State and explain the various ratings of high voltage a.c. circuit breakers. (10 Marks)
b. Explain the various steps in maintenance of circuit breakers. (10 Marks)
- 8 Write short notes on any four of the following :
a. Types of enclosures for rotating electrical machines.
b. Polarization index and its significance.
c. Routine tests performed on high voltage circuit breakers.
d. Specific tests on transformer to determine the performance curves.
e. Cooling system for electrical machines. (10 Marks)
