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10EE756

Seventh Semester B.E. Degree Examination, Dec.2015/Jan.2016
Testing and Commissioning of Electrical Equipments

Time: 3 hrs. Max. Marks:100

Note: ***Answer any FIVE full questions, selecting atleast TWO questions from each part.***

PART – A

1 a. What are the standard specifications of a power transformer? **(10 Marks)**

b. Explain the points to be considered in the selection of site and location of power transformer. **(10 Marks)**

2 a. What are the qualities of a good insulating oil? **(04 Marks)**

b. Explain the method of measurement of insulation resistance and polarization index in case of transformer. **(06 Marks)**

c. Explain the procedure of drying out of power transformer. **(10 Marks)**

3 a. Explain the sudden 3 ϕ short circuit test on a three phase generator and how to calculate X'_d, X''_d and X_c or X_q from the sudden three phase short circuit test. **(10 Marks)**

b. State the routine tests required to be done for a synchronous machine. **(10 Marks)**

4 a. Enumerate the various steps of installation of a synchronous machine. **(06 Marks)**

b. Describe the methods of cooling employed in synchronous machines. **(04 Marks)**

c. State and explain the various abnormal conditions in synchronous generators and their effect on the generator. State respective protection. **(10 Marks)**

PART – B

5 a. Explain the high voltage test conducted on the induction motors. **(10 Marks)**

b. Describe a typical preventive maintenance schedule of induction motors. **(10 Marks)**

6 a. Write a brief note on shaft alignment of induction motors. **(05 Marks)**

b. Explain in detail what are the different methods of drying out the induction motors **(10 Marks)**

c. State the various types of enclosures adopted in induction motors. **(05 Marks)**

7 a. Explain briefly the no – load, blocked rotor and temperature rise tests for induction motors. **(10 Marks)**

b. Explain the layout of a simple short circuit testing and the procedure of conducting the short circuit test on I.M. **(10 Marks)**

8 Write short notes on :

a. Maintenance of SF_6 circuit breaker.

b. Selection of bearings in an induction motor.

c. Testing of transformer oil.

d. Specification of high voltage circuit breaker. **(20 Marks)**

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