42+8 = 50, will be treated as malpractice Important Note: 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Any revealing of identification, appeal to evaluator and /or equations written eg,

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Seventh Semester B.E. Degree Examination, Aug./Sept.2020 Testing and Commissioning of Electrical Equipment

Time: 3 hrs.

Library

Max. Marks:100

Note: Answer any FIVE full questions, selecting at least TWO full questions from each part.

PART - A

- a. Explain the various aspects to be considered in the selection of site and location of power 1 transformer. (06 Marks)
 - What are the expected properties of good insulating oil used in transformers? (04 Marks) b.
 - Explain the various accessories and fitments fitted on power transformer. (10 Marks)
- What is drying out of transformer? Explain briefly the different methods of drying out of transformer. (05 Marks)
 - b. Describe the test setup for impulse testing of power transformers. (10 Marks)
 - Explain the recommended maintenance schedule for transformer of capacities less than 1000KVA. (05 Marks)
- Explain the procedure for dismantling of a large rotating machine despatched in fully 3 assembled condition. What are the cheeks after dismantling? (14 Marks)
 - Mention the specifications of synchronous machine. (06 Marks) b.
- a. Explain the sudden 3 phase short circuit test on a 3 phase synchronous generator and also calculate x''_d , x'_d and x_d from this test. (10 Marks)
 - State and explain the various abnormal conditions in synchronous generators and their effect on the generator, state the respective protection. (10 Marks)

PART - B

- What are the standard specifications of Induction motor? 5 (04 Marks)
 - State the various types of enclosures for rotating electrical machines. (06 Marks)
 - Explain the procedure of drying out an electrical machine by
 - Drying chambers and resistance heaters i)
 - Radiating lamps ii)
 - By circulating short circuit currents. iii)

(10 Marks)

- a. Explain the methods of measuring slip of an Induction motor.
- (08 Marks) (04 Marks)

- b. Explain different duties of Induction motor.
 - State the various steps in installation of a large IM received in dismantled condition.
- (08 Marks)
- Explain the various protective devices and their functions used in electrical system. 7 a.

(04 Marks)

Explain the various steps in maintenance of circuit breakers.

- (10 Marks)
- State and explain the various tests performed on high voltage ac circuit breaker.
- (06 Marks)
- Write short notes on the following: 8
 - a. Balancing of Induction motor
 - Polarity testing of transformer
 - Various causes for vibration of Induction motor
 - Short Circuit Ratio (SCR) of a synchronous machine and its significance. (20 Marks)

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