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10EE756

Seventh Semester B.E. Degree Examination, June/July 2019
Testing and Commissioning of Electrical Equipment

Time: 3 hrs.

Max. Marks:100

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

PART – A

- 1 a. Explain the procedure of drying out of a power transformer. (06 Marks)
b. What are the qualities of good insulating oil? (06 Marks)
c. Describe the test setup for impulse testing of power transformers. (08 Marks)
- 2 a. What are the standard specifications of a power transformer? (06 Marks)
b. With a neat sketch, explain the method of measurement of insulation resistance. (08 Marks)
c. List the various commissioning tests on a power transformer. Explain any one of them. (06 Marks)
- 3 a. Name the various accessories and fitments on a transformer. (10 Marks)
b. What are the typical ratings of synchronous Generator? (10 Marks)
- 4 a. Describe features of steam – turbine generators. (06 Marks)
b. What is unit commissioning? What are the essential steps in unit commission protocol with reference to steam turbine generator unit? (06 Marks)
c. Define short – circuit ratio SCR of synchronous machine. What is its significance? (08 Marks)

PART – B

- 5 a. State the various steps in the installation and commission of Induction motors. (10 Marks)
b. What are permissible tolerances of shaft alignment? Explain the procedure of alignment of shaft of electrical machines. (10 Marks)
- 6 a. Give example of a Rating plate of an Induction motor. (06 Marks)
b. Explain the drying out of a motor by radiating lamps (or) infrared lamps. (06 Marks)
c. State the checks to be carried out at site prior to commissioning of an Induction motor. (08 Marks)
- 7 a. List the various factors to be considered while selecting a circuit breaker. (06 Marks)
b. Explain different tests to be conducted on circuit breaker. (06 Marks)
c. Explain the various commissioning tests on high voltage A.C circuit breakers. (08 Marks)
- 8 Write a short not on :
 - i) Maintenance of SF₆ circuit breaker.
 - ii) Various steps in installation and commissioning of outdoor circuit breaker.
 - iii) Polarization Index
 - iv) Short circuit test setup for circuit breaker. (20 Marks)

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