



P.E.S. College of Engineering, Mandya - 571 401
 (An Autonomous Institution affiliated to VTU, Belagavi)
Seventh Semester, B.E. - Electrical and Electronics Engineering
Semester End Examination; Dec. - 2019
Testing and Commissioning of Electrical Equipments

Time: 3 hrs

Max. Marks: 100

Note: Answer FIVE full questions, selecting ONE full question from each unit.

UNIT - I

- 1 a. What are the different methods of cooling in transformers? Explain them in brief. 10
 b. List the possible troubles with the transformers and precautions against the same. 10
 2 a. Explain with a neat sketch the working principle of Buchholtz relay. 10
 b. Why drying of transformers are necessary? Explain the different methods of drying. 10

UNIT - II

- 3 a. List the steps involved in Installation of an alternator. 10
 b. Explain the SC and OC tests on synchronous generator. 10
 4 a. State and explain various abnormal and fault conditions in synchronous generator. What are the protections provided against these faults? 10
 b. Explain the procedure for measurement of DC resistance of windings in alternator. 10

UNIT - III

- 5 a. Explain the following tests carried on Induction motor: 10
 i) H.V test ii) No load test
 b. What are the information to be given with enquiry and placing the order for induction motor. 10
 6 a. What are the different methods of drying out of an Induction motor? Explain. 10
 b. Explain the following tests carried on Induction motor: 10
 i) Insulation test ii) Temperature Rise test

UNIT - IV

- 7 a. Explain the preventive and corrective maintenance as applied to circuit breakers. 10
 b. List and explain the different tests to be conducted on circuit breakers. 10
 8 a. Explain the need of protection for power system components. 10
 b. i) List out the applications of VT's and CT's. 6
 ii) Define the following:
 I) Ratio error II) Phase angle error 4

UNIT - V

- 9 a. State the seven principles of safety management. 10
 b. State and explain the principles of Hot line maintenance. 10
 10 a. Explain the following: 10
 i) First aid ii) Electric shock iii) Safety clearance
 iv) Touch potential v) step potential
 b. Explain the safety management interface with O and M. 10