

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER–VIII • EXAMINATION – SUMMER • 2015****Subject Code: 180801****Date: 15/05/2015****Subject Name: Testing and Installation of Electrical Equipment and Systems****Time: 10.30AM-01.00PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) State the standard method of designation of cooling of an electrical rotating machine as per IEC recommendations. **07**  
 (b) What are the power quality disturbances in voltage? Also write its causes and remedies. **07**
- Q.2** (a) State the significance of safety precautions and explain management's responsibility. **07**  
 (b) Explain the procedure of dismantling of a large rotating machine dispatched in fully assembled condition. What are the checks after dismantling? **07**
- OR**
- (b) What is synchronizing of a synchronous generator with busbars? What are the required conditions for instant of synchronizing? **07**
- Q.3** (a) Explain the working principle of megger with necessary figure and procedure of its use. **07**  
 (b) What is load shedding? Why is it necessary? How is it carried out and where? **07**
- OR**
- Q.3** (a) Explain the procedure of acceptance and storage of induction motor. **07**  
 (b) Explain the seven principles for safety management. **07**
- Q.4** (a) What is cyclic duration factor? Explain with standard notations. Explain the term MRC, STR and DTR for rotating electrical machines. **07**  
 (b) Explain the procedure of drying out of electric motor using the **07**  
 (1) radiating lamp  
 (2) drying chambers and resistor heaters.
- OR**
- Q.4** (a) Explain the main functions of SCADA. **07**  
 (b) Describe the test setup for impulse testing of power transformers with necessary figure. **07**
- Q.5** (a) State the conditions for which HVDC Links are preferred? **07**  
 (b) Describe capacitance bridge method for locating cable faults with necessary circuit diagram. **07**
- OR**
- Q.5** (a) Explain the procedure of design of transmission towers and structures. **07**  
 (b) Explain the procedure of investigation of power quality. **07**

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