

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VIII • EXAMINATION – WINTER • 2014****Subject Code: 180801****Date: 04-12-2014****Subject Name: Testing and Installation of Electrical Equipments and System****Time: 02:30 pm - 05:00 pm****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) What is electrical shock? Distinguish between primary shock and secondary shock. Write the causes behind severity of shock **07**
(b) Explain the seven principles of safety management in electrical plants. **07**
- Q.2** (a) State the causes of disturbances in power quality and their effects on power quality. **07**
(b) State the principle of DC Insulation Resistance Measurements. Describe the Megger and procedure of its use. **07**
- OR**
- (b) Describe Oscillographic tests on electrical equipment. Give example of a typical test record. **07**
- Q.3** (a) Write IEEE recommended practice for monitoring Electric Power Quality. **07**
(b) What is the significance of lightning impulse tests? Describe the test set –up and test procedure. **07**
- OR**
- Q.3** (a) Explain the second characteristic numeral in the standard designation of cooling system. **07**
(b) Explain the procedure of making the rotating machine ready for installation. **07**
- Q.4** (a) State the checks to be carried out at site prior to commissioning. **07**
(b) What is synchronizing of a synchronous generator with bus bars ? What are the required conditions for instant of synchronizing? **07**
- OR**
- Q.4** (a) Describe the construction of Substation Structures .Explain the method of their erection and maintenance. **07**
(b) State the various steps in the Drying –out of a Motor or a Generator. **07**
- Q.5** (a) Describe the connections between Generator, Main Transformer and Auxiliary Transformer for unit connection in a typical power plant. **07**
(b) Describe various methods of installing Power Cables. **07**
- OR**
- Q.5** (a) State the merits of Back to Back HVDC coupling Station. Describe a typical Layout of Back to Back HVDC Coupling Station. **07**
(b) Explain the principle and function of VT and Capacitor Voltage Transformer (CVT). **07**
