Seat No.: _____ Enrolment No._____

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**

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