Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VIII EXAMINATION – WINTER 2015

Subject Code:180801 **Date:09/12/2015**

Subject Name: Testing and Installation of Electrical Equipments and System

Time: 2:30pm to 5:00pm **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)**	Explain the standard code for the degree of cooling and degree of Protection. Explain the suitable example for each of this designation.	**07**
	(b)	Explain the standard maintenance procedure for a typical motor in factory premises.	**07**
Q.2	**(a)**	Explain in brief the safety management system for O and M.	**07**
	(b)	Describe Electrical Shock and discuss the various factors affecting the same.	**07**
		OR	
	(b)	(1) Draw the waveform for the following conditions: (I) outage(II) Surge (III) Harmonic (IV) Voltage Sag	**04**
		(2) Briefly Describe the polarization index test o Dielectric material.	**03**
Q.3	**(a)**	List the various tests on conducting path. Briefly Describe the continuity test and its significance.	**07**
	(b)	Explain the failure modes in dielectric material.	**07**
		OR	
Q.3	**(a)**	What is load shedding?Why is it necessary? How is it carried out and where?	**07**
	(b)	Explain low voltage d.c. system in a substation.	**07**
Q.4	**(a)**	Explain the procedure of drying out of electric motor using the (1) radiating lamp (2) drying chambers and resistor heaters.	**07**
	(b)	Explain the procedure of acceptance and storage of induction motor.	**07**
		OR	
Q.4	**(a)**	Explain the main functions of SCADA.	**07**
Q.4	**(b)**	State the conditions for which HVDC Links are preferred?	**07**
Q.5	**(a)**	State the factors to be considered while making a choice of a particular drive.	**07**
	(b)	State and explain essential steps in unit commissioning of synchronous generator.	**07**
		OR	
Q.5	**(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 work permit system for electric plant.	**07**