Seat No.: _____ **Enrolment No._____**

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VIII (OLD) - EXAMINATION – SUMMER 2017

Subject Code:180801 **Date:02/05/2017**

Subject Name: Testing and Installation of Electrical Equipments and Systems

Time:10:30 AM to 01:00 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)**	Explain the first characteristic numeral in the standard designation of cooling system.	**07**
	(b)	Recommend safety precautions and procedures in electrical plants to prevent electric shocks.	**07**
Q.2	**(a)**	Describe the test set-up and test procedure of switching impulse test with necessary figure.	**07**
	(b)	Explain the work and Procedures of Hot –line Maintenance.	**07**
		OR	
	(b)	What is the IEEE recommended practice for Monitoring Electric Power Quality?	**07**
Q.3	**(a)**	Describe oscillographic tests on electrical equipment. Give example of a typical test record.	**07**
	(b)	State the causes of disturbances in power quality and list the power quality improvement facilities for each variable of electrical power supply?	**07**
		OR	
Q.3	**(a)**	State various types of enclosures used for rotating electrical machines.	**07**
	(b)	What is drying-out of an electric rotating machine? Why and when is it necessary?	**07**
Q.4	**(a)**	What should be the value of insulation resistance of electric rotating machines? Define with necessary formula.	**07**
	(b)	What is the significance of preventive maintenance and servicing of electric motors? Give guidelines for preventive maintenance.	**07**
		OR	
Q.4	**(a)**	State the various steps in the installation and commissioning of induction motors.	**07**
	(b)	Explain the meaning of synchronizing of an alternator with the busbar. Explain the method of synchronizing by means of lamps.	**07**
Q.5	**(a)**	What is the meaning of compensation of reactive power? Why is it necessary?	**07**
	(b)	Describe the construction of substation structures. Explain the method of their erection and maintenance.	**07**
		OR	
Q.5	**(a)**	Explain the principle of fiber -optic data transmission.	**07**
	(b)	Writes advantages and applications of SF_6 gas insulated substations.	**07**

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