Seat No.:	Enrolment No.
Deat 110	

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VIII (OLD) - EXAMINATION – SUMMER 2017 Subject Code:180901 Date:04/05/2017

Ti	ime: 1 structi	t Name: Commissioning of Electrical Equipments 10:30 AM to 01:00 PM Total Marks: ions: 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks.	: 70
Q.1	` '	Explain Mechanical Endurance and Impulse testing of Circuit breakers. Explain charging current making and breaking test of isolator.	07 07
Q.2	(a) (b)	Explain the different methods of earth resistance measurement. Explain Murray loop test of cable.	07 07
	(b)	OR Explain voltage drop and bar to bar test of DC machines.	07
Q.3	(a)	Explain with the help of circuit diagram the partial discharge test of transformer	07
	(b)	Why to conduct tan delta test on transformer? Explain it with the help of circuit diagram	07
Q.3	(a)	OR Explain purposes for performing No-load and Blocked rotor tests on 3-ф	07
Q.e.	(b)	induction motor. For the following conditions explain in detail troubles, causes and its remedies for 3-φ squirrel cage induction motor. (i) Motor fails to start (ii) Motor runs at 1/7 th synchronous speed. (iii) Motor heats up	07
Q.4	(a)	State the importance of mechanical balance and magnetic balance in synchronous machine. How mechanical balance is measured?	07
	(b)	Why the Hopkinson's test performed on D.C. machine? Explain it. OR	07
Q.4	(a)	List out the necessary conditions of Synchronization. Draw the circuit diagram of synchronization of alternator with grid.	07
	(b)	Explain behavior of 3 phase induction motor under abnormal frequency condition and under single phasing condition.	07
Q.5	(a) (b)	Explain procedure for determination of polarization index for transformer. State the causes for vibration in motors and generators. Explain the harmful effects of vibration. How are the vibration measured.	
0.5	(-)	OR	07
Q.5	(a)	State the various troubles with commutator and brush gear, their causes and remedies .Explain the choice of selection of materials used for the brushes of various rotating machine	07
	(b)	Explain power frequency voltage withstand test, impulse voltage withstand test & vibration test on bus bar	07
