

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-VIII • EXAMINATION – WINTER • 2014

Subject Code: 180901**Date: 04-12-2014****Subject Name: Commissioning Of Electrical Equipment****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) Explain with setup sketch, Impulse testing for power transformer. **07**

(b) List out the various tests on transformer. **07**
Explain temp. Rise test for same.

Q.2 (a) Explain power frequency and impulse voltage withstand test on three phase distribution transformer. **07**

(b) Explain Dielectric strength measurement test on transformer oil. **07**

OR

(b) Explain the purification and filtration process of transformer oil. **07**

Q.3 (a) Give causes, consequences and remedies for the following abnormal conditions of 3-phase induction motor. **07**

1. Overheating 2. Stalling 3. Excessive speed.

(b) State the methods of measurement of slip of induction motor. Also explain any one in detail. **07**

OR

Q.3 (a) Explain procedure for conducting Full load test on 3-phase induction motor. Also analyze characteristics of diff. parameters with curves. **07**

(b) What is the necessity of drying of electrical equipment? **07**
Explain polarization index of 3-phase induction motor.

Q.4 (a) What is diff. between system earthing and structure earthing ? Explain with diagram, measurement of earth resistance in substation. **07**

(b) Explain short circuit testing on circuit breaker with plant layout. **07**

OR

Q.4 (a) Explain Murray test for earth fault location in underground cable. **07**

(b) Explain the significance of following in performance of electrical equipments. **07**
1. Interpoles in d.c. m/c
2. Partial discharge test on transformer
3. Insulation co-ordination in sub station

- Q.5 (a)** Explain the causes of various troubles with commutator and brush gear in d.c. machines. Give remedies for same. **07**
- (b)** Explain commissioning steps for synchronous machines **07**
- OR**
- Q.5 (a)** Define Degree of Protection of Induction Motor. **07**
Explain I.P. and I.C. codes for same.
- (b)** Explain the testing of Voltage Regulators and Excitation Circuit of Synchronous Generator. **07**
