

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VIII (NEW) EXAMINATION – WINTER 2018

Subject Code: 2180901

Date: 29/11/2018

Subject Name: Testing and Commissioning of Electrical Equipments

Time: 02:30 PM TO 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.

	MARKS
Q.1 (a) What is testing of electrical equipments? Classify different tests.	03
(b) What is polarization index? State its importance.	04
(c) What is difference between equipment earthing and system grounding? Explain earthing procedure for substation.	07
Q.2 (a) State the importance of polarity test for transformer.	03
(b) Explain insulation resistance measurement for power transformer.	04
(c) Explain any two troubles in three phase induction motor with their causes and remedies.	07
OR	
(c) Explain Hopkinson's test with its circuit diagram.	07
Q.3 (a) What are clearance and creepage?	03
(b) Explain any one method for alignment of rotating electrical machine.	04
(c) Explain earth resistance measurement with usual connection diagram.	07
OR	
Q.3 (a) Explain slip measurement using galvanometer.	03
(b) Explain power frequency HV test on three phase induction motor.	04
(c) Explain drying out procedure for power transformer. Also show the insulation resistance variation during drying out with respect to time.	07
Q.4 (a) Explain the polarity measurement of current transformer.	03
(b) Can Dy1 connected in parallel with Dy11? Justify your answer.	04
(c) Explain routine maintenance procedure for a power transformer.	07
OR	
Q.4 (a) What is technical report? Show any sample technical report in sheet form.	03
(b) Enlist the different protection schemes for synchronous generator.	04
(c) Explain the commissioning procedure of synchronous generator.	07
Q.5 (a) Enlist the different types of conductor used for transmission line.	03
(b) Write short note on gas insulated substation.	04
(c) What is tower footing resistance? Explain any one method to reduce the value of tower footing resistance.	07
OR	
Q.5 (a) Give difference between isolator and circuit breaker.	03
(b) Explain mechanical endurance test for switchgear.	04
(c) Explain any two routine tests to be performed on circuit breaker.	07
