

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.E. - SEMESTER – VIII EXAMINATION – OCTOBER 2012**

**Subject code: 180901****Date: 27/10/2012****Subject Name: Commissioning of Electrical Equipment****Time: 02.30pm - 05.00pm****Total Marks: 70****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) What are different types of tests performed on electrical equipment? Explain them briefly. **07**
- (b) Explain drying out method of oil cooled transformer? **07**
- Q.2** (a) What is the method for purification of transformer oil? How can we measure Dielectric strength of oil? **07**
- (b) What is polarization Index? What is the importance of it? Explain briefly. **07**
- OR**
- (b) Explain the following test regarding transformer  
 (1) Polarity test (2) Loss measurement (3) Power frequency with stand test. **07**
- Q.3** (a) Explain the different method for measurement of Earthing resistance. **07**
- (b) What is the significance of polarity in case of current transformer? How can we test the polarity of C.T? **07**
- OR**
- Q.3** (a) How the D.C/A.C resistance, insulation resistance and block rotor test can be performed on three phase induction motor? **07**
- (b) Why the Hopkinson's test performed on D.C. machine? Explain it. **07**
- Q.4** (a) Explain following test regarding cable **07**
- 1) High voltage test.
  - 2) Insulation resistance test
  - 3) Conductor resistance test
- (b) What are the different methods to find out cable fault? Explain one of them. **07**
- OR**
- Q.4** (a) Explain the following test regarding circuit breaker **07**
- 1) Mechanical endurance test
  - 2) Measurement of breaker time
  - 3) Impulse testing.
- Q.4** (b) What is the significance of partial discharge measurement and Tan Delta test in case of transformer? **07**
- Q.5** (a) How can we find Dy1 & Dy11 connection in the case of transformer? **07**
- (b) How can you find out the polarity test in case of three phase power transformer and what is the significance of it? Can we connect Dy1 & Dy11 transformer in parallel? Give your reason. **07**
- OR**
- Q.5** (a) Explain noise measurement, vibration measurement and slip measurement in case of three phase induction motor. **07**
- (b) What is the working of ELCB? What are the different tests performed on it? **07**

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