EE666

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NEW SCHEME

# Sixth Semester B.E. Degree Examination, July 2007
## Electrical and Electronics Engineering
## Testing and Commissioning of Electrical Equipments

Time: 3 hrs.] [Max. Marks:100

**Note :** ***Answer any FIVE full questions.***

1 a. What are standard specification of a power transformer? Explain the specification of outdoor type distribution transformer up to 100 KVA, 11KV. **(10 Marks)**

b. Which are the four phasor groups adopted for standard connection of transformers? Explain any one with phasor diagram and winding connection. **(10 Marks)**

2 a. What are the qualities of a good insulating oil? **(04 Marks)**

b. Explain the method of measurement of insulation resistance and polarization index in case of transformers. **(06 Marks)**

c. What is impulse testing? Explain the test setup used for impulse testing of transformers. **(10 Marks)**

3 a. Explain the various transformer accessories, fitments and safety devices. **(12 Marks)**

b. Mention the typical tests carried out on transformers before commissioning. **(08 Marks)**

4 a. What are the specifications of a three phase induction motor? **(05 Marks)**

b. Explain the foundation details of induction motors. **(05 Marks)**

c. Explain the methods of drying out of induction motors **(10 Marks)**

5 a. Explain the High Voltage test conducted on induction motors. **10 Marks**

b. Explain briefly the no-load, locked rotor and temperature rise test for induction motors. **10 Marks**

6 a. What are the various steps involved in installation of an alternator? **(05 Marks)**

b. What is SCR of a synchronous machine? Explain the sudden 3 – phase short circuit test on generators. **(10 Marks)**

c. Describe the methods of cooling employed in synchronous machines. **(05 Marks)**

7 a. Explain the method of determining the insulation resistance of an alternator. **(10 Marks)**

b. Describe the negative phase sequence test on synchronous machines. **(10 Marks)**

8 a. Explain with a neat layout diagram of the short circuit test station, the method of short circuit test conducted on circuit breakers. **(10 Marks)**

b. Write short notes on Maintenance of circuit breakers. **(10 Marks)**

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