

**TUTOR MARKED ASSIGNMENT****OEE-001****ELECTRICITY AND SAFETY MEASURES****Maximum Marks : 100****Weightage : 30%****Course Code: OEE-001****Last Date of Submission: April 30, 2015****Note :** All questions are compulsory and carry equal marks.

- Q.1 (a) Explain resistance, inductance and capacitance. Name various electrical appliances and mention the type of load these belong.
- (b) What is Power Triangle? Explain the concept of active power, reactive power and power factor in electrical systems.
- Q.2 (a) With the help of neat diagrams explain various tools used in handling electrical installations.
- (b) Describe in brief the types of accidents due to electricity.
- Q.3 (a) What are various quality parameters in electric power supply?
- (b) Describe Grid management in power distribution.
- Q.4 (a) Explain different methods of equipment earthing.
- (b) What steps are required for maintenance of earthing in electrical installations?
- Q.5 (a) Describe working of protective relays. What are important functional requirements of relays?
- (b) Write a note on application of relays in substation protection.
- Q.6 (a) What are various personal protective equipments to be used for safety?
- (b) Give details of various types of fire extinguishers and their respective applications.
- Q.7 (a) Prepare a list of checks to avoid hazards in 'Main Board' 'Lamps and Switches'.
- (b) What is the importance of power factor improvement?
- Q.8 (a) Explain the concept of cardiopulmonary resuscitation. How it is facilitated.
- (b) Write first aid treatment in case of a fall resulting in situation like :
- (i) Unconsciousness, (ii) Nose Bleeding, and (iii) Fractures.
- Q.9 (a) List various natural and manmade disasters and their impact on electrical power systems.
- (b) Explain various aspects of power supply restoration in case of disaster.
- Q.10 (a) Write Do's and Don'ts for electrical safety in case of domestic consumers.
- (b) Write down various measures which can be taken to avoid fire in electrical cables.

**TUTOR MARKED ASSIGNMENT****OEE-002****POWER DISTRIBUTION SYSTEM – BASICS****Maximum Marks : 100****Weightage : 30%****Course Code : OEE-002****Last Date of Submission : April 30, 2015****Note :** All questions are compulsory and carry equal marks.

- Q.1 (a) What are commercial losses in power distribution? Write about various constituents of commercial losses in distribution systems.
- (b) Write about various factors affecting commercial losses.
- Q.2 (a) Explain High Voltage Distribution Systems and its advantages.
- (b) What are important reasons for transformer failure, explain?
- Q.3 (a) Describe various types of power cables. Also explain various types of faults in power cables.
- (b) List various constituents of an overhead line. Write about their specific utility in brief.
- Q.4 (a) Write down various maintenance considerations for transformers.
- (b) Write various operational practices for enhancing transformer life and efficiency.
- Q.5 (a) Describe the equipments required for the construction of a 66-33/11 KV substation.
- (b) Explain general maintenance practices for substation and distribution lines.
- Q.6 (a) Explain various meter installation practices adopted to guard against meter tampering.
- Q.7 (a) Describe construction of power cables.
- (b) Explain role of energy accounting and auditing in preventing revenue loss.
- Q.8 (a) Elaborate Indian electricity rules regarding earthed terminal on consumer' premises and use of energy at high and extra high voltage.
- (b) Write down provisions laid out in Indian Electricity Rules regarding:
- (i) Clearances between ground and lowest conductor, (ii) Clearance between buildings and service lines, and (iii) Clearance between buildings and
- (a) High (b) Extra high voltage (EHV) lines.
- Q.9 (a) Explain following metering techniques used for High Tension (HT) consumers.
- (b) Describe various aspects of installation, commissioning and field-testing of energy meters.
- Q.10 (a) Write down various measures for controlling direct tapping by non- customers and customers.

