

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.

