

**TUTOR MARKED ASSIGNMENT****BEE-001****POWER DISTRIBUTION SECTOR****Maximum Marks : 100****Course Code : BEE-001****Weightage : 30%****Last Date of Submission : November 30, 2012****Note :** All questions are compulsory and carry equal marks.

- Q.1 (a) Which overhead conductor is best suited in theft prone areas and why?  
(b) What are the types of consumption recorded by a bivector meter? Is there any other indicator in the meter? If yes, name it.
- Q.2 (a) Explain AT&C losses. What is collection efficiency?  
(b) What factors contribute to T&D losses in urban areas?
- Q.3 (a) Following are the peak loads in the various regional grids in the country
- |               |          |
|---------------|----------|
| Northern      | 25000 MW |
| Western       | 30000 MW |
| Eastern       | 20000 MW |
| North-eastern | 23000 MW |
| Southern      | 7500 MW  |
- Work out the total peak load in the country when  
(i) None of the grids are interconnected.  
(ii) If all the grids are interconnected the diversity factor of peak load is 1.1.
- (b) Name the key performance indicators for customer service.
- Q.4 (a) Which tests should be performed on the distribution transformer before installation? What are the two inherent errors in a current transformer?  
(b) Differentiate between preventive and breakdown maintenance.
- Q.5 (a) Discuss the role of CERC in tariff setting.  
(b) What are the measures a distribution utility can take to improve collection?
- Q.6 (a) What are the measures which can be adopted by a utility to reduce Distribution transformer failure rate?  
(b) How would the National Tariff policy help in realizing the aims and objectives of Electricity Act 2003?
- Q.7 (a) Describe the method of testing of transformer insulation oil.  
(b) What are the various type of Distribution network systems? Describe briefly.
- Q.8 (a) Explain the live line maintenance techniques and tools.  
(b) What is KPI? Explain advantages and disadvantages of Benchmarking?

- Q.9 (a) Who can engage in trading? Which body fixes the trading margins?  
(b) Explain the importance of key performance indicators for a utility.
- Q.10 (a) What are the measures involved in network reconfiguration?  
(b) Briefly explain the features of meters used for HT metering.

**TUTOR MARKED ASSIGNMENT****BEE-002****ENERGY MANAGEMENT AND IT APPLICATIONS****Maximum Marks : 100****Course Code : BEE-002****Weightage : 30%****Last Date of Submission : November 30, 2012****Note :** All questions are compulsory and carry equal marks.

- Q. 1 (a) Describe any case study related to energy management in Power Distribution.  
(b) Describe the benefits of GIS for managing the power distribution system.
- Q.2 (a) Explain in brief energy usage and energy balance. List steps to curtail air pollution due to energy usage.  
(b) What do you understand by energy auditing? Justify need for energy auditing with the help of suitable examples.
- Q.3 (a) What is ERP? Describe its application areas in distribution.  
(b) Describe what you can do as a consumer to contribute to DSM and energy efficiency improvement.
- Q.4 (a) Discuss the measures that should be taken for preventing and handling cases of electric shock.  
(b) Explain in brief different types of fire extinguishers.
- Q.5 (a) What are the problems in energy accounting?  
(b) Explain the two types of spot billing technology. What are their relative advantages and disadvantages?
- Q.6 (a) List the different tools used for customer analysis. How do they benefit the utilities?  
(b) Explain how IT can help in reducing AT & C losses and improving the efficiency of power distribution.
- Q.7 (a) Discuss undesirable effects of "Green House Effect" on Global Environment.  
(b) Describe in brief the formation of Acid Rain and its effects.
- Q.8 (a) What should be the disaster management plan for quick restoration of power supply in the event of earth quake?  
(b) State the benefits of AMR and outline the hardware requirements for it.
- Q.9 (a) Discuss the reasons why DSM has not been taken up actively by utilities in the domestic and commercial sectors.  
(b) What are the key areas of IT interventions in the power distribution sector?
- Q.10 (a) Discuss the usefulness of SCADA for improving the operations of a power distribution utility.  
(b) Explain why utilities should adopt integrated IT systems rather than standalone applications.

**TUTOR MARKED ASSIGNMENT****BEE-003****MANAGEMENT OF POWER DISTRIBUTION****Maximum Marks: 100**  
**Weightage : 30%****Course Code : BEE-003**  
**Last Date of Submission : November 30, 2012****Note :** All questions are compulsory and carry equal marks.

- Q.1 (a) Explain the four phases of a project.  
(b) How can a utility implement Franchisee scheme to increase revenue collection and provide better customer care?
- Q.2 (a) Discuss the reliable methods of communication.  
(b) Why is effective communication important to the managers?
- Q.3 (a) Analyse statement 'Customer relationship management has become an important area for public utilities' in the context of your own organization.  
(b) What is performance Management System? Give examples.
- Q.4 (a) Explain turnkey contracts in power distribution? Make comparative statement of benefits of turnkey contracts vis-à-vis unit rate contracts.  
(b) Distinguish between fixed assets and current assets.
- Q.5 (a) Explain why customer satisfaction survey is important and how it is conducted..  
(b) Discuss the models of conflict process with examples.
- Q.6 (a) Discuss the important factors for motivating employees in an organization.  
(b) In your opinion, what should the role of a change leader be in facilitating the changes being brought about due to the power distribution reforms?
- .Q.7 (a) Describe the cost-volume-profit analysis.  
(b) Explain the process of DPR preparation.
- Q.8 (a) Explain the basic process of communication. What purposes are served through vertical communication?  
(b) Explain the various methods of resolving conflicts in an organization.
- Q.9 (a) Explain the difference between Trail Balance and Balance Sheet.  
(b) What is meant by 'Operating Leverage' and 'Financial Leverage'?
- Q.10 (a) Define the objective of budgeting and budgetary control.  
(b) Describe Variable Overhead Efficiency Variance.