

ACPDM

Assignment Booklet

**Advanced Certificate in Power
Distribution Management**

ACPDM

Course Code

BEE-001

BEE-002

BEE-003



School of Engineering and Technology
Indira Gandhi National Open University
Maidan Garhi, New Delhi – 110 068

(Jan 2018 / July 2018)

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Dear Student,

This booklet contains the assignments for the ACPDM – for the courses of BEE-001 BEE-002 & BEE-003. It is for your kind information that each course has one assignment, which is based on course materials of these courses. You are also advised to **write your responses in your own words**. This will improve your comprehension skills.

Further, you may note that in case the Coordinator / Counselor may summarily reject your assignment response happens to be a copy of assignment response sheet submitted by another student, your assignment **and/or your marks might be made null and void**. Therefore, you are strongly advised not to allow any other student to copy it. The last date of submission of assignment is given against each assignment. You are advised not to wait for the last date to submit your assignments.

This to inform that minimum duration of this programme is 6 months and max. Duration is 2 years. Please note that if you fails to submit the assignment of any course in the registered session of 6 months then same set of assignment is valid for one year, after one year you have to upload fresh set assignment of current year for submission.

Please note , assignments submission are prerequisite to appear and pass in your Term End Examination (TEE).

You need to submit the assignments as under:

For January Session- By 30th April ; For July Session- By 30th October

You can submit your assignment-

At your concern **Study Centre/Regional Centre** on or before the due date (in person).

Student are advised to get the acknowledgement/receipt while submitting assignment at Study Centre/Regional Centre concerned in order to fill up assignment submission details in your term end examination form.

We strongly feel that you should retain a photocopy of your assignment answer sheet duly acknowledged by the office of the Coordinator/ Study Centre/ Regional Centre to avoid any unforeseen situation.

For Formatting Your Assignments

- **On the top of the first page of your Tutor Marked Assignment (TMA) answer sheet**, please write the details exactly in the following format :

Enrolment No. _____	Date : _____
Regional Centre(RC) Code:-----	Study Centre(SC) Code:-----
Course Code : _____	Course Title : _____
Name : _____	Address : _____

Signature :	E mail----- Mob.-----

- Please follow the above format strictly to facilitate evaluation and avoid delay.
- Use only foolscap size writing paper (but not of very thin variety) for writing your answers.
- Leave 3 cm margin on the left, top and bottom of your answer sheet.
- Your answer should be logical and coherent.
- While solving problems, clearly indicate the question number along with the part being solved. Recheck your work before submitting it.

Wishing you all good luck!

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

- Q.1 (a) Why was the T&D loss assessment changed to AT&C loss determination in distribution? Hence explain the term AT&C loss. Discuss the role of field level staff in controlling AT & C losses. As a manager, how would you facilitate them?
- (b) List and explain various factors contributing to high technical and commercial losses in power distribution utilities.
- Q.2 (a) Discuss the role of central and state governments in power distribution sector reforms.
- (b) Are the current power distribution reforms sufficient to achieve the goal of providing reliable and quality power to all? Justify your answer.
- Q.3 (a) Discuss the salient features of the electricity act, 2003 and objectives of National electricity Policy in brief.
- (b) How would the National Tariff policy help in realizing the aims and objectives of Electricity Act 2003?
- Q.4 (a) Discuss on key issues and challenges before the power distribution sector in India.
- (b) Write the current demand and supply scenario of power in India. What measures have been taken to improve the demand supply gap scenario?
- Q.5 (a) Explain various aspects of transformer testing. What measures can be taken to enhance the life and efficiency of the transformer. Explain various reasons leading to transformer failure.
- (b) Outline the measures required for commercial loss reduction in the following areas :
- (i) Direct tapping by non consumers (ii) Direct tapping and theft by tampering of meter by consumers, and (iii) Metering, billing and collection deficiencies.
- Q.6 (a) Suggest a long term plan and short term measures for reducing technical losses to acceptable levels.
- Q.7 (a) Discuss the role of CERC in tariff setting.
- (b) What are the legal provisions as per the Electricity Act, 2003 for dealing with theft/pilferage of energy?
- Q.8 (a) Discuss the significance of technological interventions in metering, billing and collection for the utility's revenue protection.
- (b) Explain the metering techniques used for LT and HT consumer metering.
- Q.9 (a) Distinguish between various types of benchmarking. Also describe the process of benchmarking.
- (b) Discuss the importance of seven quality control tools in the organization for performance improvement.
- Q.10 (a) Identify KPIs for supply availability, reliability, consumer service, cost and profitability.
- (b) Discuss the role of data warehouse and data mining in CRM framework.

TUTOR MARKED ASSIGNMENTCourse Code: **BEE-002****ENERGY MANAGEMENT AND IT APPLICATIONS**

Maximum Marks: 100

Weightage : 30%

Note : All questions are compulsory and carry equal marks.

- Q.1 (a) Discuss the need for energy auditing and its objectives and functions.
- (b) In your opinion, what problems will your utility encounter if it resorts to energy auditing? How can these be managed?
- Q.2 (a) Discuss the need and procedure of energy accounting. Explain how energy accounting can benefit from the use of information technology?
- (b) Outline the various options for (i) Ensuring energy security, (ii) Improved resource management, and (iii) Use of energy efficient technologies.
- Q.3 (a) Describe what you can do as a consumer to contribute to DSM and energy efficiency improvement.
- (b) Discuss the techniques for Demand Side Management (DSM) in power systems.
- Q.4 (a) Outline the earthing practices and procedures.
- (b) Discuss electrical safety procedures for working with :
- (i) Transformer, (ii) Overhead lines, (iii) Underground lines, (iv) Switchgear, and (v) High voltage equipment.
- Q.5 (a) Describe the major constituents of the disaster management system and their functions in context to power utilities.
- (b) What is business process reengineering? Discuss the steps that should be taken for managing the change brought about by the use of IT in organizations.
- Q.6 (a) Outline the causes of accidents in power distribution systems and the general measures for preventing them. Describe the first aid measures to help the victim of :
- (i) Electric shock, (ii) Burns, (iii) Physical shock, (iv) Heat exhaustion, and (v) Heat stroke.
- (b) Explain the major causes for fire outbreaks in a power utility. What techniques can be used for handling and preventing such fires?
- Q.7 (a) What is ERP? Discuss the benefits of using ERP in a power distribution utility.
- (b) What is SCADA? Discuss its usefulness for improving the operations of a power distribution utility?
- Q.8 (a) What is Geographic Information System (GIS)? Describe objectives and advantages of GIS in power distribution system.
- (b) Discuss various GIS applications for managing the power distribution network.
- Q.9 (a) List the different tools used for customer analysis. Outline their features. How do they benefit the utilities?
- (b) State the benefits of AMR and outline the hardware requirements for it. Discuss the aspects that should be kept in view while using AMR.
- Q. 10 (a) Describe any case study related to energy management in Power Distribution.
- (b) What is business process reengineering? Discuss the steps that should be taken for managing the change brought about by the use of IT in organizations.

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

- Q.1 (a) Is it possible to give a true or a fair view of a company's position using accounting information? Discuss.
- (b) What are the provisions in IEA 2003 that endeavor to bring out transparency in the working of discoms?.
- Q.2 (a) What are important factors which help improving motivation and moral of employees an organization?
- (c) Is it possible to give a true or a fair view of a company's position using accounting information? Discuss.
- Q.3 (a) What is organization communication? Write various goals of organization communication.
- (b) What measures should be taken to make inter-personnel communication effective?
- Q.4 (a) What are the main driving factors of change in any business?
- (b) Explain various change models for business.
- Q.5 (a) Explain various financial ratios falling under the category of liquidity ratios.Explain the concept of financial leverage.
- (b) Describe the process of conflict. What are different types of conflicts taking place in business organizations?
- Q.6 (a) Describe practices in complaint handling with reference to customer relationship management.
- (b) 'Customer relationship management has become an important area for public utilities'. Analyze this statement in context of any organization.
- Q.7 (a) Describe how you can use the print and electronic media to sensitize your customers about timely payment of bills, and legalizing power connections.
- (b) Explain the concept of supply chain management in detail.
- Q.8 (a) Describe in brief the management processes of planning, controlling, organizing and leading.
- (b) With reference to cost management, explain following Material variance, fixed overhead variance, Variable overhead variance, Labor variance and Sales variance.
- Q.9 (a) Explain various investment evaluation methods.
- (b) Describe various aspects of cost volume profit (CVP) analysis.
- Q.10 (a) Give a comparison of unit rate and turnkey contracts.
- (c) Explain various cost components of Detailed Project Report.

