

ACPDM

Assignment Booklet

Advanced Certificate in Power Distribution Management (ACPDM)

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 / July 2023)

Dear Student,

This booklet contains the assignments of ACPDM programme 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. 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 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 : _____
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 ASSIGNMENTCourse Code: **BEE-001****POWER DISTRIBUTION SECTOR****Maximum Marks: 100**
Weightage : 30%**Note :** All questions are compulsory and carry equal marks.

- Q.1 (a) Describe the prevailing power scenario in India.
- (b) Explain Aggregate Technical & Commercial Losses (T&C losses). Discuss the role of field level staff in controlling AT & C losses.
- Q.2(a) Which overhead conductor is best suited in theft prone areas and why?
- (b) What configurations of feeder networks can be used in a distribution system? Discuss their suitability in different circumstances.
- Q.3(a) What are the activities involved in Distribution System Planning. Identify the short-term, medium/long-term planning objectives for your utility.
- (b) Which tests should be performed on the distribution transformer before installation? What are the two inherent errors in a current transformer?
- Q.4 (a) How has the distribution scenario changed after the enactment of the Electricity Act, 2003?
- (b) Describe the objectives and thrust areas of the National Electricity Policy and the National Tariff Policy.
- Q.5 (a) Discuss the role of CERC in tariff setting.
- (b) What are the measures which can be adopted by a utility to reduce Distribution transformer failure rate?
- Q.6 (a) Describe the equipment required for the construction of a 11/0.4 kV distribution substation.
- (b) What are the various type of Distribution network systems? Describe briefly.
- Q.7 (a) What is Benchmarking? Identify the most viable type of benchmarking measurement technique for the organization you are working in and frame a simple, paper based benchmarking for your organization.
- (b) What do you understand by Customer Relationship Management (CRM)? How CRM can be applied in the organizations in the power business sector?
- Q.8 (a) Describe the ways in which your utility can adopt the franchisee system to increase its revenues.
- (b) Who can engage in trading? Which body fixes the trading margins?
- Q.9 (a) Describe various metering technologies available today ? What are Smart Meters?
- (b) Explain the metering techniques used for LT and HT consumer metering.
- Q.10 (a) Discuss the seven QC-tools and its importance in the organization for performance improvement.
- (b) Discuss the process of assessing the customer satisfaction.

TUTOR MARKED ASSIGNMENT**Course 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 undesirable effects of "Green House Effect" on Global Environment.
(b) List 5 steps each that you can take immediately to a) reduce your contribution to global warming
- Q.2 (a) Describe the benefits of GIS for managing the power distribution system.
(b) Describe any case study related to energy management in Power Distribution.
- Q.3 (a) Assess the suitability for adopting renewable energy resources as an option for attaining energy security.
(b) What is the objective of energy accounting? Describe the procedure of energy accounting ?
- Q.3 (a) Describe energy auditing? Justify need for energy auditing with the help of suitable examples.
(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.6 (a) What are the key areas of IT interventions in the power distribution sector?
(b) Explain how IT can help in reducing AT & C losses and improving the efficiency of power distribution.
- Q.5 (a) What is ERP? Describe its application areas in distribution.
(b) Explain the two types of spot billing technology. What are their relative advantages and disadvantages?
- 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 do you understand by Energy Conservation Building Codes? State the objective of this Programme.
- 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**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) How are wheeling charges computed? Give the procedure for source connected at 33kV consumer connected at 11 kV.
- (b) Explain the four phases of a project.
- 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 various aspects of cost volume profit (CVP) analysis.
- (b) Explain various cost components of Detailed Project Report.
- Q.8 (a) Explain the difference between Trail Balance and Balance Sheet.
- (b) What is meant by 'Operating Leverage' and 'Financial Leverage'?
- Q.9 (a) Define the objective of budgeting and budgetary control.
- (b) Describe Variable Overhead Efficiency Variance.
- Q.10 (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.

