

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 2020)

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 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) Which component of the distribution system can be a critical bottleneck in supplying uninterrupted power to consumers and why?
- (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.

