

**ADVANCED CERTIFICATE IN POWER
DISTRIBUTION MANAGEMENT**

Term-End Examination

December, 2016

00383

**BEE-002 : ENERGY MANAGEMENT AND ITS
APPLICATIONS**

Time : 3 hours

Maximum Marks : 100

Note : The question paper has three parts : Parts I, II and III. Answer the questions as indicated in each part. Question no. 1 is compulsory.

PART I

1. (a) Fill in the blanks.
- (i) Turbine rotates an electric _____ . 1
 - (ii) Generator produces _____ . 1
 - (iii) Creeping effect occurs in _____ . 1
 - (iv) Utilities are using the system of _____ to generate bills. 1
 - (v) Transmission is done at _____ voltage. 1
- (b) Give full forms of the following : 10
- ERS, AMR, DTR, ESCO, SCADA, BEE, AT&C, CNG, CFL, ERC

(c) State whether the following statements are *True* or *False* :

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- (i) Acid rain is caused when the burning of fossil fuel emits carbon dioxide in the atmosphere.
- (ii) Hot water discharge from thermal power plants is known as water pollution.
- (iii) Energy can neither be created nor destroyed.
- (iv) Indian coal tends to have high calorific value.
- (v) TOD tariff is an important DSM technique.

Answer any five of the following :

5×2=10

2. What do you understand by Class-A type of fire ? 2
3. Name the types of disasters in power sector that can occur due to human acts. 2
4. What do you understand by one unit of energy consumed by household appliances ? 2
5. What do you understand by Seismic Zone-V ? 2
6. Name some greenhouse gases. 2
7. Give an example of how polluting by-products can be put to good use. 2
8. Name two manufacturers of meters for AMR. 2

PART II

Attempt any five questions.

5×8=40

9. What is spot billing ? Explain its advantages over traditional billing. 8
10. What is global warming ? How is our energy usage influencing it ? 8
11. Explain the practices that can improve the accuracy and reliability of energy accounting. 8
12. What is the Standards and Labelling program ? Explain how can it help in effective DSM. 8
13. Explain how IT can help in reducing AT&C losses and improving the efficiency of power distribution. Give examples. 8
14. What is ERP ? Discuss the benefits of using ERP in a power distribution utility. 8
15. Outline the reasons for the failure of electricity grid when a disaster strikes. 8

PART III

Attempt any two questions.

2×15=30

16. Describe the first aid measures to help the victims of

- (a) electric shock,
- (b) burns, and
- (c) heat stroke.

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17. Outline the major problems and challenges faced by power utilities in implementing DSM on the consumer end. Discuss the measures that can be taken by various stakeholders to meet these challenges.

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18. What IT applications can be used by the utilities for customer satisfaction ? Explain by giving examples.

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