

**ADVANCED CERTIFICATE IN POWER
DISTRIBUTION MANAGEMENT**

Term-End Examination

December, 2008

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

Time : 3 hours

Maximum Marks : 100

Note : *The question paper has three parts — part I, II and III. Answer questions as indicated in each part.*

PART I

Question no. 1 is compulsory.

1. (a) Give full form of the following : 10
- GPS, GHGs, CIN, CFC, GSM, PAN,
PSTN, CFL, CDMA, ERP

(b) State whether the following statements about DSM are true or false :

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- (i) DSM is a concept in which power utility manages the demand for power among some or all its customers to meet its current or future demand.
- (ii) DSM involves remote control of load management.
- (iii) DSM focuses on pilferage of energy.
- (iv) DSM is concerned with the conduct of energy audit of distribution network.
- (v) DSM involves incorporation of customer load modification.
- (vi) Demand Side Management is more cost effective compared to adding capacity to meet growing power demand.

(c) Fill in the blanks in the following statements about DSM tools :

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DSM tools help to reduce the _____ peaks, shift the _____, fill the demand _____ and _____ overall demand (strategic saving) in the context of delivering the required energy services by use of less energy and not a reduction in services.

PART II

Attempt any **five** questions.

5×10=50

2. Explain natural and enhanced greenhouse effect. 10
3. Explain the need for energy accounting. 10
4. What are the benefits of an energy audit for a power distribution utility ? 10
5. Discuss the two ways in which utilities can control load at consumer premises. 10
6. Explain the ESCO route to DSM. 10
7. Discuss the causes of accidents in power utilities. 10
8. Discuss the characteristic features of a spot billing machine/simputer. 10

PART III

Attempt any **two** questions.

2×15=30

9. What do you understand by software based distribution network planning and analysis ? What are the advantages of integrating it with GIS ? 15
10. Outline the IT applications involved in the functioning of the Customer Care Centres and Call Centres. 15
11. List the various steps in the process of meter reading by Hand Held Devices. Give a brief description of each step. 15