

**ADVANCED CERTIFICATE IN POWER
DISTRIBUTION MANAGEMENT**

Term-End Examination

June, 2011

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

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 number 1 is compulsory : 10x1=10

1. (a) Fill in the blanks as in the check list given below using the following words :
- (i) _____ is a system of application of water at a particular angle on burning transformer oil.
 - (ii) Substation _____ is integrated with SCADA often.
 - (iii) Many ERC's have mandated 100% metering at the _____ level.
 - (iv) _____ provides the first line of defence against faults in a substation.

- (v) Zone -v covers the portion of the country where _____ risk is the highest.
- (vi) _____ may be the secondary impact of flood.
- (vii) Eliminate Heat, _____ and fuel for fire fighting.
- (viii) Turbine turns an electric _____ .
- (ix) One unit of electric energy is equal to _____ W hr.
- (x) One of the objectives of energy accounting is to identify areas of mismatch between _____ and revenue collection.

Check list :

1000 ; Oxygen ; Automation ; Relay ;
Epidemics ; Emulsifier ; filling ; Seismic ;
Generator ; DTR.

- (b) Give the full form of the following ; **10x1=10**
- (i) CFL
 - (ii) WAN
 - (iii) RTU
 - (iv) GIS
 - (v) MIS
 - (vi) GHG
 - (vii) LEAP
 - (viii) R&D
 - (ix) AT&C Loss
 - (x) CNG.

PART - II

Attempt *any five* questions :

5×10=50

2. Explain the ESCO voute to DSM.
3. What is ERP ? Outline the benefits of ERP software system and application areas in Distribution.
4. What is an energy audit ? What is its purpose ?
5. Describe first aid treatment for electric shock.
6. What is SCADA ? Mention different communication channels in SCADA system.
7. Describe different arrangements to limit spread of fire in a substation.
8. Outline the reasons for failures of electricity grid when a disaster strikes.

PART - III

Answer any two questions :

15x2=30

9. What kind of infrastructure is required for effective use of IT in power distribution business ?
Give suitable architectures.
 10. What are the problems in energy accounting ?
How does IT application help to eliminate them ?
Give specific examples.
 11. State the benefits of AMR and outline the hardware requirements for it. Give the block diagram showing implementation architecture.
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