

**ADVANCED CERTIFICATE IN POWER
DISTRIBUTION MANAGEMENT**

**Term-End Examination
December, 2010**

BEE-001 : POWER DISTRIBUTION SECTOR

Time : 3 hours

Maximum Marks : 100

Note : This paper has three sections. Attempt all sections.

SECTION - A

Attempt all questions :

10x1=10

1. (i) The interconnected transmission system within each of the five regions of the country is called the _____.
- (ii) The designated consumer should get an energy audit conducted by an _____.
- (iii) All appliances and motors give good performance for long duration if _____ voltage is maintained by the supplier.
- (iv) The meters installed at interface points of generation - transmission and transmission distribution are called _____.
- (v) _____ is the high voltage backbone system of the interconnected transmission lines, sub-stations and generating plants.

- (vi) _____ control provides appropriate placement of compensation devices to ensure a satisfactory voltage profile while minimizing the power losses and the cost of compensation.
- (vii) _____ are mechanical switching devices capable of opening or closing a circuit when a negligible current is broken or made.
- (viii) CTs have two inherent errors: ___ and ___.
- (ix) All voltage transformers are designed for a standard secondary voltage of _____ V or _____ V.
- (x) CTs are designed to provide a standard secondary current of ___A or ___ A, when rated current flows through the primary.

SECTION - B

Attempt all questions in this section :

10x3=30

2. What do you understand by AT & C losses ?
3. What are the activities involved in distribution system planning?
4. What are the cost benefits of PF improvement ?
5. What are the different types of circuit breakers used in a distribution system ?
6. What are the factors that influence the selection of cable ?
7. Distinguish between current and voltage transformers.
8. How are transformers classified ?
9. Describe the role of CERC in tariff regulation.
10. Elaborate the important properties for KPIs.
11. What is balanced score card ?

SECTION - C

Attempt any ten questions :

10x6=60

12. Outline the aims and objectives of the Electricity Act, 2003. In what sense is it different from the Electricity Acts preceding it ?
13. How does the NEP help in realising the aims and objectives of Electricity Act, 2003 ?
14. Outline the impediments, if any, in carrying out reforms in the power distribution sector.
15. What configurations of feeder networks can be used in a distribution system ?
16. Explain the impact of LT/HT ratio on losses and voltage.
17. Discuss measures to avoid DTR failure at the O and M level.
18. What do you understand by Bench marking ? Explain giving examples.
19. Distinguish between different types of bench marking giving real world examples.
20. What do you understand by Customer Relationship Management(CRM) ? How CRM can be applied in organisations in the power business sector ?
21. Explain the KPIs for supply availability and reliability .
22. Elaborate your understanding about voltage quality standards.
23. What factors contribute to high technical losses in power distribution sector ?
24. Describe the measures that can be taken to reduce technical losses in power distribution sector .
25. How can you improve the billing and collection in a distribution utility ? Explain with examples.