

**ADVANCED CERTIFICATE IN POWER  
DISTRIBUTION MANAGEMENT**

**Term-End Examination  
June, 2011**

**BEE-001 : POWER DISTRIBUTION SECTOR**

*Time : 3 hours*

*Maximum Marks : 100*

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

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**SECTION - A**

*Attempt all questions :*

**10x1=10**

- (a) The peak load demand in our country is about \_\_\_\_\_ % to \_\_\_\_\_ % more than the available generating capacity.
- (b) The major reasons for \_\_\_\_\_ lie in lack of adequate generation capacity and in frequent breakdowns in the power system.
- (c) The Electricity Act, 2003 has declared electricity as \_\_\_\_\_ and all streams of Electricity sector as \_\_\_\_\_.
- (d) \_\_\_\_\_ consists of all primary and secondary voltage segments of distribution lines.
- (e) Meters installed at consumer premises by the utility are called \_\_\_\_\_.

- (f) \_\_\_\_\_ is the process of achieving and maintaining equal load on each phase of a distribution transformer.
- (g) All electric equipment require \_\_\_\_\_ , a term used to describe the reactive or magnetising power required by the inductive characteristics of electrical equipment.
- (h) The insulators in use at substations are post insulators of \_\_\_\_\_ type.
- (i) A PT is rated in terms of the maximum \_\_\_\_\_, it can deliver without exceeding specified limits of error.
- (j) Work performed on transformers and distribution lines while they are energised and in service is called \_\_\_\_\_.

## SECTION - B

*Attempt all questions :*

**10x3=30**

2. What is the significance of Grid Management ? 3
3. What are the advantages of PF improvement by capacitor addition ? 3
4. What are the elements of a circuit breaker ? 3
5. List the principle types of insulators. 3
6. What are the factors on which sizing of cables depends ? 3
7. Explain hot line maintenance techniques and tools. 3
8. What are the criteria for selection of rating / size of DTRs ? 3
9. Describe the role of SERC in tariff regulation. 3
10. Briefly explain KPIs for finance and accounting. 3
11. How balanced score can be linked with KPI ? 3

## SECTION - C

Attempt any ten questions :

10x6=60

2. Discuss the salient features of Electricity Act 2003. 6
3. What are the stipulations of NTP ? 6
4. Outline the obligations placed on consumers by the reforms process in the power sector. 6
5. What do you understand by load scheduling and unscheduled interchange. 6
6. What equipment is required for construction of an overhead distribution line ? 6
7. Which tests can be performed on DTRs before and immediately after installation ? 6
8. Explain the different types of benchmarking with the help of examples. 6
9. What are different steps involved in identifying CSFs ? Discuss with the help of an illustration. 6
20. Explain installation practices for meters to be observed to guard against tempering. 6
21. Explain the KPIs for commercial quality standards. 6

22. How customer satisfaction can be assessed ? 6
23. What factors contribute to high commercial losses ? 6
24. Discuss short term measures for technical loss reduction. 6
25. What are different methods of theft and pilferage of energy ? 6
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