

**ADVANCED CERTIFICATE IN POWER
DISTRIBUTION MANAGEMENT**

Term-End Examination

00272

December, 2017

BEE-001 : POWER DISTRIBUTION SECTOR

Time : 3 hours

Maximum Marks : 100

Note : *The paper has three sections. Attempt **all** sections.
Answer the questions in English language only.*

SECTION A

*Attempt **all** questions.*

1. Fill in the blanks from the choices given below :

10×1=10

(cross subsidies, non-remunerative, collection, MIS, standards, unbilled, communication obsolete, capacitor, accountability)

(a) Regulatory Commission to specify expected _____ .

(b) High commercial losses are due to theft and _____ electricity.

- (c) Poor management of distribution utilities is due to lack of _____ , transparency and commercial culture.
- (d) Thrust area of National Electricity Policy (NEP) is progressive reduction of _____ .
- (e) Customer services are insufficient _____ mechanisms.
- (f) _____ tariff structure and subsidies lead to unviable tariffs.
- (g) Poor management of distribution utilities leads to renovation and modernisation of _____ technology.
- (h) The remedy for poor quality power is addition of _____ .
- (i) The challenge of increase in revenue collection can be solved by improving _____ efficiency.
- (j) _____ could be used to improve operation and management of distribution systems.

SECTION B

Attempt any *ten* questions.

10×3=30

2. Define Load factor.
3. What do you mean by Wheeling Charges ?
4. What are TOD meters ?
5. Define technical and commercial losses.
6. What are the cost benefits of PF Improvement ?
7. What is the criteria for selecting a distribution transformer ?
8. Write the salient features of the Electricity Act, 2003.
9. What are the tests performed on transformers ?
10. What does grid management involve ?
11. What is Return on Capital Employed (ROCE) ?

SECTION C

Answer any **ten** questions.

10×6=60

12. What are the functions of a load despatch centre ?
 13. Explain KPIs for Finance and Accounting (F&A) and Human Resources (HR).
 14. Describe the role of CERC.
 15. List the different types of underground cables in use nowadays. What criteria are used for selection of these cables ?
 16. Discuss the measures to avoid DTR failures at the operation and maintenance level.
 17. What are the factors responsible for high T&D losses of utility ?
 18. Explain the importance of HVDS.
 19. How can we improve the billing and collection of the utility ? Explain with examples.
 20. Describe various LT and HT metering techniques.
 21. Explain load balancing. What is the role of SCADA system in load management ?
 22. Explain the impact of LT/HT ratio on losses and voltage.
 23. What do you mean by AMR ?
 24. What are the DTR failures that occur the most in the distribution system ?
-