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BEE-001

ADVANCED CERTIFICATE IN POWER

DISTRIBUTION MANAGEMENT

(ACPDM)

Term-End Examination

June, 2020

BEE-001 : POWER DISTRIBUTION SECTOR

Time : 3 Hours

Maximum Marks : 100

Note : (i) This question paper has four Sections.

(ii) Answer the questions as indicated in each Section.

Section—A

Note : Attempt all questions in this Section.

1. Fill in the blanks : 1 each
- (a) Non-remunerative tariff structure
subsidies tariffs.

P. T. O.

- (b) Thrust areas of National Electricity Policy (NEP) in development of sources of energy.
- (c) Power factor in pure resistive circuit is
- (d) Energy realised = Energy billed \times
- (e) Voltage unbalance is of RMS supply voltage.
- (f) Billing ratio is ratio of and total billed amount.
- (g) Levels of peak power losses in distribution lines and service connection is static.
- (h) Static meter are meters.
- (i) EHT consumers has overall accuracy class of instrument of

(j) are instrument transformer.

(Choices : one, industrial, 20%, 4%, collection amount, electronic, 0.2 CT¹ and PT¹, non-conventional, electrical, industrial, collection efficiency)

Section—B

Note : Attempt any *ten* questions. 2 each

2. What are the metering techniques for LT and HT metering ?
3. How can you improve the billing and collection in utility ?
4. What are the technical losses ?
5. What are the key challenges of any Power Distribution Utilities ?
6. What are the role of CERe and SERe ?
7. What are the objectives of NEP ?

8. What are the aims and objectives of Electricity Act, 2003 ?
9. What are the obligations on the consumers by the reforms process in Power Distribution System ?
10. How can balance score card be linked with KPIs ?
11. How to improve power factor (pf) of distribution system ?
12. What is circuit breaker ? Why are capacitor provided in the distribution system ?

Section—C

Note : Attempt any *ten* questions. 5 each

13. What are Operation and Maintenance (O & M) objectives and activities ?

14. What does Grid Management involve ?
15. Explain the importance of KPIs in Power Distribution Sector.
16. Explain KVAR control of grid.
17. What does MIS reports contain ?
18. Explain the impact of LT/HT ratio on losses and voltage.
19. Distinguish voltage and current transformer.
20. What are the normal failures observed in distribution transformer ?
21. How to reduce DTR failure rate of utility ?
22. Elaborate your understanding about voltage quality standards.
23. Discuss the short-term and long-term measures for technical loss reduction.

Section—D

Note : Attempt any *two* questions. 10 each

24. What are the activities involved in Distribution System Planning ?
25. Discuss the role of Electricity Regulatory Commission on the policy of electricity power business.
26. Describe the equipments required for the construction of 66-33/11 kV substation.