

Subject : **Electrical Power Distribution Engineering**
(Elective – II)

Time : 3 Hours}

{Max. Marks: 75

Note: Answer **all** questions of Part - A and answer any **five** questions from Part-B.

PART – A (25 Marks)

1. Explain main and transfer bus scheme. (2)
2. Explain the following terms (3)
(a) Diversified demand (b) Load factor
3. What is secondary Banking? (2)
4. Explain express feeders with back feed. (3)
5. Explain the use of booster transformer . (3)
6. Explain the advantages of shunt capacitor. (2)
7. What is 'k' in voltage drop formula? (2)
8. Explain any three control functions in distribution Automation. (3)
9. What are the factors affecting substation site selection ? (3)
10. What do you mean by CIS? (2)

PART – B (5x10=50 Marks)

- 11.(a) Explain types of distribution transformers.
(b) Explain different types of Rate structure.
- 12.(a) Explain any three sub-station bus schemes.
(b) Explain the calculation of voltage drop formula for a Hexagonal service area.
- 13.(a) Explain what are Network Transformers and where they are used.
(b) Explain the general Total Annual Cost (TAC) equation without constraints.
- 14.(a) Explain the criteria of applying fixed and switched capacitors to a distribution system.
(b) Explain the voltage drop and power loss calculation for a 3- ϕ primary line and single phase two wire Lactéal .
- 15.(a) Explain the role of communication in distribution Automation.
(b) What is the Need of automation in distribution system ?
- 16.(a) Explain with diagram a typical distribution system.
(b) Explain the factors affecting primary voltage selection.
17. Short notes on the following :
(a) Automatic meter reading
(b) Autotransformer
(c) Customer Billing