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Total No. of Questions : 08

M.Tech.(EE)EI-II(2018 Batch) (Sem.-1)
ELECTRIC POWER DISTRIBUTION SYSTEM

Subject Code : MTEE-104B

Paper ID : [75222]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

- 1. Attempt any FIVE questions out of EIGHT questions.**
2. Each question carries TWELVE marks.

- Q1 a) Explain the difference between structure and characteristics of transmission system and distribution system. (6)
- b) What is load forecasting and across which time frames is it carried out? Explain basic advantages of various types of load forecasting. (6)
- Q2 a) Explain about the significance of power factor improvement. Also explain the methods of power factor improvement. (6)
- b) What is distribution management system (DMS)? How is it related to Energy management system (EMS)? Explain the need of DMS. Explain various functions of distribution management system (DMS). (6)
- Q3 a) What is Distribution automation system? Explain four main functions of distribution automation system. (6)
- b) What are the main field devices used in Distribution Automation? Explain their role in detail. (6)
- Q4 a) Explain the benefits and disadvantages of advanced metering. Explain the technical issues related to advanced metering infrastructure. (6)
- b) Write down the procedure to determine the optimal capacitor placement in radial distribution systems. (6)
- Q5. Explain SCADA with the help of a block diagram. What are the different functional levels associated with SCADA and its system components? (12)

- Q6. a) What are the main causes of losses in distribution systems and how they can be monitored? What is meant by energy efficiency? (6)
- b) Explain the procedure to determine the optimal number and location of sectionalizing switches. (6)
- Q7. a) Explain the difficulties associated with implementation of distribution automation in actual practice. (6)
- b) Explain the difference between urban and rural distribution management system.
- Q8. Write short notes on the following :
- a) Technological forecasting (4)
- b) AI techniques applied to distribution automation (4)
- c) Power loads (4)