10EE844

Eighth Semester B.E. Degree Examination, Aug./Sept. 2020
Electrical Distribution System

Time: 3 hrs.   Max. Marks:100

Note: *Answer any FIVE full questions, selecting at least TWO questions from each part.*

PART – A

1 a. Explain in detail Present Distribution System Planning Techniques with block diagram.
                                                                              (10 Marks)
   b. Discuss in brief about Distribution system Automation.   **(10 Marks)**

2 a. Define the mean of utilization factor, plant factor and load factor.   **(06 Marks)**
   b. The feeder has a system peak of 3000KVA per phase and a copper loss of 0.5% at the system peak. Determine the following :
      i)   The copper losses of the feeder in kilowatt per phase
      ii) The total copper losses of the feeder in kilowatt per three phases. **(04 Marks)**
   c. Explain the relationship between the load and loss factor.   **(10 Marks)**

3 a. Write a note on :
      i)   Traditional Least Cost Planning   **(05 Marks)**
      ii) Demand Side Planning (DSP)   **(05 Marks)**
   b. Explain different component of the planning process?   **(10 Marks)**

4 a. What is Digital Mapping? Explain with diagram.   **(10 Marks)**
   b. Discuss the Dispersed Generation in Distribution system.   **(10 Marks)**

PART – B

5 a. With the block diagram, explain the Engineering Design of distribution system. **(06 Marks)**
   b. With any one bus scheme, explain distribution substation.   **(06 Marks)**
   c. Explain Design criteria and standards in distribution system.   **(08 Marks)**

6 a. Draw the schematic diagram of Energy management system scheme and explain the various means of energy management.   **(10 Marks)**
   b. Explain in brief the voltage fluctuation in distribution system.   **(04 Marks)**
   c. Write the effect of Harmonics on power distribution System.   **(06 Marks)**

7 a. With a neat block diagram, explain SCADA system.   **(10 Marks)**
   b. Write short notes on sensors and its types.   **(06 Marks)**
   c. Explain the following terms :
      i)   Remote Terminal Units (RTU)
      ii) Work Station.   **(04 Marks)**

8 a. With graphical representation, discuss the least cost analysis.   **(08 Marks)**
   b. Mention the approach to synthesis of optimum line network.   **(08 Marks)**
   c. Write a note on substation size.   **(04 Marks)**

* * * * *