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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B.Tech IV Year I Semester Supplementary Examinations November-2020

ELECTRICAL DISTRIBUTION SYSTEMS

(Electrical & Electronics Engineering)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units **5 x 12 = 60** Marks)

UNIT-I

- 1 **a** A feeder supplies 2 MW to an area the total losses at peak load are 100KW and units supplied to that area during an year are 5.61 million units calculate loss factor? **6M**
- b** Discuss about Diversity factor and Coincidence factor? **6M**
- OR**
- 2 Discuss different types of loads present in distribution system and explain their characteristics? **12M**

UNIT-II

- 3 **a** Compare the radial and loop type primary feeders? **6M**
- b** Explain the basic design practice of secondary distribution system? **6M**
- OR**
- 4 Derive the equations for voltage drop and power loss in a radial feeder with uniformly distributed load fed at one end? **12M**

UNIT-III

- 5 Show that if the voltage drops are limited, six feeders can carry only 1.25 times as much load as the four feeders? **12M**
- OR**
- 6 Explain how do you analyze a substation service area with 'n' primary feeders? **12M**

UNIT-IV

- 7 **a** Write the causes for low power factor in power system? **6M**
- b** Explain (i). Phase advancers (ii). Static capacitors **6M**
- OR**
- 8 Show that $VD_{1-\phi} / VD_{3-\phi} = 6$ and $P_{LS1-\phi} / P_{LS3-\phi} = 6.0$ in single phase two wire ungrounded lateral with full capacity neutral? **12M**

UNIT-V

- 9 Write short notes on Automatic Meter reading in distribution automation? **12M**
- OR**
- 10 Explain the various sensors used in distribution automation? **12M**

*** END ***