Q.P. Code: 16EE229 **R16**

Reg. No: | | | | | | | | | | |

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech IV Year I Semester Regular Examinations Nov/Dec 2019

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 50 MW hydro generator delivers 320 million KWH during the year. Calculate the plant load factor?	**6M**
	b	Explain the load characteristics of distribution system.	**6M**

OR

2		Discuss the characteristics of the following categories of loads. (a) Residential (b) Agriculture (c) Commercial (d) Industrial	**12M**

UNIT-II

3	**a**	Compare overhead and underground distribution systems.	**6M**
	b	Explain requirements and design features of distribution systems.	**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	**a**	Explain the various factors to be considered to decide the ideal location of substation?	**6M**
	b	Explain how to decide the rating of a distribution a substation?	**6M**

OR

6	**a**	Explain Air insulated substation.	**6M**
	b	Explain Indoor and outdoor substation.	**6M**

UNIT-IV

7	**a**	Explain Most economical power factor for constant KW load & constant KVA type loads?	**6M**
	b	How do you justify economically the connection of capacitors for the improvement of p.f.	**6M**

OR

8		Explain Most economical power factor for constant KW load & constant KVA type loads?	**12M**

UNIT-V

9		Draw a block diagram and explain for a typical distribution system planning process?	**12M**

OR

10		Draw and explain the flow chart for the distribution system planning process?	**12M**

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