Q.P. Code: 20EE0219 **R20**

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

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech III Year I Semester Regular Examinations March-2023

ELECTRICAL DISTRIBUTION AND AUTOMATION

(Electrical and Electronics Engineering)

Time: 3 hours Max. Marks: 60

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

UNIT-I

1	A generating station has the following daily load cycle :						CO1	L3	12M

Time (Hours)	0-6	6-10	10-12	12-16	16-20	20-24
Load (MW)	40	50	60	50	70	40

Draw the load curve and find

i) maximum demand ii) units generated per day iii) average load iv) load factor.

OR

2	**a** What is Diversity factor? What is the importance of diversity factor?	CO1	L1	6M
	b A distribution substation experiences an annual peak load of 3,500 kW. The total annual energy supplied to the primary feeder circuits is 107 kWh. Find i. the annual average power ii. the annual load factor	CO1	L2	6M

UNIT-II

3	A 2 wire DC distributor cable AB is 2 KM long supplies loads of 100A,150A, 200A and 50A situated 500m,1000m,1600m and 2000m from the feeding point A. Each conductor has a resistance of 0.01ohm per 1000m.calculate potential difference at each load point if a potential difference of 300V is maintained at point A.	CO2	L4	12M

OR

4	**a** Explain connection schemes of distribution system and give the advantages disadvantages.	CO2	L3	6M
	b Explain about Primary distribution systems.	CO2	L2	6M

UNIT-III

5	**a** What is Neutral grounding? What are the advantages of neutral grounding?	CO3	L1	6M
	b What are the disadvantages of ungrounded system?	CO3	L1	6M

OR

6	Explain different types of bus bar arrangements with neat sketch? And give the advantages and Disadvantages.	CO3	L1	12M

UNIT-IV

7	How we can improve the power factor and explain different types of Power Factor Improvement Equipment.	CO4	L3	12M

OR

8	**a** Determine the optimum capacitor allocation for improvement of power factor.	CO4	L1	6M
	b List the various causes of low power factor and explain.	CO4	L1	6M

UNIT-V

9	**a** What are the benefits of distribution automation.	CO5	L1	6M
	b Explain about Information technology and LAN.	CO5	L1	6M

OR

10	Explain about Automatic Meter reading in distribution automation.	CO6	L1	12M

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