Code No: **RT41029**

R13

Set No. 1

IV B.Tech I Semester Supplementary Examinations, October/November-2019 ELECTRICAL DISTRIBUTION SYSTEMS

(Electrical and Electronics Engineering)

Time: 3 hours

Max. Marks: 70

Question paper consists of Part-A and Part-B Answer ALL sub questions from Part-A Answer any THREE questions from Part-B *****

PART-A (22 Marks)

1.	 a) b) c) d) e) f) 	Define the terms w.r.t Load characteristics: (i) Demand factor (ii) Load Factor. List the factors affecting the Primary feeder loading. What are the primary and secondary distribution level voltages, used in India? Explain the concept or need of Coordination procedure among protective devices. Explain the significance of capacitor in Power factor correction. Explain the significance of Booster transformer.	[4] [4] [3] [4] [3] [4]
		$\underline{\mathbf{PART}}_{\mathbf{B}} (3x16 = 48 Marks)$	
2.	a) b)	Explain the factors that affect the Distribution System planning.	[8]
	0)	different methods of load forecasting.	[8]
3.	a)	What is the need for locating the substation optimally and discuss the procedure	101
	b)	Explain in detail about the different types of Distribution feeders.	[8]
4.		Prove that the Power loss due to the load current in the conductors of the Single phase system with ungrounded neutral is equal to 2 times the Power loss in one of the conductors in three phase system.	[16]
5.	a)	Explain the significance and importance of Line sectionalizer and circuit recloser.	[8]
	b)	Explain the working of Residual current circuit breaker in detail.	[8]
6.	a)	Compare the series and shunt compensation in improving power factor of Distribution system.	[8]
	b)	Give the best value for capacitor banks to improve load power factor 0.77 to	
		0.96 for the following system in (1) Star connection (11) Delta Connection. Load is 800 KVA and the operating voltage is 3.3 KV.	[8]
7.	a)	List and explain the different methods of Voltage control.	[8]
	b)	Explain the strategy to be followed in Control and rating of Voltage regulator.	[8]

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