III B.Tech - II Semester – Regular Examinations – JUNE 2023

DISTRIBUTION SYSTEM PLANNING & AUTOMATION (ELECTRICAL & ELECTRONICS ENGINEERING)

Duration: 3 hours

Note: 1. This paper contains questions from 5 units of Syllabus. Each unit carries 14 marks and have an internal choice of Questions.

2. All parts of Question must be answered in one place.

BL – Blooms Level

CO – Course Outcome

			BL	CO	Max.			
			BL		Marks			
UNIT-I								
1	a)	Draw a schematic single line diagram of an	L3	CO2	7 M			
		Electrical Distribution System and explain						
		its typical parts in detail.						
	b)	Classify the types of loads and draw their	L3	CO2	7 M			
		characteristics in detail.						
OR								
2	Exp	plain the central role of Computer in	L3	CO2	14 M			
	Dis	tribution Planning with neat schematic.						
UNIT-II								
3	Wh	at is a Sub transmission system? Discuss	L3	CO3	14 M			
	various Sub transmission systems with neat							
	diagrams.							
OR								
4	a)	What is Distribution substation? Discuss	L3	CO3	7 M			
		briefly the rating of Distribution substation.						
L		Dage 1 of 2			1			

Max. Marks: 70

in Distribution Substations. Image: constraint of the co		b)	Differentiate Four and Six Feeder patterns	L3	CO3	7 M
5 Discuss in detail the concept of Primary Network and Interpret Radial type Primary Feeder with neat sketch. L3 CO3 6 a) What is your understanding on the concept of Secondary Networks? L3 CO3 b) Give the various Loading and Voltage Level L3 CO3 CO3 factors that influence the design and operation of Primary Feeders. L3 CO3 UNIT-IV 7 Discuss the communication requirements for Distribution Automation. L4 CO4 OR 8 a) What are the problems with present necessity to go for Distribution automation? L4 CO5			in Distribution Substations.			
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Feeder with neat sketch. OR 6 a) What is your understanding on the concept of Secondary Networks? L3 CO3 b) Give the various Loading and Voltage Level factors that influence the design and operation of Primary Feeders. L3 CO3 UNIT-IV 7 Discuss the communication requirements for Distribution Automation. L4 CO4 OR 8 a) What are the problems with present is necessity to go for Distribution automation? L4 CO5	5	Dis	cuss in detail the concept of Primary	L3	CO3	14 M
OR 6 a) What is your understanding on the concept of Secondary Networks? L3 CO3 b) Give the various Loading and Voltage Level I.3 CO3 factors that influence the design and operation of Primary Feeders. L3 CO3 VNIT-IV 7 Discuss the communication requirements for Distribution Automation. L4 CO4 A. Discuss in detail about need for Distribution Automation. I I OR 8 a) What are the problems with present I.4 CO5 Distribution systems and why there is necessity to go for Distribution automation? I I		Network and Interpret Radial type Primary				
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OR 8 a) What are the problems with present L4 CO5 0 Distribution systems and why there is necessity to go for Distribution automation? Image: Cost of the problems is a cost of the present is necessity to go for Distribution automation? Image: Cost of the problems is a cost of the present is necessity to go for Distribution automation?						
8 a) What are the problems with present L4 CO5 Distribution systems and why there is necessity to go for Distribution automation? L4 CO5		Dis				
Distribution systems and why there is necessity to go for Distribution automation?			-			
necessity to go for Distribution automation?	8	a)		L4	CO5	7 M
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		b)	Write down the Algorithm for Capacitor	L4	CO5	7 M
Location in Distribution Systems.			Location in Distribution Systems.			

UNIT-V								
9	a)	Discuss about DA Integration Mechanisms.	L4	CO4	7 M			
	b)	Outline the advantages of Distribution	L4	CO4	7 M			
		Automation through SCADA.						
OR								
10	0 Discuss in detail about the components of a L4 CO4 14 M							
	SCADA system with Block diagram.							