PVP 20

Code: 20EE4601A

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

DISTRIBUTION SYSTEM PLANNING & AUTOMATION
(ELECTRICAL & ELECTRONICS ENGINEERING)

Duration: 3 hours Max. Marks: 70

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

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

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