



TKR Engineering

Subject code:EE22A

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech VIII Semester Regular/Supplementary Examinations, May 2023

ELECTRICAL DISTRIBUTION SYSTEMS

(EEE)

Maximum Marks: 75

Date:29.05.2023

Duration: 3 hours

- Note:**
1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
 4. Each answer carries 20 marks and has part a, b, c, d as sub-questions.

Part-A

All the following questions	total marks	(0X20=20 Marks)	Marks	CO	Bloom Tx
1. Define Load factor			2M	1	L1
2. Define (i) loss factor (ii) Utilization factor			2M	1	L2
3. Explain Voltage drop calculations.			2M	2	L1
4. Define radial network.			2M	2	L1
5. List the different types of common faults			2M	3	L2
6. Explain Auto-Recloser to Fault Coordination,			2M	3	L1
7. Differentiate short and serious ca. accidents.			2M	4	L4
8. Define over current protection.			2M	4	L1
9. What is the importance of voltage control?			2M	5	L1
10. List the Limitations of line drop compensation.			2M	5	L3

Part-B

Answer All the following questions. (5X10M=50Marks)

Answer	All the following questions	(5X10M=50Marks)	Marks	CO	Bloom Tx
11	a) Explain the Relationship between the load factor and loss factor. b. Classification of loads and their characteristics.		2M 5M	1	L2 L2
	OR				
12	Discuss the characteristics of the following categories of loads (i) Residential (ii) Agriculture (iii) Commercial.		4M 3M 3M	1	L2 L3
13	Derive the equations for voltage drop and power loss in a radial feeder with uniform distributed load fed at one end?		10M	2	L3
	OR				
14	a) Explain the method to analyze the distribution feeder cost. b. What are the common methods of solution for radial networks?		5M 5M	2	L2 L3
15	a) Discuss the Objectives of distribution system protection. b) Explain Fuse to Fuse Coordination.		3M 7M	3	L1 L2
	OR				
16	Explain any two of the following protection coordination. I. Auto-Recloser to Fuse. ii. Circuit breaker to Fuse. iii. Circuit breaker to Auto-Recloser.		10M	3	L2
17	a) Procedure to determine the best capacitor location. b. Explain Economic justification of ca. accidents.		5M 3M	4	L3 L1

	OR			
18	In detail compare series and shunt compensator.	10M	4	L5
19	a) Explain Equipment's used for voltage control.	5M	5	L2
	b) Define Voltage fluctuations and its drawbacks.	5M		L2
	OR			
20	Discuss the effect of AVB and AVR on voltage control.	10M	5	L3