Question Paper Code: R18A32EE02

R18

ANURAG Engineering College

(An Autonomous Institution)

III B.Tech II Semester Supplementary Examinations, December-2024

ELECTRICAL DISTRIBUTION SYSTEMS

(ELECTRICAL AND ELECTRONICS ENGINEERING)

Time: 3 Hours **Max. Marks: 75**

Section – A (Short Answer type questions) (25 Marks)

Answer All Questions		Course Outcome	B.T Level	Marks
1.	Define the demand factor and diversity Factor.	CO1	L1	2M
2.	What are the factors affecting the feeder voltage level? Explain any two of them.	CO1	L1	3M
3.	Write any two factors effecting substation site selection.	CO2	L1	2M
4.	What is meant by voltage drop and voltage regulation?	CO2	L1	3M
5.	Mention the differences between fuse and a circuit breaker.	CO3	L2	2M
6.	What is the need for coordination of protective devices?	CO3	L1	3M
7.	What is the effect of low power factor in the distribution system?	CO4	L1	2M
8.	What are the differences between fixed and switched capacitors?	CO4	L1	3M
9.	What is a line drop compensator?	CO5	L1	2M
10.	Explain the effect of series capacitor in distribution systems.	CO5	L2	3M

Section B (Essay Questions)

Answer all questions, each question carries equal marks. **(5 X 10M = 50M)**

11. A)	How loads are classified and modeled in distribution networks? Give the characteristics of different types of loads.	CO1	L2	10M
	OR			
B)	Describe the types of primary feeders and discuss the merits and demerits of them.	CO1	L3	10M
12. A)	Explain methodology for optimal location of substations and indicate the benefits derived through this approach.	CO2	L2	10M
	OR			
B)	Derive the expression for voltage drop and power loss for non uniformly radial type distribution load?	CO2	L3	10M
13. A)	What are the common types of faults that occur in the distribution system? Explain the fault current calculations for any one type of fault.	CO3	L2	10M
	OR			
B)	Describe the coordination procedure between Circuit breaker to Auto-Recloser	CO3	L2	10M
14. A)	Explain the economic justification of installing a capacitor in distribution system	CO4	L2	10M
	OR			
B)	Discuss the procedure for best location of capacitor placement in a Distribution system.	CO4	L3	10M

15. A)	What are different methods for voltage control? Briefly explain them.	CO5	L2	10M
	OR			
B)	Discuss the effect of AVB/AVR on voltage control in distribution system in detail	CO5	L3	10M