Question Paper Code: R18A42EC02

R18

ANURAG Engineering College

(An Autonomous Institution)

IV B. Tech II Semester Regular/Supplementary Examinations, April - 2024

WIRELESS COMMUNICATIONS & NETWORKS

(ELECTRONICS AND COMMUNICATION 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.	Write about improving coverage capacity in cellular systems.	CO1	L1	2M
2.	How does frequency reuse help in increasing the capacity of a cellular network?	CO1	L2	3M
3.	Explain the basic propagation mechanisms in wireless communication.	CO2	L2	2M
4.	What is the Brewster angle and how is it related to reflection of electromagnetic waves?	CO2	L1	3M
5.	Compare between FDMA and TDMA.	CO3	L2	2M
6.	What is Doppler shift?	CO3	L1	3M
7.	Explain the advantages and limitations of linear equalizers.	CO4	L2	2M
8.	How does equalization help in combating inter symbol interference (ISI).	CO4	L2	3M
9.	List out the advantages and disadvantages of wireless LAN.	CO5	L1	2M
10.	Explain the wireless LAN topologies.	CO5	L2	3M

Section B (Essay Questions)

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

11. A)	How can prioritizing handoffs help in improving the quality of service in a cellular network? Discuss the handoff technique.	CO1	L2	10M
	OR			
B)	Discuss the system capacity-co channel interference.	CO1	L2	10M
12. A)	Explain the hata propagation model and discuss the knife edge diffraction model.	CO2	L3	10M
	OR			
B)	What is the two-ray ground reflection model in wireless communication? And What are the limitations of the two-ray ground reflection model?	CO2	L3	10M
13. A)	Discuss the impulse response model of a multipath channel.	CO3	L2	10M
	OR			
B)	Explain the space division multiple access.	CO3	L2	10M
14. A)	Discuss the linear equalizers and decision-feedback equalization (DFE).	CO4	L3	10M
	OR			
B)	What is a RAKE receiver, and how does it exploit multipath diversity? How does a RAKE receiver improve the performance of the system.	CO4	L2	10M

15. A)	Discuss the IEEE802.16 and its enhancements and wireless PANs.	CO5	L2	10M
	OR			
B)	Discuss the IEEE802.11 a,b,g standard and their merits and limitations.	CO5	L2	10M