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Reg. No. : | | | | | | | | | | |

Question Paper Code: 59413

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2022

Elective

Electronics and Communication Engineering

15UEC913–WIRELESS NETWORKS AND STANDARDS

(Regulation 2015)

Duration: Three hours | Maximum: 100 Marks

Answer ALL Questions

PART A - (5x 1 = 5 Marks)

1. The type of access used in GSM technology is CO1 -R

   (a) FDMA/TDMA (b) CDMA (c) OFDMA (d) None of the above

2. The uplink frequency of P-GSM system is CO2 -R

   (a) 1850-1910Mhz (b) 1710-1785 Mhz (c) 890-915 Mhz (d) None of the above

3. The IEEE 802.11 wireless LANs use _____ types of frames. CO3 -R

   (a) Four (b) Five (c) six (d) None of the above

4. The caching and multipath routing protocol (CHAMP) makes use of temporal locality in CO4 -R

   (a) Dropped Packets (b) Returned Packets (c) Sent Packets (d) All of the above

5. Which of the following is a collection of many separate networks? CO5 -R

   (a) WAN (b) PAN (c) ZAN (d) MAN

PART – B (5 x 3= 15 Marks)

6. Compare dynamic channel assignment and fixed channel assignment. CO1- R
7. Determine the capacity of GSM for k = 3. CO2 -App
8. What are the functions of physical layer of IEEE 802.11 system? CO3 -R
9. Compare hierarchical routing and flat routing in sensor networks. CO4 -U
10. Write Power consumption level changes when a Bluetooth device is in different states. CO5 -U

PART – C (5 x 16= 80 Marks)

11.	(a)	Explain in detail the methods of data services get integrated with Voice Oriented Networks.	CO1- U	(16)
		Or		
	(b)	In which handoff, a mobile station can communicate with two base stations at the same time. Discuss its operation with example.	CO1 -U	(16)
12.	(a)	Explain in detail about GPRS network architecture and its operation.	CO2 -U	(16)
		Or		
	(b)	Compare the various parameters for WCDMA and CDMA2000.	CO2 -U	(16)
13.	(a)	Compare the Wimax and HIPERLAN standard.	CO3 -U	(16)
		Or		
	(b)	Explain any two MAC mechanism used in IEEE 802.11 WLAN systems**.**	CO3- U	(16)
14.	(a)	Explain the source initiated routing protocols for ad hoc networks in detail.	CO4 -U	(16)
		Or		
	(b)	Explain the key features of routing protocol in WSN and discuss any two energy efficient routing protocols.	CO4- U	(16)
15.	(a)	Discuss briefly about parameter optimization technique in detail.	CO5 -U	(16)
		Or		
	(b)	Describe in detail about Architecture of Bluetooth Systems**.**	CO5 -U	(16)