Code: 20EC4501A

III B.Tech - I Semester – Regular Examinations - DECEMBER 2022

WIRELESS COMMUNICATIONS AND NETWORKS
(ELECTRONICS & COMMUNICATION 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)	Discuss about the Space Division Multiple Access (SDMA).	L2	CO1	7 M
	b)	Compare various CSMA protocols.	L4	CO2	7 M
		OR			
2	a)	Explain in detail about Spread Spectrum Multiple Access (SSMA).	L2	CO1	7 M
	b)	In an unslotted ALOHA system the packet arrival times form a Poisson process having a rate of 10^3 packets/sec. If the bit rate is 10 Mbps and there are 1000 bits/packet, find (i) the normalized throughput of the system, (ii) the number of bits per packet that will maximize the throughput.	L3	CO2	7 M

UNIT-II

3	a)	Explain traffic routing for the following wireless network: i) Circuit switching. ii) X.25 protocol.	L1	CO1	7 M
	b)	Differentiate between circuit switching and packet switching.	L4	CO2	7 M

OR

4	a)	Describe evolution and development of wireless networks.	L2	CO1	7 M
	b)	Explain the following: i) PSTN ii) Limitations in Wireless Networking.	L2	CO1	7 M

UNIT-III

5	a)	Explain in detail about Mobile IP operation and registration.	L2	CO4	7 M
	b)	What is SS7? Explain with the help of protocol architecture.	L2	CO4	7 M

OR

6	a)	What is ISDN? Explain with the help of block diagram.	L2	CO4	7 M
	b)	Outline the WAP using protocol stack.	L4	CO4	7 M

UNIT-IV

7	a)	Contrast the IEEE 802 Protocol Architecture along with its services.	L3	CO4	7 M
	b)	Discuss the application areas supported by bluetooth.	L2	CO4	7 M

OR

8	a)	Enumerate the special features of Narrow Band Microwave LAN and Infrared LAN.	L3	CO4	7 M
	b)	Explain Radio specification of Bluetooth.	L2	CO4	7 M

UNIT-V

9	a)	Define and explain Cellular Digital Packet Data (CDPD).	L2	CO5	7 M
	b)	Discuss short messaging services in GPRS.	L3	CO5	7 M

OR

10		Discuss about the following: i) Adhoc Networking. ii) HIPERLAN.	L2	CO5	14 M