GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–VII (NEW) EXAMINATION – SUMMER 2022

Subject Code:2170710   **Date:06/06/2022**
Subject Name:Mobile Computing and Wireless Communication
Time:02:30 PM TO 05:00 PM   **Total Marks: 70**
Instructions:
1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Simple and non-programmable scientific calculators are allowed.**

			MARKS
Q.1	(a)	Describe the factors affecting Channel Capacity.	03
	(b)	Compare Packet Switching and Circuit switching.	04
	(c)	Define the term Multiplexing. Compare FDM ,TDM and CDM.	07
Q.2	(a)	Find out the channel capacity and number of signaling levels required for channel having spectrum between 3 MHZ and 4MHZ and SNR_{db} = 24DB.	03
	(b)	Discuss Hidden terminal and Exposed terminal problem.	04
	(c)	Describe various types of Antennas.	07
		OR	
	(c)	Write the needs of ARQ and describe it's working	07
Q.3	(a)	Describe Billing and Charging in GPRS.	03
	(b)	Enlist different types of Handover. Explain any one of them in brief.	04
	(c)	Differentiate GSM and GPRS by considering functions and architecture	07
		OR	
Q.3	(a)	Define and give format for following Identifiers of GSM: IMSI, MSISDN,LAI	03
	(b)	Discuss Authentication and Security in GSM	04
	(c)	Draw and discuss GPRS transmission plane protocol stack.	07
Q.4	(a)	Compare Wi-fi and Wi-Max.	03
	(b)	Describe various types of power control techniques in cellular network.	04
	(c)	Define spreading sequence. Discuss any one spread spectrum technology with example.	07
		OR	
Q.4	(a)	Enlist various Transmission Media Explain any one of them.	03
	(b)	Explain Registration, Discovery and Tunneling in Mobile IP	04
	(c)	Enlist and compare the different Modulation Techniques in the signal theory.	07
Q.5	(a)	Discuss Radio button in Android.	03

	(b)	Explain Activity Life Cycle of Android.	**04**
	(c)	Draw Bluetooth protocol stack and Explain it.	**07**
		OR	
Q.5	**(a)**	Discuss Check Box in Android.	**03**
	(b)	Enlist various Android Layout and explain Relative Layout.	**04**
	(c)	Draw and Explain 802.11 Architecture.	**07**

****