GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–VII (NEW) EXAMINATION – WINTER 2021

Subject Code:3170710   **Date:15/12/2021**
Subject Name:Mobile Computing and Wireless communication
Time:10:30 AM TO 01:00 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)**	Explain any three addresses and identifiers used in GSM with example.	**03**
	(b)	Differentiate packet switching and circuit switching.	**04**
	(c)	Explain Mobile IP.	**07**
Q.2	**(a)**	Given a channel with an intended capacity of 50 Mbps, the bandwidth of the channel is 5 MHz What signal-tonoise ratio is required to achieve this capacity?	**03**
	(b)	Write a short note on selective repeat ARQ.	**04**
	(c)	Write a note on stop-and-wait and selective repeat ARQ.	**07**
		OR	
	(c)	Explain various signal multiplexing techniques	**07**
Q.3	**(a)**	Explain L2CAP protocol of Bluetooth.	**03**
	(b)	Explain handover process in cellular system.	**04**
	(c)	Explain DFWMAC-DCF using CSMA/CA	**07**
		OR	
Q.3	**(a)**	Differentiate infrastructure and ad-hoc network.	**03**
	(b)	What is Handover? Explain types of it in brief	**04**
	(c)	Explain IEEE 802.11 architecture and its services.	**07**
Q.4	**(a)**	Define ASK, FSK & PSK.	**03**
	(b)	What are HLR and VLR? Describe its functions in call routing and roaming.	**04**
	(c)	State the applications of Bluetooth and differentiate between Piconet and Scatternet with neat diagram.	**07**
		OR	
Q.4	**(a)**	Compare Paging and Location update in GSM.	**03**
	(b)	Differentiate Amplitude, Frequency and Phase Shift Keying in Digital Modulation with proper diagram.	**04**
	(c)	Explain in detail the Direct Sequence Spread Spectrum (DSSS).	**07**
Q.5	**(a)**	Explain the power saving states of Bluetooth device.	**03**
	(b)	Explain the IEEE 802.11 Architecture with the neat diagram.	**04**
	(c)	Enlist & explain common layouts available in android.	**07**
		OR	
Q.5	**(a)**	Explain types of Intents.	**03**
	(b)	Write a note on DECT frame format.	**04**
	(c)	Define the Android Layout. Explain the various Android Layouts.	**07**

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