

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

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII (NEW) EXAMINATION – SUMMER 2022****Subject Code:3170710****Date:08/06/2022****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) Enlist various multiplexing techniques and explain any one.	03
	(b) Compare Packet switching and Circuit Switching.	04
	(c) Define channel capacity and various factors which affect it. State Nyquist and Shannon criteria.	07
Q.2	(a) Define Scattering, Refraction and Reflection.	03
	(b) Describe Hamming code in brief.	04
	(c) Explain Direct Sequence Spread Spectrum with example.	07
	OR	
	(c) Explain Frequency Hopping Spread Spectrum.	07
Q.3	(a) Enlist types of Antenna and Explain any one of them.	03
	(b) Describe CRC in brief.	04
	(c) Compare 1G,2G,3G and 4G technology.	07
	OR	
Q.3	(a) Explain Piconet and Scatternet.	03
	(b) Describe WAP in brief.	04
	(c) Describe Multiple Access with Collision Avoidance and explain how hidden terminal problem can be solved by it.	07
Q.4	(a) Define IMSI,MSISDN and LMSI.	03
	(b) Draw GPRS protocol stack and write the functions of GTP,LLC protocols.	04
	(c) Draw and describe GSM Architecture.	07
	OR	
Q.4	(a) Define TMSI,LAI and IMEI.	03
	(b) Enlist types of Handover and explain any one.	04
	(c) Write short note on Mobile IP.	07
Q.5	(a) Discuss type of Intents.	03
	(b) Compare Wi fi and Wi Max	04
	(c) Draw and explain Android Architecture.	07
	OR	
Q.5	(a) Compare HLR and VLR.	03
	(b) Draw and describe Bluetooth protocol architecture in brief.	04
	(c) Enlist various Android layouts and explain them.	07
