

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER- VIII EXAMINATION – SUMMER 2020

Subject Code: 2170710

Date: 28/10/2020

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.

		MARKS
Q.1	(a) Explain any three addresses and identifiers used in GSM with example.	03
	(b) Explain Android EditText and TextView control with an example.	04
	(c) Draw and explain the GPRS transmission plane protocol model.	07
Q.2	(a) Given a channel with an intended capacity of 50 Mbps, the bandwidth of the channel is 5 MHz. What signal-to-noise ratio is required to achieve this capacity?	03
	(b) Discuss the manifest file with example.	04
	(c) What is wave propagation? Discuss various modes of propagation with example.	07
	OR	
	(c) Explain frequency hopping spread spectrum.	07
Q.3	(a) What is Direct Sequence Spread Spectrum technology?	03
	(b) Explain any two various signal multiplexing techniques.	04
	(c) Draw and explain Bluetooth protocol stack.	07
	OR	
Q.3	(a) Explain L2CAP protocol of Bluetooth.	03
	(b) How DSSS does works in CDMA technology?	04
	(c) Draw and explain the IEEE 802.11 architecture in detail.	07
Q.4	(a) Define spreading sequence.	03
	(b) List different categories of spreading sequences. Explain Walsh code with example.	04
	(c) Discuss Mobile IP.	07
	OR	
Q.4	(a) Define channel capacity. Write Shannon capacity formula.	03
	(b) State the key factors that affect channel capacity.	04
	(c) Explain GSM architecture.	07
Q.5	(a) What is the need of ARQ?	03
	(b) Explain Automatic Repeat Request (ARQ) in details.	04
	(c) List all and explain any five IEEE 802.11 services.	07
	OR	
Q.5	(a) Explain piconet and scatternet.	03
	(b) Write a note on DECT frame format.	04
	(c) Define Android layout. Explain various Android layouts.	07
