

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER– VII (NEW) EXAMINATION – WINTER 2021****Subject Code:2170710****Date:29/11/2021****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) Differentiate: TCP and UDP.	03
	(b) Compare Guided and Unguided media with its applications.	04
	(c) Describe the Switching Techniques. Differentiate the Circuit Switching and Packet Switching.	07
Q.2	(a) What is hidden terminal problem?	03
	(b) Explain frequency hopping in spread spectrum.	04
	(c) Define channel capacity. Write Shannon and Nyquist capacity formula. State the key factors that affect channel capacity.	07
	OR	
	(c) Explain OSI model with function of each layer.	07
Q.3	(a) What is multiplexing? Explain multiplexing with an example.	03
	(b) Explain TDMA in detail.	04
	(c) Enlist and Explain the different Modulation Techniques in the signal theory.	07
	OR	
Q.3	(a) What are the essential functional differences between 2 nd and 3 rd Generation of networks?	03
	(b) Differentiate: CDMA technology and GSM technology.	04
	(c) Explain Sliding Window Protocol with an example.	07
Q.4	(a) Discuss Billing and Charging in GPRS network.	03
	(b) Discuss the network elements in GPRS that are different from GSM. Also discuss limitations of GPRS.	04
	(c) Explain GSM architecture.	07
	OR	
Q.4	(a) What are HLR and VLR? Describe its functions in call routing.	03
	(b) Explain the WAP Stack with neat diagram.	04
	(c) What is Mobile IP? Explain the tunneling in context of Mobile IP.	07
Q.5	(a) Draw and explain MAC frame format in WLAN.	03
	(b) Explain IEEE 802.11 Architecture.	04
	(c) Explain Bluetooth Protocol Stack in detail.	07
	OR	
Q.5	(a) Explain types of Intents in android.	03
	(b) Compare and contrast WiMAX and WiFi technologies.	04
	(c) Explain the Android Architecture with the neat diagram.	07
