

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII (NEW) EXAMINATION – SUMMER 2024****Subject Code:3170710****Date:22-05-2024****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) Define IMSI,MSRN and MSISDN. | 03 |
| | (b) Compare Packet Switching and Circuit Switching. | 04 |
| | (c) Define Channel Capacity. Describe Nyquist and Shannon criteria to find Channel Capacity. | 07 |
| Q.2 | (a) Compare TDM and FDM. | 03 |
| | (b) Describe different types of Antennas. | 04 |
| | (c) Draw and Describe GSM Architecture. | 07 |
| OR | | |
| | (c) Describe Mobile IP. | 07 |
| Q.3 | (a) Describe Multi path Propagation and fading. | 03 |
| | (b) Compare HLR and VLR. | 04 |
| | (c) Describe Spread Spectrum Technology. | 07 |
| OR | | |
| Q.3 | (a) Describe billing and charging in GPRS. | 03 |
| | (b) Describe Propagation Modes in Wireless Communication. | 04 |
| | (c) Describe Frequency Hopping Spectrum Technology. | 07 |
| Q.4 | (a) Write Architectural Difference in GSM and GPRS. | 03 |
| | (b) Enlist various Multiple Access Technology and Describe CDMA. | 04 |
| | (c) Describe Automatic Repeat Request. | 07 |
| OR | | |
| Q.4 | (a) Enlist various error detection techniques and explain any one. | 03 |
| | (b) Describe Multiple Access with Collision Avoidance. | 04 |
| | (c) Describe Wireless Application Protocol. | 07 |
| Q.5 | (a) Write use of Manifest file. | 03 |
| | (b) Enlist Various Android Layouts. Describe any one. | 04 |
| | (c) Draw and Describe Bluetooth Protocol Architecture. | 07 |
| OR | | |
| Q.5 | (a) Differentiate Wi-fi and Wi-Max. | 03 |
| | (b) Describe Piconets and scatternet. | 04 |
| | (c) Describe Android Architecture. | 07 |
