

**University of Mumbai**  
**Examinations Summer 2022**  
**(Revised Set May 2022)**

Time: 2 Hr 30 Mins

Max. Marks: 80

| Q1.       | <b>Choose the correct option for following questions. All the Questions are compulsory and carry equal marks</b>  |
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| 1.        | VoLTE Stands for  |
| Option A: | Voice over Long Term Evolution  |
| Option B: | Voice Over Local Telecommunication Equipment  |
| Option C: | Video Over Long Term Evolution  |
| Option D: | Volume Over Long Term Evolution   |
| 2.        | UTRAN stands for  |
| Option A: | Universal Transmission Radio Networks   |
| Option B: | Universal Terrestrial Radio Access Network  |
| Option C: | Unified Transmission Area Network   |
| Option D: | Universal Time Radio Access Network   |
| 3.        | Which of the following Stores the User Related Data That is also relevant to GSM Mobile Systems?  |
| Option A: | VLR   |
| Option B: | HMR   |
| Option C: | GMR   |
| Option D: | SIM   |
| 4.        | Generic Routing Encapsulation allows the encapsulation of packet of One protocol suite into payload portion of a packet of another Protocol suite is nothing but      |
| Option A: | GRE   |
| Option B: | IP Tunneling  |
| Option C: | Protocol Synchronization  |
| Option D: | Minimal Encapsulation   |
| 5.        | Two or more antennas can also be combined to Improve the reception by counteracting the negative effects of multi path propagation, these antennas are also termed as |
| Option A: | multi element antenna Array   |
| Option B: | Smart Antenna   |
| Option C: | Sectored antenna  |
| Option D: | Isotropic Radiator  |
| 6.        | What is an Access Point   |
| Option A: | An entity that provides access to LLC layer   |
| Option B: | An entity that provides access to MAC layer   |
| Option C: | An entity that provides access to the Destination System  |
| Option D: | An entity that provides access to Basic Service Set   |

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| 7.        | A Mobile Phone Uses _____ Type of Communication   |
| Option A: | Full Duplex   |
| Option B: | Half Duplex   |
| Option C: | Both A and B  |
| Option D: | None of the Above   |
| 8.        | There is a need for certain _____ to avoid the frequency Overlapping in FDM.                                  |
| Option A: | Guard Space   |
| Option B: | Frequency Range   |
| Option C: | Carrier   |
| Option D: | Attenuator  |
| 9.        | Which of the following is the disadvantage of having smaller cells in Cellular System                         |
| Option A: | Less Transmission Power   |
| Option B: | Only Local Interface  |
| Option C: | Need of Handover  |
| Option D: | Frequency Re-use  |
| 10.       | IN TCP/IP _____ is a congestion Control algorithm that makes it possible to quickly recover lost Data Packets |
| Option A: | Fast Retransmit and Fast Recovery   |
| Option B: | Fast Retransmit   |
| Option C: | Fast Recovery   |
| Option D: | Slow Start  |

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| <b>Q2,</b> | <b>Solve any Two</b>  | <b>10 marks each</b> |
| a)         | Explain Bluetooth Protocol Stack in detail.<br>Explain the terms PICONET and Scatter net in terms of Bluetooth. |                      |
| b)         | Explain Various Hand over mechanisms in Details.  |                      |
| c)         | Write a Short Note on UTRAN and UMTS Network  |                      |

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| <b>Q3</b> | <b>Solve any Two</b>  | <b>10 marks each</b> |
| a)        | Explain IP Packet Delivery, What do you mean by Agent Discovery and Agent Advertisement in terms of Mobile N/w                      |                      |
| b)        | Explain GSM Architecture in Detail.   |                      |
| c)        | Explain signal Propagation in detail with various effects such as shadowing, Reflection, Refraction, scatter, multipath propagation |                      |

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| <b>Q4</b> | <b>Solve any Two</b>   | <b>10 marks each</b> |
| a)        | Write a brief description on Various Generations of Telecommunication, Describe various applications of mobile devices for Vehicles, Emergency situation, Business, Entertainment. |                      |
| b)        | Write a Short Note on<br>a) HAWAII b) HMIPv6   |                      |
| c)        | What are the various Wireless LAN Threats and How we can secure the wireless Networks  |                      |