



**DEPARTMENT OF ELECTRONICS AND COMMUNICATION
ENGINEERING**

QUESTION BANK

**EC1451 / MOBILE AND WIRELESS COMMUNICATION
YEAR/SEM : IV / VIII**

**UNIT I
PRINCIPLES OF WIRELESS COMMUNICATION**

PART A (2 MARKS)

1. What is digital modulation?
2. What is FSK?
3. What is PSK?
4. What is QAM?
5. Define Spread-spectrum techniques.
6. What is hopping sequence?
7. Define TDMA.
8. What are the TDMA characteristics?
9. Define Frequency Division Multiple Access or FDMA.
10. Define Space-Division Multiple Access (SDMA).
11. What is mean by Handover technique?

PART B (16 MARKS)

1. Briefly explain the different types of Digital Modulation techniques. (16)
2. Briefly explain the different types of linear modulation techniques. (16)
3. Define multiple access techniques and briefly explain them. (16)
4. In detail explain the Cellular concepts (16)

UNIT II - WIRELESS PROTOCOLS

PART A (2 MARKS)

1. Define routing.
2. What is network security?
3. Define ALOHA.
4. Explain CSMA.
5. Define wireless LAN.
6. Define MAN.
7. Explain IEEE 802.11.
8. Define wireless routing protocol.
9. Define Mobile IP.
10. What is 4G?
11. What is 3G?

PART B (16 MARKS)

1. What are the issues and challenges of wireless networks? Explain them.
2. In detail explain ALOHA, CSMA, Wireless LAN, and MAN IEEE 802.11 (a-b-e-f-g-h-i) Bluetooth. (16)
3. Explain in detail about Protocols for 3G & 4G cellular networks. (16)
4. Briefly explain IMT – 2000, UMTS, CDMA2000. (16)
5. Explain Mobility management and handover technologies and All-IP based cellular network. (16)

UNIT III - TYPES OF WIRELESS NETWORKS

PART A (2 MARKS)

1. Define Adhoc network.
2. Explain Adhoc routing protocol.
3. Define wireless sensor network.
4. What is meant by peer-to-peer network?
5. Define DSR.
6. Explain Mobility models.
7. What are the advantages of P2P networks?
8. Define LAR (Location - Aided Routing).
9. High latency time in route finding.

PART B (16 MARKS)

1. Explain in detail about Ad-hoc networks and Ad-hoc routing. (16)
2. Explain in detail about Sensor networks and Peer-Peer networks. (16)
3. Briefly explain the different types of Mobile routing protocols. (16)
4. Define mobility models and briefly explain them. (16)
5. Explain in detail about Reactive routing and Location aided routing. (16)

UNIT IV - ISSUES AND CHALLENGES

PART A (2 MARKS)

1. What are the issues in mobile networking?
2. What is the need for Network Security?
3. What are the Types of unauthorized access.
4. Define Ad-hoc networks.
5. Explain MAC ID filtering
6. What are the Different levels of security?
7. Explain Authentication versus identification.
8. Define Mobile IP.
9. What do you mean by Home network and Home address?
10. Give the applications of VoIP.

PART B (16 MARKS)

1. Briefly explain the Issues and challenges of mobile networks. (16)
2. Give the difference between Authentication and identification? Write a short note on Authentication in mobile applications. (16)
3. Explain in detail about Privacy issues in Mobile Networks. (16)
4. Briefly explain About Mobile IP and Ad-hoc networks. (16)
5. Explain in detail about Security issues. (16)

UNIT V - SIMULATION

PART A (2 MARKS)

1. What is GloMoSim?
2. Explain advantages of parallelization in GloMoSim.
3. What are important components of mobile networking?
4. Write the command for Creating Node movements in NS-2.
5. What are the Network Components in a mobile node?

6. What are the Different types of Routing Agents in mobile networking?
7. Define DSDV.
8. Define TORA.
9. Define AODV.
10. Briefly explain about 802.11 DCF from CMU

PART B (16 MARKS)

1. Design and evaluate the performance of various transport protocols of mobile using network simulator (any one). (16)
 2. Design and evaluate the performance of various routing protocols of mobile using network simulator (any one). (16)
 3. Design and evaluate the performance of routing protocols of wireless networks using network simulator (any one). (16)
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