

**DIPLOMA EXAMINATION IN ENGINEERING/ TECHNOLOGY/  
MANAGEMENT/ COMMERCIAL PRACTICE, APRIL -2021**

**MOBILE COMMUNICATION**

[Maximum marks: 75]

(Time: 2.15 Hours)

**PART – A**

I. Answer any three questions in one or two sentences. Each question carries 2 marks

1. Give the example for first generation cellular network.
2. List three satellite orbits based on altitude.
3. Expand TDMA and CDMA
4. What type of communication is implemented by IEEE 802.16
5. Define piconet.

(3 x 2 = 6)

**PART – B**

II. Answer any *four* of the following questions. Each question carries 6 marks

1. Briefly explain first generation cellular system TDMA.
2. Write short notes on FDMA multiple access technique.
3. Describe briefly the classification of satellite based on their orbits.
4. Explain codeless system.
5. Describe the MAC layer of IEEE 802.11
6. Explain spread spectrum LAN
7. Write various features and applications wireless sensor network.

(4 x 6= 24)

**PART – C**

Answer *any of the three units* from the following. Each full question carries 15 marks

**UNIT –I**

- III (a) Discuss Frequency reuse and handover/handoff related with cellular network systems. (10)
- (b) Write Advantages of Cellular Network (5)

**OR**

- IV (a) Discuss third generation cellular system (7)  
(b) Differentiate between FDMA and TDMA (8)

**UNIT-II**

- V (a) List the mobile IP terminology (8)  
(b) Explain IEEE 802.16 Broadband wireless access standards (7)

**OR**

- VI (a) Explain the architectural overview of Wireless Application Protocol (9)  
(b) Explain capacity allocation time division. (6)

**UNIT-III**

- VII (a) Explain 802.11 architecture with a diagram. (10)  
(b) Briefly describe Narrowband Microwave LAN (5)

**OR**

- VIII (a) Differentiate between 802.11 Medium Access Control and Physical Layer (9)  
(b) Write short notes on Wireless LAN (6)

**UNIT-IV**

- IX (a) Discuss the protocol stack of Bluetooth with a diagram (10)  
(b) Explain WPAN (5)

**OR**

- X (a) Explain Bluetooth application and services. (5)  
(b) Describe Bluetooth Architecture with suitable diagram (10)

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