

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/
COMMERCIAL PRACTICE - APRIL - 2022**

MOBILE COMMUNICATION

[Maximum marks: 100]

(Time: 3 Hours)

PART – A

(Maximum Marks: 10)

Marks

I. Answer all the questions in one or two sentences. Each question carries 2 marks

1. List the frequency reuse parameters.
2. Define elevation angle e of the earth station.
3. Define WAP
4. Define Adhoc network.
5. Define piconet.

(5 x 2 = 10)

PART – B

(Maximum Marks: 30)

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

1. Explain the operation of first generation AMPS analog cellular network.
2. List the advantages and disadvantages of CDMA cellular networks.
3. Derive the actual data transmission rate in a simple TDD cordless system.
4. Describe the WAP protocol stack with a neat diagram.
5. Difference between Single cell and multiple cell wireless LAN configurations.
6. Write a note on wireless LAN technologies.
7. Explain Wireless Sensor Network.

(5 x 6 = 30)

PART – C

(Maximum Marks: 60)

(Answer one full question from each unit. Each full question carries 15 marks)

UNIT –I

- III. (a) Distinguish between cell splitting and cell sectoring in cellular wireless technology. (8)
- (b) Draw the diagram of a GSM architecture and describe the various components. (7)

OR

- IV. (a) Explain the concept of FDMA with a graphical representation. (8)
- (b) Describe the spread spectrum technology of CDMA with the help of a diagram. (7)

UNIT-II

- V. (a) Explain the types of satellites based on orbits. (8)
(b) Describe the various transmission impairments that affects the performance of a satellite.(7)

OR

- VI. (a) Explain the DECT frame format and protocol architecture with the help of a diagram. (8)
(b) Describe the tunnelling process in mobile IP. (7)

UNIT-III

- VII. (a) Explain IEEE 802.11 architecture with neat diagram. (8)
(b) Write a note on wireless LAN requirements (7)

OR

- VIII. (a) Explain IEEE 802.11 Medium Access Control logic (8)
(b) Describe the application of Wireless LAN. (7)

UNIT-IV

- IX. (a) Explain bluetooth protocol architecture with diagram. (8)
(b) Describe the applications of bluetooth technology. (7)

OR

- X. (a) Explain IEEE 802.15.3 protocol for WPAN. (8)
(b) Describe Scatternet. (7)
