

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE, APRIL – 2024**

MOBILE COMMUNICATION

[Maximum Marks: **100**]

[Time: **3 Hours**]

PART-A

[Maximum Marks: **10**]

I. (Answer **all** questions in one or two sentences. Each question carries **2** marks)

1. What is a cellular network?
2. Define coverage angle of a satellite.
3. List any four requirements of Wireless LAN.
4. State the term scatternet.
5. What is SDMA?

(5 x 2 = 10)

PART-B

[Maximum Marks: **30**]

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

1. Describe Space Division Multiple Access in Wireless system.
2. List and Explain advantages of CDMA.
3. Write notes on Satellite configuration.
4. State advantages of wireless local loop over wired subscriber loop.
5. Describe transmission techniques of Infrared LAN.
6. Explain IEEE 802.11 Physical Layer.
7. Discuss Bluetooth usage models.

(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. List and explain the ways of increasing capacity of a cellular system. (7)

b. Compare FDMA and TDMA. (8)

OR

- IV. a. Explain CDMA Design considerations. (7)
- b. What is handoff? Describe various handoff strategies. (8)

UNIT – II

- V. a. Describe factors affecting performance of satellites. (6)
- b. Explain operation of Mobile IP. (9)

OR

- VI. a. Explain WAP Architecture. (9)
- b. Discuss cordless systems. (6)

UNIT- III

- VII. a. Discuss Spread spectrum LAN. (6)
- b. Explain services of IEEE 802.11 (9)

OR

- VIII. a. Explain IEEE 802.11 Architecture with diagram. (9)
- b. Describe Narrowband Microwave LAN. (6)

UNIT - IV

- IX. a. Explain Bluetooth Protocol Architecture. (8)
- b. Discuss Bluetooth applications and usage models. (7)

OR

- X. a. Draw and explain IEEE 802.15 Protocol Architecture. (7)
- b. Explain Piconet and Scatternet. (8)
