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DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/ COMMERCIAL PRACTICE, APRIL - 2025

MOBILE COMMUNICATION

[Maximum marks: 100] [Time: 3 Hours]

PART – A
Maximum marks: 10

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

1. Define Base Station.
2. Define GEO,MEO Satellites.
3. Define SDMA,CDMA.
4. What is ISM band?
5. Define Scatternet. (5 x 2 = 10)

PART – B
Maximum marks: 30

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

1. List the advantages of cellular system.
2. Explain CDMA access technology.
3. Explain cordless system in satellite communication.
4. Explain capacity allocation time division in satellite communication.
5. Explain single cell and multiple cell wireless LAN configuration.
6. Explain wireless sensor network.
7. Describe Wi-Fi protected access. (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) Discuss third generation cellular system. (7)

(b) Describe the performance metrics used to make handoff decision. (8)

OR

IV. (a) Explain and Compare FDMA and CDMA. (8)

(b) Give the principle components of cellular system. (7)

UNIT - II

V. (a) Explain the protocol architecture of IEEE 802.16 (7)

(b) Describe Mobile – IP. (8)

OR

VI. (a) Explain capacity allocation time division in satellite communication. (8)

(b) Give the architectural overview of wireless application protocol. (7)

UNIT - III

VII. (a) Explain briefly about narrow band microwave LAN. (8)

(b) Write short note on wireless LAN. (7)

OR

VIII. (a) Explain transmission technology used in Infrared LANS. (10)

(b) Explain IEEE 802.11 services. (5)

UNIT – IV

IX. (a) Explain the architecture of Bluetooth technology. (10)

(b) Describe Bluetooth low energy. (5)

OR

X. (a) Explain different states of devices in Bluetooth network. (8)

(b) Explain Bluetooth usage model. (7)
