DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/ COMMERCIAL PRACTICE , APRIL – 2023

MOBILE COMMUNICATION

(Maximum Marks : 100)   (Time : 3 hours)

PART – A
(Maximum Marks : 10)

Marks

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

1. Define Base station.

2. Define WLL.

3. List the categories of wireless LANs.

4. What is ISM band?

5. List two applications of Bluetooth.

(5x2=10)

PART – B
(Maximum Marks : 30)

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

1. Describe different ways of increasing capacity of a cellular system.

2. List and explain the advantages of cellular system.

3. List and explain the factors that depends the performance of satellite link.

4. Explain the concept of mobile IP.

5. List and explain application areas of wireless LAN.

6. Describe Wi-Fi protected access.

7. Illustrate wireless sensor networks.

(5x6=30)

PART – C

(Maximum Marks : 60)

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

UNIT – I

III. (a) Explain the developments in cellular systems during second generation. (8)

(b) Describe the performance metrics used to make hand off decision. (7)

OR

IV. (a) List and explain the principle components of cellular system. (8)

(b) Compare different multiple access protocols. (7)

UNIT – II

V. (a) Explain GEO, MEO and LEO satellites. (8)

(b) Describe protocol architecture of IEEE 802.16. (7)

OR

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

(b) Explain 802.16 broadband access standards. (7)

UNIT –III

VII. (a) Explain the transmission techniques for infrared LAN. (8)

(b) List and explain IEEE 802 protocol layers. (7)

OR

VIII. (a) List and explain the key requirements of WLAN. (8)

(b) Explain IEEE 802.11 services. (7)

UNIT – IV

IX. (a) Explain the architecture of Bluetooth. (8)

(b) Describe Bluetooth low energy. (7)

OR

X. (a) Explain scatternet and piconet. (8)

(b) Describe Bluetooth usage models. (7)

****