



**A22-02802**

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TED (15) - 6134  
(Revision-2015)

Reg.No.....

Signature.....

**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)

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