

**TED (15/19) - 6042**  
(REVISION-2015/19)

1509233375

Reg.No.....  
Signature.....

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/  
MANAGEMENT/COMMERCIAL PRACTICE, NOVEMBER - 2023**

**COMMUNICATION SYSTEMS**

(Maximum Marks:100)

(Time: 3 Hours)

**PART - A**  
( Maximum Mark : 10 )

**Marks**

- I. **Answer all the questions in one or two sentences. Each question carries 2 marks.**
1. Write the concept of microwave communication.
  2. State the function of wave guide.
  3. Define DBS.
  4. Draw the block diagram of fiber optic communication system.
  5. Enumerate the components of RFID.

( 5 x 2 = 10 )

**PART - B**  
( Maximum Mark: 30 )

- II. **Answer any five questions from the following. Each question carries 6 marks.**
1. Draw the Applegate diagram of reflex klystron.
  2. Describe the concept of TDMA.
  3. Explain direct-to-home satellite television.
  4. List the advantages of fiber optic communication.
  5. Enumerate the applications of fiber optics in data communication.
  6. Explain in detail the handoff mechanism.
  7. Explain the concept of Wi-Fi.

( 5 x 6 = 30 )

*P.T.O*

**PART – C**

(Maximum Mark: 60 )

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

**UNIT - I**

- III. (a) Explain the working of TWT with the help of suitable diagram. (10)  
(b) Draw the block diagram of microwave repeater. (5)

**OR**

- IV. (a) Explain the working of tunnel diode with the help of V-I characteristics and write any four applications. (10)  
(b) Draw the block diagram of a microwave receiver. (5)

**UNIT –II**

- V. (a) Explain the features of CDMA. (8)  
(b) Enumerate the applications of satellite. (7)

**OR**

- VI. (a) Explain the working of satellite up-link model with the help of block diagram. (8)  
(b) Explain the working of dish antenna. (7)

**UNIT – III**

- VII. (a) Enumerate different types of losses occurred in optical fiber. Explain absorption losses in optical fibers & comparing intrinsic and extrinsic absorption losses. (8)  
(b) Analyze the working of an avalanche diode. (7)

**OR**

- VIII. (a) Explain numerical aperture and acceptance angle of an optical fiber. (8)  
(b) Illustrate the working of a LASER diode. (7)

**UNIT – IV**

- IX. (a) Describe frequency reuse in mobile communication. (8)  
(b) Describe about Bluetooth and write the applications of Bluetooth. (7)

**OR**

- X. (a) Explain the GSM network architecture. (12)  
(b) Enumerate the features of Wi-Max. (3)

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