



C-09-EC-403

**3469**

**BOARD DIPLOMA EXAMINATION, (C-09)**

MARCH / APRIL - 2019

**DECE - IV SEMESTER EXAMINATION**

**COMMUNICATION SYSTEMS**

Time : 3 Hours]

[Total Marks : 80

**PART - A**

**3×10=30**

- Instructions :**
- (1) Answer **ALL** questions.
  - (2) Each question carries **THREE** marks.
  - (3) Answer should be brief and straight to the point.
- 1 Distinguish between Synchronous and asynchronous communication.
  - 2 Mention the types of pulse modulation.
  - 3 What is the principle of Pulse code Modulation ?
  - 4 What is TDMA?
  - 5 Differentiate between FDM and TDM.
  - 6 Write the advantages of ISDN.
  - 7 Classify switched telephone systems.
  - 8 Define beam width of antenna.
  - 9 What are the differences between broadside array and endfire array ?
  - 10 Define decibel and neper.

## PART - B

10×5=50

- Instructions :**
- (1) Answer any **FIVE** questions.
  - (2) Each question carries **TEN** marks.
  - (3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

- |    |  |   |
|----|--|---|
| 11 | (a) Explain Baudot code.   | 5 |
|    | (b) Explain the operation of Vocoder.  | 5 |
| 12 | (a) Explain CRC (Cyclic Redundancy Check) method for error detection and correction using checksum.  | 7 |
|    | (b) Mention the advantages of CRC Checksum.  | 3 |
| 13 | (a) Mention the salient features of Cable modem.   | 3 |
|    | (b) Describe the operation of Telephone Modem.   | 7 |
| 14 | (a) Explain the working principle of Spread Spectrum.  | 5 |
|    | (b) Explain frequency hopping system.  | 5 |
| 15 | Describe various signals present on a local-loop telephone line, with diagram.                       |   |
| 16 | (a) Describe the working principle of FAX machine.   | 7 |
|    | (b) What is internet telephony ?   | 3 |
| 17 | (a) Explain the operation of Loop antenna.   |   |
|    | (b) Explain the radiation pattern and applications of yagi antenna.                                  |   |
| 18 | Explain the working of cell-site antenna and mobile portable antenna used in cellular communication. |   |