C-14-EC-**404**

4437

BOARD DIPLOMA EXAMINATION, (C-14)

MARCH / APRIL - 2019

DECE - IV SEMESTER EXAMINATION

DIGITAL COMMUNICATIONS

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 and shall not exceed five simple sentences.

1   State sampling theorem.

2   Define bit rate, and dynamic range for PCM systems.

3   Define the term bit overhead and overhead efficiency.

4   Mention different error detection techniques.

5   List the three basic types of digital modulation techniques.

6   List any three advantages of BPSK.

7   List any three advantages of TDM.

8   State the advantages of ISDN.

9   Mention the advantages of electronic telephony over manual telephony.

10   Mention various signals present on a local-loop telephone line.

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 Explain the generation and demodulation of PAM with waveforms.

12 Explain adaptive delta modulation with block diagram and waveform.

13 Explain VRC method of error detection with an example.

14 Explain the working of a ASK modulator with block diagram.

15 Draw and explain the functioning FSK demodulator using PLL.

16 Explain Time division multiplexing in detail.

17 Explain Asynchronous Digital Subscriber Line (ADSL) technology.

18 Explain the use of FDM in telephony.

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