



C14-EC-404

4458

BOARD DIPLOMA EXAMINATION, (C-14)
OCT/NOV—2018
DECE—FOURTH SEMESTER EXAMINATION
DIGITAL COMMUNICATIONS

Time : 3 Hours]

[Total Marks : 80

PART—A

3×10=30

Instruction : (1) Answer **all** questions. Each question carries **three** marks.
(2) Answers should be brief and straight to the point and shall not exceed **five** simple sentences.

1. State Sampling theorem and explain its significance.
2. What is quantization noise?
3. List the various error detection and error correction techniques.
4. What is RZ line coding technique?
5. List different digital modulation techniques.
6. State the importance of constellation diagram.
7. What is the need for multiplexing?
8. What are the disadvantages of TDM?
9. List the signals present on a local loop telephone line.
10. Compare in band and out of band signalling systems for telephony.

PART—B

10×5=50

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Instruction : (1) Answer any **five** questions and each question carries **ten** marks.
(2) Answers should be comprehensive and the criteria for valuation is the content but not the length of the answers.

11. Explain the generation and demodulation of Pulse Amplitude Modulation with block diagram and suitable waveforms .
12. Explain the operation of vocoders.
13. Explain hamming code. Explain the method of error detection and error correction using these codes.
14. Explain VRC method of error detection with an example.
15. Explain Quadrature Amplitude Modulation (QAM) with the help of diagrams.
16. Explain ASK coherent demodulator with block diagram.
17. Explain the operation of Telephone Modem.
18. Explain the TDM and FDM techniques used in Telephony with block diagrams.

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