

4458

BOARD DIPLOMA EXAMINATION, (C-14)

JUNE-2019

DECE - FOURTH SEMESTER EXAMINATION

DIGITAL COMMUNICATIONS

Time: 3 Hours]

[Max. Marks: 80

PART - A

10x3=30M

Instructions: 1) Answer **all** questions. Each question carries **three** marks.

2) Answer should be brief and straight to the point and shall not exceed five simple sentences.

- 1) List any three advantages of delta modulation over PCM.
- 2) State sampling theorem and explain its significance.
- 3) Define the terms: bit overhead and bit overhead efficiency.
- 4) List any three error detection techniques.
- 5) What is QAM?
- 6) What is the difference between bit rate and baud rate?
- 7) State the need for multiplexing.
- 8) Describe briefly about the operation of telephone modem.
- 9) List the various signals present in local loop telephone system.
- 10) List the different types dialing methods.

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PART - B

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10x5= 50M

- 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 coding and decoding of a PCM signal.
- 12) Explain the generation and detection of DM signal.
- 13) Explain the cyclic redundancy check method for error detection and correction using checksum.
- 14) Explain NRZ and RZ line coding technique.
- 15) Explain the digital modulation techniques (ASK,FSK and PSK)
- 16) Draw and explain BPSK modulator and demodulator.
- 17) Explain frequency division multiplexing and time division multiplexing.
- 18) Explain the TDM techniques used in Telephony.

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