



C16-EC-404

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**BOARD DIPLOMA EXAMINATION, (C-16)
OCTOBER/NOVEMBER-2018
DECE-FOURTH SEMESTER EXAMINATION**

DIGITAL COMMUNICATIONS

Time : 3 Hours]

[Total Marks: 80

PART-A

3X10=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 smapling theorem.
2. Compare analog and digital communication techniques.
3. List the digital signal encoding formats.
- * 4. State the advantages of CRC method of error detection.
5. State typical application areas of different digital modulation techniques.
6. State the need for digital modulation.
7. List any three merits of TDM.
8. State the need for multiplexing.
9. Mention the advantages of electronic telephony over manual telephony.
10. Define local loop in telephone system.

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PART-B

10X5=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) Describe the coding and decoding of PCM signal.
(b) Write the advantages of delta modulation over PCM.
12. Explain the CRC method of error detection with an example.
13. Explain about the hamming code in error detection and correction.
14. Draw the diagram and explain ASK modulator with block diagram.
15. (a) Draw the block diagram and explain BPSK modulator
(b) List four advantages of BPSK.
16. (a) Explain cable modems.
(b) Explain ISDN.
17. (a) State the need for a modem in data communications
(b) Explain Digital subscriber line (DSL).
18. (a) Explain the use of FDM in telephony.
(b) Mention the various signals present on a local loop telephone line.

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