



C14-EC-404

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BOARD DIPLOMA EXAMINATION, (C-14)
MARCH/APRIL—2018
DECE—FOURTH 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) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. Define information capacity of a channel.
2. Classify pulse modulation techniques.
3. List any three digital encoding formats.
4. List different types of error during data transmission.
5. Define bit rate and baud rate.
6. Write any three comparisons among ASK, FSK and PSK.
7. List any three merits and three demerits of TDM.
8. State the need for modern in data communication.

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[*Contd...*

9. Write any six advantages of electronic telephony over manual telephony.
10. Compare in-band and out-of-band signalling systems for telephony.

PART—B

10×5=50

Instructions : (1) Answer *any five* questions.

(2) Each question carries **ten** marks.

(3) Answers 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 block diagram. 5+5
12. Explain different data compression techniques.
13. (a) Explain *L-R-C* method of error detection with an example. 4
(b) Explain check-sum method of error detection. 6
14. Explain ASK modulation and ASK coherent demodulation with block diagram for each. 5+5
15. Explain quadrature amplitude modulation with block diagram. 6+4
16. Explain frequency division multiplexing with block diagram. 6+4
17. Explain ISDN with necessary diagram. 6+4
18. Explain IP telephony (VOIP).
