4458

**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. List three advantages and disadvantages of PPM.

3. What is NRZ line coding technique?

4. Define overhead efficiency.

5. Compare ASK, FSK and PSK.

6. Explain the difference between bit rate and baud rate.

7. List the advantages of TDM.

8. List the differences between Data modem and Fax modem.

9. List the types of dialling.

10. Write the advantages of DTMF.

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

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

(3) Answers should be comprehensive and the criteria for valuation is the content but not the length of the answer.

11. Explain the generation and demodulation of Pulse Amplitude Modulation with block diagram.

12. Explain the generation and detection of Delta Modulation with block diagram.

13. Explain the Cyclic Redundancy Check method of error detection with an example.

14. Explain ASK coherent demodulator with block diagram.

15. Draw and explain BPSK modulator.

16. Explain retransmission method of error correction.

17. Explain the Asynchronous Digital Subscriber Line (ADSL) technology.

18. Explain different signals present on a local loop telephone line and explain the function of each signal.

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