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C14-CM-505

4628

BOARD DIPLOMA EXAMINATION, (C-14)
OCT/NOV—2017
DCME—FIFTH SEMESTER EXAMINATION
DATA COMMUNICATION

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 data communication.
2. List the differences between point-to-point and multipoint communications.
3. List any three functions of modem.
4. Define channel capacity. List the key factors that affect channel capacity.
5. Write the differences between an analog and a digital electromagnetic signal.
6. Define a parity bit.
7. Write about different types of errors in data transmission.
8. Write about NRZ-L and NRZ-I.

- * 9. Define upstream and downstream with respect to subscriber lines.

10. Write the need for switching.

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 basic components of data communication model analog with a block diagram.

12. (a) Explain the operation of acoustic modem connection to the telephone line. 5

- (b) List the advantages and disadvantages of network adapter. 5

13. Explain about various guided transmission media.

14. Explain about different transmission impairments.

15. Explain the modulation techniques for transforming analog data into digital signals.

16. Explain synchronous data transmission with frame formats.

17. Explain about statistical time division multiplexing.

- * 18. (a) Explain about packet switching. 6

- (b) List the advantages of packet switching over circuit switching. 4

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