



C14-CM-505

4628

**BOARD DIPLOMA EXAMINATION, (C-14)
OCT/NOV—2016
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) Answer should be brief and straight to the point and shall not exceed *five* simple sentences.

1. Write the need for data communication.
2. List the different modes of data transmission.
3. List any three functions of network adapter.
4. What is the significance of twisting in twisted pair cable?
5. List the three important characteristics of a periodic signal.
6. Define differential encoding.
7. Write about CRC error detection technique.
8. List the advantages and disadvantages of asynchronous data transmission.

- * 9. Write the need for multiplexing.
10. Why is a statistical time division multiplexer more efficient than a synchronous time division multiplexer?

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 point-to-point, multipoint and broadcasting communication. 10
12. Explain the working principle of modem with diagram.
13. Explain about various unguided transmission media.
14. (a) Define attenuation. 3
(b) Compare various guided transmission media. 7
15. Explain the modulation techniques for transforming digital data into analog signals.
16. (a) List and explain various types of errors. 5
(b) Explain the error correction process. 5
- * 17. Explain about frequency division multiplexing.
18. Explain about switched communication network.
