A23 -07538

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/ COMMERCIAL PRACTICE, APRIL- 2023

DATA COMMUNICATION

[Maximum marks: 100]   (Time: 3 Hours)

PART – A
Maximum marks : 10

I (Answer *all* the questions in one or two sentences. Each question carries 2 marks)

1. List the key elements of a protocol.
2. Define physical topology.
3. Define broadband transmission.
4. State the difference between guided and unguided media.
5. Compare single bit error and burst error.   (5 x 2 = 10)

PART – B
Maximum marks : 30

II (Answer any *five* of the following questions. Each question carries 6 marks)

1. Explain different data flow methods.
2. Explain about any three network topologies.
3. Mention the causes of transmission impairments.
4. Compare parallel and serial transmission.
5. Describe the constructional details of coaxial cable with figure.
6. Compare Character oriented and bit oriented protocols.
7. Explain CSMA.   (5 x 6 = 30)

PART – C
Maximum marks : 60

(Answer one full question from each unit.. Each full question carries 15 marks)

UNIT –I

III. (a) What are the components of communication? Explain.   (8)

(b) Explain the different categories of network. (7)

OR

IV. Explain ISO-OSI model with a neat diagram. (15)

UNIT-II

V.(a) Explain Synchronous and Asynchronous transmission modes. (8)

(b) Write short notes on AM and FM. (7)

OR

VI. Explain FDM, WDM, TDM. (15)

UNIT-III

VII. (a) With a neat sketch, explain the constructional details and applications of Twisted
pair cable. (9)

(b) Write short note on circuit switched networks. (6)

OR

VIII.(a) Explain any three methods of wireless propagation. (8)

(b) With a neat sketch explain virtual circuit switching. (7)

UNIT-IV

IX. (a) Explain about stop and wait protocol. (8)

(b) Write short notes on flow control and error control. (7)

OR

X. (a) Explain Cyclic redundancy Check with an example. (10)

(b) Explain HDLC frame format with figure. (5)

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