

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/  
COMMERCIAL PRACTICE, APRIL-2021**

**DATA COMMUNICATION**

[Maximum marks: 75]

(Time: 2.15 Hours)

**PART – A**

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

1. Define protocol.
2. Differentiate between Analog and Digital data.
3. List the components of packet switch.
4. State the significance of redundancy bits.
5. Mention the purpose of bit stuffing. (3 x 2 = 6)

**PART – B**

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

1. Explain briefly about the components of data communication.
2. Discuss different categories of networks.
3. Compare parallel and serial communication.
4. Describe asynchronous communication.
5. Explain twisted pair cable.
6. Discuss about wireless communication.
7. Write short note on HDLC (4 x 6=24)

**PART – C**

(Answer *any of the three units* from the following. Each full question carries 15 marks)

**UNIT –I**

III. Explain ISO-OSI layered architecture. (15)

**OR**

IV. Explain different network topologies (15)

**UNIT-II**

V. (a) Explain different transmission impairments. (9)

(b) Describe about PCM with diagram. (6)

**OR**

- VI.**(a) Discuss about digital to analog conversion techniques ASK,FSK and PSK. (9)  
(b) Explain briefly about FDM. (6)

**UNIT-III**

- VII.**(a) Explain briefly about Fiber optic cable. (9)  
(b) Discuss the constructional details of coaxial cable. (6)

**OR**

- VIII.**(a) Explain different packet switching methods. (9)  
(b) Describe circuit switched networking. (6)

**UNIT-IV**

- IX.** (a) Explain parity check coding with diagram (9)  
(b) Discuss about CRC. (6)

**OR**

- X.** (a) Describe briefly about Datalink Layer protocols. (9)  
(b) Explain ALOHA. (6)

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