

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 2018

DATA COMMUNICATION

[Time : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

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

1. Name the addressing methods used in Data link layer and Transport Layer.
2. Define Baseband Transmission.
3. Name different packet switching methods.
4. What is Forward Error Correction ?
5. Name the components of a data communication system.

(5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Explain different categories of network.
2. Explain noise in a communication system and different categories of noise.
3. Briefly explain different analog to analog conversion schemes.
4. Write a note on different methods of propagation of unguided signals.
5. Discuss stop and wait ARQ of data link layer.
6. Define HDLC and its different transfer modes.
7. Explain circuit switched networks.

(5×6 = 30)

PART — C

(Maximum marks : 60)

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

UNIT — I

- III (a) Discuss the functions of physical and datalink layers in ISO OSI model. 8
 (b) Explain Protocol. State the use of any three application layer protocols. 7

OR

- IV (a) Discuss the functions of Network and Transport layers in ISO OSI model. 8
 (b) Explain Star and Ring topologies of computer network. 7

UNIT — II

- V (a) Explain synchronous and asynchronous transmission modes. 8
 (b) Discuss on FSK and PSK methods. 7

OR

- VI Explain FDM, WDM and TDM. 15

UNIT — III

- VII (a) Explain datagram and virtual circuit networks. 7
 (b) Write a note on any two guided media. 8

OR

- VIII (a) Write notes on (i) Radio Waves (ii) Microwaves. 8
 (b) Compare circuit switching and packet switching. 7

UNIT — IV

- IX (a) Write a note on HDLC transfer modes and frame formats. 8
 (b) Explain point to point protocol transition phases. 7

OR

- X Write a note on (i) ALOHA (ii) CSMA (iii) CSMA/CD 15