

TED (15/19)-3151
(Revision-2015/19)

N21-08256

Reg.No.....
Signature.

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/
COMMERCIAL PRACTICE –NOVEMBER -2021.

DATA COMMUNICATION

(Maximum Marks : 75)

[Time : 2.15 hours]

PART-A

Marks

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

1. Name different components in a data communication system.
2. Define bandwidth of a composite signal.
3. Define bit rate and bit length.
4. Name different categories of multi mode fibers.
5. Define hamming distance between two words with an example.

(3x2=6)

PART - B

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

1. Define protocol and describe its elements.
2. Describe the advantages of using layered network design approach.
3. Compare analog and digital communication.
4. Compare circuit switching and packet switching.
5. Explain different wireless signal propagation methods.
6. Explain any two forward error correction methods.
7. Describe the implementation of variable size framing methods.

(4x6 =24)

PART - C

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

UNIT I

- III** (a) Describe star and mesh topologies with neat diagrams. (8)
(b) Discuss different data flow methods. (7)

OR

- IV** Describe ISO-OSI layered architecture model with a neat diagram. (15)

UNIT- II

- V** (a) Explain pulse code modulation process. (8)
(b) Discuss ASK and PSK methods (7)

OR

- VI** (a) Explain different bandwidth utilization techniques. (8)
(b) Describe various types of transmission impairments. (7)

UNIT- III

- VII** (a) Write a note on any two guided transmission media. (8)
(b) Describe circuit switching process and its properties. (7)

OR

- VIII** (a) Explain any two types of wireless transmission waves and its applications. (8)
(b) Discuss the advantages and disadvantages of Optical Fiber communication (7)

UNIT – IV

- IX** (a) Explain any two data link layer protocols for noisy channels. (8)
(b) Describe checksum method of error detection. (7)

OR

- X** (a) Write notes on (i) ALOHA (ii) CSMA (8)
(b) Write a note on HDLC frames. (7)
