TED (15/19) 4132

(Revision-2015/19)

N22-00417

Reg.No.....

Signature.....

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/ COMMERCIAL PRACTICE, NOVEMBER - 2022

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 any four components of Data Communication.
2. Define composite signals.
3. What is interleaving?
4. What is the purpose of Cladding in optical fiber?
5. Define Hamming distance. (5 x 2 = 10)

PART – B

Maximum marks : 30

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

1. Differentiate between LAN and WAN.
2. Explain the elements of Protocol.
3. Explain the fundamental factors of Sine Wave.
4. List and explain transmission impairments.
5. Write short note on Twisted Pair Cable?
6. Explain Radio Wave Communication.
7. Describe 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. Explain different types of Network Topologies. (15)

OR

IV. Explain each layer in ISO-OSI Reference model with a neat diagram. (15)

UNIT-II

V. Draw and explain the steps to convert Analog to Digital signals using PCM. (15)

OR

VI. Explain Frequency Division Multiplexing and Time Division Multiplexing. (15)

UNIT-III

VII. (a) Write a short note on Coaxial cable. (6)

(b) Explain Circuit Switched network with a diagram. (9)

OR

VIII.(a) Explain the advantages and disadvantages of Optical Fiber Cable? (6)

(b) Explain Virtual Circuit Network. (9)

UNIT-IV

IX. (a) Explain Cyclic Redundancy check. (9)

(b) Define Framing and explain different types of frames in Data Link Layer. (6)

OR

X. (a) Briefly explain Check Sum error detection method. (8)

(b) Describe Stop and Wait Protocol. (7)

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