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DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 2019

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. Define data communication.
2. What is attenuation ?
3. Define bit rate.
4. State any two applications of coaxial cable.
5. What is flow control ? (5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Describe the components of data communication.
2. Write short notes on LAN and MAN.
3. Explain frequency division multiplexing.
4. Comparison between unshielded and shielded pair twisted pair cable.
5. Explain circuit switched networks.
6. Explain CRC. Draw CRC encoder and Decoder.
7. Write short notes on CSMA/CD. (5×6 = 30)

Marks

PART — C

(Maximum marks : 60)

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

Unit — I

III (a) Explain different types of topology. 7

(b) Explain half duplex and full duplex transmission. 8

Or

IV Explain ISO-OSI layered architecture with block diagram. 15

Unit — II

V (a) Explain various types of noises. 9

(b) Describe amplitude modulation. 6

Or

VI Explain digital modulation techniques such as ASK, FSK and PSK. 15

Unit — III

VII Explain unguided transmission media such as Radio waves, Micro waves and Infrared waves. 15

Or

VIII (a) Explain the construction characteristics of optical fiber cable and its applications. 8

(b) Explain packet switched networks. 7

Unit — IV

IX (a) Explain parity check with example. 7

(b) Explain the frame format of HDLC. 8

Or

X (a) Explain ALOHA protocol. 8

(b) Explain simple stop and wait flow control. 7