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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?

 $(5 \times 2 = 10)$

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.

 $(5 \times 6 = 30)$



7



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Marks PART — C (Maximum marks: 60) (Answer one full question from each unit. Each full question carries 15 marks.) Unit — I IIIExplain different types of topology. 7 (b) Explain half duplex and full duplex transmission. 8 OR Explain ISO-OSI layered architecture with block diagram. IV 15 Unit — II 9 V (a) Explain various types of noises. (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 Explain the construction characteristics of optical fiber cable and its applications. 8 (b) Explain packet switched networks. 7 Unit — IV ΙX Explain parity check with example. (b) Explain the frame format of HDLC. 8 OR X Explain ALOHA protocol. 8

(b) Explain simple stop and wait flow control.