

TED (10)-3067

(REVISION-2010)

Reg. No.

Signature

THIRD SEMESTER DIPLOMA EXAMINATION IN ENGINEERING/
TECHNOLOGY—MARCH, 2012

DATA COMMUNICATION
(Common to CT, CM and IF)

(Maximum marks : 100)

[Time : 3 hours

Marks

PART—A

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

1. Define analog and digital signals.
2. Mention any four types of noises.
3. Compare guided and unguided transmission media.
4. Outline the features of full duplex data communication.
5. Define public key and private key in cryptography.

(5x2=10)

PART—B

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

1. Distinguish between LAN and WAN.
2. Compare TCP/IP protocol architecture with ISO-OSI reference model.
3. Give a brief description of satellite communication.
4. Explain synchronous TDM.
5. Describe RS-232 C standard.
6. Mention the steps involved in communication via circuit switching.
7. Write notes on transposition ciphers.

(5x6=30)

PART—C

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

UNIT - I

III Explain ISO-OSI layered architecture with block diagram. Also explain the functions of each layer.

15

OR

IV Explain the different types of transmission impairments.

15

[25]

[P.T.O.]

UNIT – II

- V (a) Explain any three methods of wireless propagation. 6
 (b) Explain analog data to digital signal encoding. 9

OR

- VI Describe NRZ-L, NRZ-I, Manchester and differential Manchester encoding. 15

UNIT – III

- VII (a) Give a brief description on error correction techniques. 6
 (b) Explain HDLC protocol. 9

OR

- VIII (a) Explain FDM and WDM. 10
 (b) Explain the flow control mechanisms : (i) Stop and wait (ii) Sliding window. 5

UNIT – IV

- IX (a) Compare circuit switching and packet switching. 8
 (b) Explain the use of digital signatures. 7

OR

- X (a) Explain public key algorithm - RSA. 10
 (b) Write notes on hub polling. 5

MADIN Polytechnic College