

THIRD SEMESTER DIPLOMA EXAMINATION IN ENGINEERING/
TECHNOLOGY—MARCH, 2014

DATA COMMUNICATION
(Common for IF, CM and CT)

[Time : 3 hours

(Maximum marks : 100)

Marks

PART—A

(Maximum marks : 10)

- I Answer all questions in one or two sentences. Each question carries 2 marks.
1. Define digital signal.
 2. List different categories of noises.
 3. What are the advantages and limitations of twisted pair cable compared to other transmission media ?
 4. What is flow control ?
 5. What is the main characteristic of Virtual Circuit approach in packet switching ?
(5x2=10)

PART—B

(Maximum marks : 30)

- II Answer *any five* questions. Each question carries 6 marks.
1. What is attenuation ?
 2. Differentiate between analog and digital transmission.
 3. Describe the characteristics that distinguish optical fiber from twisted pair and coaxial cable.
 4. Describe NRZ-L. Give its advantages and disadvantages.
 5. Explain the different errors that occur in digital transmission systems.
 6. Write short notes on digital signature.
 7. Explain about Datagram Packet switching. (5x6=30)

PART—C

(Maximum marks : 60)

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

UNIT – I

- III (a) Explain ISO-OSI layered architecture with figure. 10
- (b) Write short notes on :
- (i) Cross talk (ii) Intranet 5

OR

	Marks
IV (a) Describe the different categories of network.	8
(b) Describe Delay Distortion.	7

UNIT – II

V (a) Describe two-level and four-level PSK.	8
(b) Explain about satellite communication.	7

OR

VI (a) Describe Delta Modulation with a block diagram.	8
(b) Explain the construction characteristics of optical fiber cables and its applications.	7

UNIT – III

VII (a) Explain the basic characteristics of HDLC.	8
(b) Describe GO-Back-N-ARQ.	7

OR

VIII (a) Describe the frame structure of HDLC.	10
(b) Describe Synchronous and Asynchronous transmission.	5

UNIT – IV

IX (a) Describe RSA Public Key Encryption algorithm.	10
(b) Write short notes on Substitution Ciphers.	5

OR

X (a) Explain different types of polling.	10
(b) Describe line configuration.	5
