TED (15) – 4132

Reg. No 1323 1454

Signature ....

(REVISION — 2015)

FOURTH SEMESTER DIPLOMA EXAMINATION IN COMPUTER ENGINEERING — APRIL, 2017

DATA COMMUNICATION

[*Time* : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

I Answer the following questions in one or two sentences. Each question carries 2 marks.

1. What is data communication ?

2. What is meant by topology ?

3. Define bit rate and bit length.

4. What is UTP ?

5. What is meant by flow control ?   (5×2=10)

PART — B

(Maximum marks : 30)

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

1. Discuss different types of connection between devices with figure.

2. Explain periodic signals, and sine wave with figure.

3. Differentiate between baseband and broadband transmission.

4. Describe Infrared waves with its disadvantages.

5. Compare guided and unguided media.

6. Illustrate the use CSMA in data communication.

7. Discuss about different types of errors during data transmission.   (5×6=30)

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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

III (a) Sketch the block diagram of ISO-OSI model. 7

(b) Explain the functions of network and transport layers in OSI. 8

OR

IV (a) List and explain different forms of data representation. 7

(b) Explain protocols and various standards. 8

UNIT — II

V Explain different techniques to achieve bandwidth utilization in data communication. 15

OR

VI (a) List and discuss the different serial transmission methods. 5

(b) Explain analog to digital conversion method. 10

UNIT — III

VII Explain circuit and packet network switching techniques with figures. 15

OR

VIII (a) Explain about any three unguided medias. 9

(b) List the advantages and disadvantages of coaxial cable. 6

UNIT — IV

IX (a) Explain different error correction methods and their difference. 6

(b) What is the significance of redundancy in error correction ? 3

(c) Explain coding with a coding scheme. 6

OR

X (a) Explain point to point protocol and its functions. 7

(b) Explain about ALOHA. 8