TED (15) — 4132

(REVISION — 2015)

Reg. No. ....

Signature ....

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 2017

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.   What is message ?

2.   Define protocol.

3.   Define bandwidth.

4.   What is a packet ?

5.   List any two random access protocols.   (5×2 = 10)

PART — B

(Maximum marks : 30)

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

1.   Explain briefly about star topology.

2.   Discuss about FDM.

3.   Explain modes of data transmission.

4.   Illustrate the use of fiber optic cable with its advantages.

5.   Describe microwave transmission.

6.   Explain HDLC.

7.   State how checksum is used to detect error.

(5×6 = 30)

[52]

[P.T.O.

Marks

PART — C

(Maximum marks : 60)

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

Unit — I

III (a) List the components of data communication and explain how data communication takesplace with figure. — 9

(b) Explain different data flow methods. — 6

Or

IV (a) Explain different network criterias. — 6

(b) Explain catagories of network. — 9

Unit — II

V (a) Explain various types of transmission impairments. — 9

(b) Explain wavelength division multiplexing. — 6

Or

VI Explain the different technique to transmit digital data via an analog carrier. — 15

Unit — III

VII (a) Illustrate the need of switching. — 5

(b) Explain virtual circuit switching and its setup request phase. — 10

Or

VIII Explain any three Guided transmission medias. — 15

Unit — IV

IX (a) Explain the need of error detection and correction in data communication. — 6

(b) What is CRC ? Illustrate the working of CRC with an example. — 9

Or

X (a) State how parity check can be used to detect errors. — 6

(b) Explain two noiseless channel protocols. — 9

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