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(REVISION - 2015)

Reg. No.

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## 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.

 $(5 \times 2 = 10)$ 

#### 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) [P.T.O.

[52]



2

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.	
	(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
	(h)	Explain wavelength division multiplexing.	6
	(0)	OR	
VI	Ex	plain the different technique to transmit digital data via an analog carrier.	15
		Unit — III	
VII	(a)	Illustrate the need of switching.	5
	(h)	Explain virtual circuit switching and its setup request phase.	10
	(0)	Or	
VII	E	xplain any three Guided transmission medias.	15
		Unit — IV	
D	(a)	Explain the need of error detection and correction in data communication.	6
1	(h	What is CRC ? Illustrate the working of CRC with an example.	9
	(0	Or	
	K (a	) State how parity check can be used to detect errors.	6
1	- (u	) Explain two noiseless channel protocols.	9