TED (10)–3067

(REVISION—2010)

Reg. No. .....

Signature .....

THIRD SEMESTER DIPLOMA EXAMINATION IN ENGINEERING/ TECHNOLOGY—OCTOBER, 2011

DATA COMMUNICATION

(Common for CT, CM and IF)

[*Time* : 3 hours

(Maximum marks : 100)

Marks

PART—A

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

1. Write down the number of links in a fully connected mesh network with n nodes.
2. Define antenna.
3. State the function of a modem.
4. List different type of errors that occur in digital transmission.
5. Give two examples for multipoint configuration. (5×2=10)

PART—B

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

1. Explain various types of noises.
2. Distinguish between LAN and WAN.
3. Explain Manchester and differential Manchester signal encoding.
4. Explain Delta Modulation (DM) with example.
5. Illustrate cyclic redundancy check (CRC).
6. Write notes on different types of frames used in HDLC.
7. Differentiate roll call polling and hub polling. (5×6=30)

PART—C

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

UNIT—I

III 1. Explain TCP/IP protocol architecture with neat diagram. 8

2. Differentiate between analog and digital transmission. 7

OR

			Marks
IV	1.	Describe the functions of each layer in ISO/OSI model.	9
	2.	Explain attenuation and delay distortion.	6

UNIT—II

V	1.	Summarize the transmission characteristics of terrestrial microwave and satellite microwave.	8
	2.	Explain pulse code modulation (PCM) with an example.	7

OR

VI	1.	Explain physical description of twisted pair cable and fiber optics cable with neat diagram.	8
	2.	Explain three basic modulation techniques for transforming digital data into analog signals.	7

UNIT—III

VII	1.	Explain sliding window flow control mechanism with the help of a diagram.	8
	2.	Explain frequency division multiplexing.	7

OR

VIII	1.	Explain Go-Back-N ARQ with diagram.	8
	2.	Distinguish between Asynchronous and Synchronous transmission.	7

UNIT—IV

IX	1.	Explain packet switching principles and approaches used in packet switching.	10
	2.	Explain substitution cipher with the help of an example.	5

OR

X	1.	Explain Time Division switching and Space Division switching.	8
	2.	Explain RSA algorithm with an example.	7