Seat No.:	Enrolment No.

## GUJARAT TECHNOLOGICAL UNIVERSITY BE- IV<sup>th</sup> SEMESTER-EXAMINATION - MAY/JUNE- 2012 Subject code: 141601

U	ubject code: 141601 Date: 23/05 ubject Name: Data Communication & Networking ime: 10:30 am – 01:00 pm Total Marinstructions:		2012
Гіте			ks: 70
1. 2.	Atte Mal	empt all questions. ke suitable assumptions wherever necessary. ures to the right indicate full marks.	
Q.1	(a) (b)	List out different types of methods for digital-to-digital conversion. Explain all methods under polar scheme with example.  Explain Link State Routing with example.	07 07
Q.2	(a) (b)	Explain functions of different layers of OSI model in detail with diagram.  Explain different transmission modes with example. Explain with diagram tree and mesh topology and list out advantages and disadvantages.  OR	07 07
	<b>(b)</b>	Write a short note on Frequency Division Multiplexing.	07
Q.3	(a)	Explain the following 1) Analog-to-Digital Conversion 2) Terrestrial Microwave	07
	<b>(b)</b>	Write short note on the following  1) Checksum with example  2) RSA  OR	07
Q.3	(a)	Explain the following  1) Effect of noise in twisted pair cable and coaxial cable.  2) CSMA/CD	07
	<b>(b)</b>	•	07
Q.4	(a)	Explain the function of DTE and DCE with example. Explain Null Modem in detail with diagram.	07
	<b>(b)</b>	Write a short note on the following.  1) Token Bus  2) FDDI  OR	07
Q.4	(a) (b)	Types of Radio Wave Propagation with diagram List and explain different connecting devices in detail.	
Q.5 (a)		Explain FSK and 8QAM and draw 8QAM (2 Amplitude and 4phase) waveform and constellation diagram for the data stream 101111001110.	07
	<b>(b)</b>	Given a bandwidth of 6000Hz.Calculate baud rate and bit rate for ASK, PSK and 8-PSK.  OR	07
Q.5	(a)	Explain Hamming code method. The code 11110101101 was received using the hamming encoding algorithm, what is the original code?	07
	<b>(b)</b>	Explain ASK and 16QAM and draw 16QAM (2 Amplitude and 8phase) waveform and constellation diagram for the data stream 101111001110.	07

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