Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE SEMESTER IV - EXAMINATION - SUMMER 2015

Subject Code: 141601 Date: 28/05/2 Subject Name: Data Communication & Networking Time: 10.30am-01.00pm Total Marks Instructions:		Code: 141601 Date: 28/05/201	Date: 28/05/2015	
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		Attempt all questions. Make suitable assumptions wherever necessary.		
Q.1	(a) (b)	Write a short note on protocols, standards and standards organizations. What is network topology? Explain different network topologies with example and compare them with each other.	07 07	
Q.2	(a) (b)	 Write a detailed note on TCP/IP protocol suite. (i) What are the differences between n a port address, a logical address, and a physical address? (ii) List out and explain in brief various types of transmission impairments. OR 	07 07	
	(b)	Give complete classification of signals according to different criteria. Also explain each flavor in brief with necessary waveforms.	07	
Q.3	(a) (b)	Classify various types of transmission media and explain any two of them in detail. What is error detection? List various methods of error detection and explain any two of them in brief.	07 07	
Q.3	(a)	OR What is Multiplexing? Explain Time division multiplexing and Frequency division	07	
	(b)	multiplexing. What do you mean by forward error correction? Explain the same with the help of one coding example.	07	
Q.4	(a)	What is analog-to-analog conversion? Explain any two techniques for analog-to-	07	
	(b)	analog conversion in detail. Explain the function of DTE and DCE with example. Explain Null Modem in detail with diagram.	07	
		OR		
Q.4	(a)	What is digital-to-analog modulation? Explain any two techniques for digital-to-analog conversion in detail.	07	
	(b)	Explain the following LANs in brief with suitable diagrams: 1. Token ring, 2. Token bus	07	
Q.5	(a) (b)	List out various routing algorithms and explain any two in brief. Name different implementations for baseband 10-Mbps Ethernet. Explain each one in brief.	07 07	
		OR		
Q.5	(a)	List and explain different networking and internetworking devices in brief with necessary diagrams.	07	
	(b)	List out the upper OSI layers and explain the duties performed by each layer.	07	
