Seat No.:	Enrolment No.

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

## **BE - SEMESTER-IV EXAMINATION - SUMMER 2016**

	•	ect Code:141601 Date:30/05/2016	
	•	ect Name:Data Communication And Networking :10:30 AM to 01:00 PM Total Marks: 70 ctions:	
		<ol> <li>Attempt all questions.</li> <li>Make suitable assumptions wherever necessary.</li> <li>Figures to the right indicate full marks.</li> </ol>	
<b>Q.1</b>	(a)	Explain the classification of transmission media. Explain guided transmission	07
	<b>(b)</b>	media in detail.  Draw the layered architecture of OSI model and explain the function of each layer of OSI model.	07
Q.2	2 (a) (b)	Explain circuit switching and packet switching in detail.  Describe link state routing with example.  OR	07 07
	<b>(b)</b>	Describe distance vector routing with example.	07
Q.3	(a) (b)	<ul><li>Explain Analog to Digital and Digital to Analog conversion.</li><li>(i) Explain transmission impairments in detail.</li><li>(ii) Explain X.25 in detail.</li></ul>	07 03 04
		OR	
Q.3	(a) (b)	Explain Frequency Division Multiplexing and Time Division Multiplexing. Explain digital data transmission. Explain DTE-DCE interface in detail.	07 07
Q.4	(a)	(i) Explain LAN, WAN and MAN.	03
	<b>(b)</b>	(ii) Explain 10Base5, 10Base2, 10BaseT and 10BaseF.  Explain Shannon Capacity and Nyquist theorem with example.  OR	04 07
Q.4	(a) (b)	Explain CRC in detail with example. Explain FDDI and token bus in detail.	07 07
Q.5	(a)	<ul><li>(i) Explain Public Switched Telephone Network in detail.</li><li>(ii) Explain router in detail.</li></ul>	03 04
	<b>(b)</b>	What is network topology? Explain star topology, bus topology and ring topology with example.	07
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Q.5	(a)	<ul><li>(i) Explain port address, logical address and physical address.</li><li>(ii) Explain cable modem and 56K modem.</li></ul>	03 04
	<b>(b)</b>	Explain Manchester and Differential Manchester encoding scheme with example.	07

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