Seat No.:	Enrolment No.
3 COLO 1 1 3 11	

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-IV • EXAMINATION - SUMMER • 2014

Sul	oject	Code: 141601 Date: 16-06-2014	
Subject Name: Data Communication and Networking Time: 10:30 am - 01:00 pm Instructions: Total Marks: 7			
mst	1.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a) (b)	Draw the layered architecture of OSI model and explain the function of each layer of OSI model. Explain LAN,MAN in detail.	07
Q.2	(a) (b)	What do you mean topology? Explain bus and star topology. Identify the five components of data communication system. Differentiate between half duplex and full duplex transmission modes. OR	07 07
	(b)	Explain TCP/IP model in detail.	07
Q.3	(a)	Explain Amplitute shift keying, Frequency shift keying and Phase shift keying for digital to analog conversion.	07
	(b)	What are different transmission impairments? Differentiate between Circuit switched network and Packet switched network. OR	07
Q.3	(a)	Explain Analog Modulation, Frequency Modulation for analog to analog conversion.	07
	(b)	What is Multiplexing? Explain Time division multiplexing and Frequency division multiplexing.	07
Q.4	(a) (b)	Explain CRC with example. What is routing algorithm? List different types of routing algorithm. Explain distance vector routing algorithm with example. OR	07 07
Q.4	(a)	_	07
	(b)	How do guided media differ from unguided media? Explain guided media in detail.	07
Q.5	(a) (b)	Explain FDDI and Token bus in detail. Explain following connecting devices. 1) Hub 2) Link layer switches 3) Router OR	07 07
Q.5	(a) (b)	List different kinds of Line coding schemes. Explain any two in detail. Explain Shannon capacity and Nyquist theorem with example.	07 07
