Date:07/05/2015

Subject Code: X81101

GUJARAT TECHNOLOGICAL UNIVERSITY PDDC - SEMESTER-VIII • EXAMINATION – SUMMER • 2015

\mathbf{T}	Subject Name: Data Communication and Networking Time:10:30 am - 01:00 pm Instructions: 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks.		
Q.1	(a) (b)	Give comparison between FDM, TDM and CDMA. Explain different topology of computer network with suitable diagram.	07 07
Q.2	(a) (b)	Draw and explain OSI model for computer network. Also list difference between OSI model and TCP/IP model. Define following terms. 1) SONET 2) Subnet 3) WAN 4) Ethernet 5) X.25 6) Protocol 7) Interface	07 07
	(b)	OR Explain connection less and connection oriented services.	07
Q.3	(a) (b)	List the basic Data Link Protocol used in network. And explain any two of them in brief. What is the Public Switched Telephone System? Also explain details of	07 07
Q.3	(a) (b)	PSTN system. OR Explain bit stuffing and byte stuffing with suitable examples. Explain in detail RFID.	07 07
Q.4	(a) (b)	Give difference between CSMA/CD and CSMA/CA. Also explain basic concept of CSMA/CA in short. Define the term Quality of Service. Explain significance of Quality of Service. List the techniques available to improve Quality of Service and explain any two of them in detail.	07 07
Q.4	(a) (b)	OR List the issues available in transport layer list and explain each issue in short. Explain UDP in detail.	07 07
Q.5	(a) (b)	Explain in short Domain Name System. Also explain Recourse records and Name Server for the Domain Name System. Give definition of cryptography. Explain Public-Key Algorithms.	07 07
Q.5	(a) (b)	OR Explain security issues and challenges in wireless networks. Explain in short 1) digital signature 2) Firewall.	07 07
