

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE- SEMESTER-V (NEW) EXAMINATION – WINTER 2020****Subject Code:3152011****Date:22/01/2021****Subject Name:Computer Networking for Mechatronics Engineers****Time:10:30 AM TO 12:30 PM****Total Marks: 56****Instructions:**

1. Attempt any FOUR questions out of EIGHT questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		MARKS
Q.1	(a) Compare Hub, switches and Routers	03
	(b) Write short note on Network Topology	04
	(c) Explain TCP/IP Model Layered architecture.	07
Q.2	(a) Differentiate simplex, Half duplex and Full duplex Communication	03
	(b) Bit-stuff the following frame payload: "00011111100111110100001111111111111111100" and discuss limitations of bit stuffing.	04
	(c) Explain GO BACK N ARQ Protocol	07
Q.3	(a) Explain Duties performed by network Layer	03
	(b) What is VLAN? Explain briefly.	04
	(c) Explain Classful addressing scheme of IPV4.	07
Q.4	(a) Explain significance of Gateway	03
	(b) What is Framing? Explain types of Framing with example	04
	(c) Write short note on CSMA/CA	07
Q.5	(a) Write full forms: ARP, RARP, DHCP, DNS, ISDN and ATM	03
	(b) Explain techniques for achieving good Quality of Service (QoS) in network layer	04
	(c) Explain Link state routing algorithm	07
Q.6	(a) Compare TCP and UDP	03
	(b) What is count to infinity problem? Explain briefly	04
	(c) Draw and Explain IPV4 Header	07
Q.7	(a) Briefly explain E-mail architecture	03
	(b) Explain Domain Name Services.	04
	(c) Explain DES (Data Encryption Standard) briefly.	07
Q.8	(a) Describe and Explain WWW.	03
	(b) Comparatively explain symmetric and asymmetric key cryptography	04
	(c) Explain Bluetooth layers in detail	07
