

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE- SEMESTER-IV (NEW) EXAMINATION – WINTER 2020****Subject Code:2140709****Date:11/02/2021****Subject Name:Computer Networks****Time:02:30 PM TO 04:30 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) Explain function of any two layers of OSI model.	3
	(b) Explain functionality of Repeater, HUB, Bridge, Router.	4
	(c) Explain various delay which are occur in data packet transmission.	7
Q.2	(a) Explain LAN , WAN and internet.	3
	(b) What is IP address ? Explain sub netting with example.	4
	(c) Explain five layer of internet(TCP/IP model)and addressing scheme at different layer.	7
Q.3	(a) Explain bit stuffing .	3
	(b) Compare IP v4 and IP v6.	4
	(c) Explain different IP address classes.	7
Q.4	(a) What is subnet mask? Explain with example.	3
	(b) Write a short note on slotted ALOHA.	4
	(c) Explain CRC code generation using example.	7
Q.5	(a) Explain checksum with example.	3
	(b) Explain CSMA/CD protocol.	4
	(c) Explain connection oriented and connectionless service.	7
Q.6	(a) Explain packet fragmentation with example.	3
	(b) Differentiate functionality of TCP and UDP protocol.	4
	(c) Explain Distance Vector routing algorithm.	7
Q.7	(a) What is functionality of DHCP protocol?	3
	(b) How DNS protocol works?	4
	(c) Explain dijkstra (Link state) routing algorithm.	7
Q.8	(a) What is functionality of NAT protocol?	3
	(b) Write a short note on packet broadcasting.	4
	(c) Write a short note on spanning tree.	7
