

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-V EXAMINATION – WINTER 2025****Subject Code:3150710****Date:21-11-2025****Subject Name:Computer Networks****Time:10:30 AM TO 01:00 PM****Total Marks:70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) Discuss throughput in Computer Network.	03
	(b) Enlist types of delay and define them all.	04
	(c) Write functions of: Repeater, Hub, Gateway, Bridge, Switch and Router	07
Q.2	(a) Compare IPV4 and IPV6.	03
	(b) Compare virtual circuit and datagram.	04
	(c) Describe Distance Vector Routing Algorithm.	07
OR		
	(c) Describe Link state Routing Algorithm.	07
Q.3	(a) Why HTTP server is stateless?	03
	(b) Discuss Multiplexing and De multiplexing at Transport layer.	04
	(c) Compare TCP and UDP.	07
OR		
Q.3	(a) Define the term: Unicast, Multicast and Broadcast.	03
	(b) Explain the following TCP socket system calls: socket(), bind(), listen(), accept().	04
	(c) Describe TCP segment structure.	07
Q.4	(a) Define: bit rate and baud rate.	03
	(b) Discuss NAT(Network address Translation) as solution to IP address depletion problem.	04
	(c) Describe roles and responsibilities of DNS.	07
OR		
Q.4	(a) What is count to infinity problem?	03
	(b) Write note on E-mail.	04
	(c) Describe Go back n and selective repeat protocol.	07
Q.5	(a) Discuss taking turn protocol.	03
	(b) Compare Persistent and non Persistent HTTP.	04
	(c) Describe CSMA protocol with Collision Detection.	07
OR		
Q.5	(a) Discuss slotted Aloha.	03
	(b) Write functionalities of ARP.	04
	(c) Describe CRC for error detection.	07
