Seat No./Enrollment No.: _____

GUJARAT TECHNOLOGICAL UNIVERSITY
MASTER OF COMPUTER APPLICATIONS – SEMESTER 2 – EXAMINATION – SUMMER 2026

Subject Code: MC02094031 **Date: 25/06/2026**

Subject Name: Computer Networking

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. Use of simple calculators and non-programmable scientific calculators are permitted.

Q.1	**(a)**	1. Explain Wide Area Network. 2. Differentiate: Hub and Switch.	**07**
	(b)	What is OSI reference model? Explain brief functionality of each layer.	**07**
Q.2	**(a)**	What are Multimode Optic Fibers? Compare Twisted Pair, Coaxial Cable and Fiber optic Cable.	**07**
	(b)	What is congestion? How is congestion controlled in Virtual circuit network?	**07**
		OR	
Q.2	**(b)**	Explain ALOHA and pure ALOHA with example.	**07**
Q.3	**(a)**	Describe hidden and exposed station problem. How RTS and CTS help to resolve the problem?	**07**
	(b)	Explain Carrier Sense Multiple Access Protocol in detail.	**07**
		OR	
Q.3	**(a)**	Explain a simple stop-and-wait protocol for an Error-Free Channel.	**07**
	(b)	Discuss IEEE 802.11 Architecture in detail.	**07**
Q.4	**(a)**	Describe Distance Vector routing with count-to-infinity problem.	**07**
	(b)	What is delayed duplicates problem? Explain Three-way handshake.	**07**
		OR	
Q.4	**(a)**	Explain IP version 4 in detail.	**07**
	(b)	How does the transport layer detect signs of congestion in the network?	**07**
Q.5	**(a)**	What is the use of Routing Algorithm? Explain Flooding in detail.	**07**
	(b)	Draw architecture of WWW and Explain HTTP query and response.	**07**
		OR	
Q.5	**(a)**	Explain Shortest Path Algorithm in detail.	**07**
	(b)	What is Domain resource record? Explain DNS resource record types.	**07**

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