GUJARAT TECHNOLOGICAL UNIVERSITY
BE – SEMESTER- V EXAMINATION-SUMMER 2023

Subject Code: 3150710   **Date: 27/06/2023**

Subject Name: Computer Networks

Time: 02:30 PM TO 05:00 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)**	What is computer network? Describe the various types of network.	**03**
	(b)	Illustrate various delays which are occurring in data packet transmission.	**04**
	(c)	Explain different network topologies in detail.	**07**
Q.2	**(a)**	What is web? Explain its architecture.	**03**
	(b)	What is URL? What are its identifiers? Explain them.	**04**
	(c)	List and Explain the methods of HTTP.	**07**
		OR	
	(c)	What is HTTP? Explain Nonpersistent and Persistent connections of HTTP.	**07**
Q.3	**(a)**	Define error detection and correction.	**03**
	(b)	What is socket? Explain its importance at transport layer protocols.	**04**
	(c)	Explain User Datagram Protocol (UDP) in detail and discuss how it differs from Transmission Control Protocol (TCP).	**07**
		OR	
Q.3	**(a)**	What is the use of two dimensional parity in error detection?	**03**
	(b)	Explain the wave length division multiplexing in detail.	**04**
	(c)	Describe flow control and error control in TCP.	**07**
Q.4	**(a)**	What is piggybacking? Explain the advantage of it.	**03**
	(b)	Write a short note on broadcast and multicast routing.	**04**
	(c)	Explain distance vector routing algorithm.	**07**
		OR	
Q.4	**(a)**	Discuss the MAC sub layer Design issues?	**03**
	(b)	Explain datagram networks and virtual circuit networks.	**04**
	(c)	Explain the shortest path routing algorithm.	**07**
Q.5	**(a)**	What is the minimum hamming distance?	**03**
	(b)	What is medium access control sub layer?	**04**
	(c)	Explain in detail ISO/OSI network model with near sketch.	**07**
		OR	
Q.5	**(a)**	What is count-to-infinity problem?	**03**
	(b)	State the difference between bit rate and baud rate.	**04**
	(c)	Describe and discuss the data link layer design issues.	**07**

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