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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