GUJARAT TECHNOLOGICAL UNIVERSITY
B.VOC- SEMESTER–VI EXAMINATION – SUMMER 2025

Subject Code:21160203   **Date:14-05-2025**

Subject Name: Computer Network Security

Time:10:30 AM TO 12:30 PM   **Total Marks:50**

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? List and explain types of networks.	**05**
	(b)	Draw and explain OSI Model in detail. Explain functionality of each layer.	**05**
Q.2	**(a)**	Explain Half and Full-Duplex Ethernet in detail.	**05**
	(b)	Explain Spanning-Tree Protocol with its advantages and limitations.	**05**
		OR	
	(b)	Draw and explain the basic architecture of Wireless LAN.	**05**
Q.3	**(a)**	Differentiate IPv4 and IPv6.	**05**
	(b)	What is subnet mask? Explain different classes of IP address.	**05**
		OR	
Q.3	**(a)**	Draw and Explain head format of IPv4.	**05**
	(b)	Explain the use of ARP and RARP.	**05**
Q.4	**(a)**	Give the difference between TCP and UDP.	**05**
	(b)	Discuss transport layer multiplexing and De-multiplexing concept.	**05**
		OR	
Q.4	**(a)**	Explain functions of Transport Layer in detail.	**05**
	(b)	Discuss Voice over IP (VoIP) in detail.	**05**
Q.5	**(a)**	Explain data confidentiality, data authentication and data integrity.	**05**
	(b)	Explain Playfair cipher technique in detail. Find cipher text for plain text 'GTUCNSEXAM' using 'STUDY' as key.	**05**
		OR	
Q.5	**(a)**	Write a short note on "Digital Signature Algorithm".	**05**
	(b)	Explain Caesar cipher technique in detail. Find cipher text for plain text 'HELLO' using '3' as key.	**05**

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