

**GUJARAT TECHNOLOGICAL UNIVERSITY**

**BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2024**

**Subject Code:3161007**

**Date:22-05-2024**

**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
<b>Q.1</b>	(a) List out types of addresses used in TCP/IP model with one example.	<b>03</b>
	(b) Classify transmission media. Explain any one guided transmission media.	<b>04</b>
	(c) List out and explain various network topologies.	<b>07</b>
<b>Q.2</b>	(a) Compare Connection oriented vs. Connection less service.	<b>03</b>
	(b) Explain LAN in detail.	<b>04</b>
	(c) Draw and explain ISO OSI reference model.	<b>07</b>
	<b>OR</b>	
	(c) Explain Cyclic Redundancy Check (CRC) in detail with an example.	<b>07</b>
<b>Q.3</b>	(a) Compare Go Back N ARQ vs. Selective Repeat ARQ	<b>03</b>
	(b) Compare Circuit switching vs. Packet switching.	<b>04</b>
	(c) What is Framing? List out and explain various framing techniques.	<b>07</b>
	<b>OR</b>	
<b>Q.3</b>	(a) Compare Error detection vs. Error correction.	<b>03</b>
	(b) Explain Sliding window protocol with an example.	<b>04</b>
	(c) What is Automatic Repeat Request (ARQ)? Explain Stop and Wait ARQ in detail with an example.	<b>07</b>
<b>Q.4</b>	(a) Discuss issues of channel allocation. Explain the static and dynamic channel allocation scheme.	<b>03</b>
	(b) Explain Subnetting and Flooding.	<b>04</b>
	(c) Explain Pure ALOHA and Slotted ALOHA.	<b>07</b>
	<b>OR</b>	
<b>Q.4</b>	(a) What is IP address? List out and explain classes of IP address.	<b>03</b>
	(b) Explain functioning of Hub, Switch, Bridge and Router.	<b>04</b>
	(c) Write a note on Ethernet Technology.	<b>07</b>
<b>Q.5</b>	(a) What is Cryptography? List out various ciphers.	<b>03</b>
	(b) Compare TCP vs. UDP.	<b>04</b>
	(c) What is Routing? Explain any one routing protocol in detail.	<b>07</b>
	<b>OR</b>	
<b>Q.5</b>	(a) Explain HTTP communication with an example.	<b>03</b>
	(b) Explain RSA algorithm.	<b>04</b>
	(c) Write a note on Domain Name System (DNS).	<b>07</b>

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