Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–IV (NEW) EXAMINATION – SUMMER 2021

Subject Code:2140709   **Date:04/09/2021**
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)	Explain functionality of HUB with diagram.	03
	(b)	Explain Function of Bridge with diagram.	04
	(c)	Explain TCP/IP reference model.	07
Q.2	(a)	What is use of ftp protocol? List out five ftp commands.	03
	(b)	What is CSMA/CD? When and why it is used?	04
	(c)	What is IP address ? Explain sub netting with example.	07
		OR	
	(c)	What is subnet mask? Explain different classes of IP address.	07
Q.3	(a)	Which layer IP packet fragmentation is used? Why it is used?	03
	(b)	What is difference between forwarding and routing in reference to router functionality.	04
	(c)	Explain Token Ring protocol with proper diagram.	07
		OR	
Q.3	(a)	In which scenario UDP protocol is used? Why?	03
	(b)	List out various data transmission delay and explain any one with proper diagram.	04
	(c)	Explain transport layer RDT 2.0 protocol with FSM or timeline diagram.	07
Q.4	(a)	Compare CRC code with normal parity code.	03
	(b)	Explain data link layer frame structure.	04
	(c)	Explain sliding window protocol with selective repeat.	07
		OR	
Q.4	(a)	What is VLAN? When and why it is used?	03
	(b)	What is application DNS protocol? Which are operation mode od DNS query?	04
	(c)	Explain dijkstra (Link state) routing algorithm.	07
Q.5	(a)	When and why DHCP protocol is used?	03
	(b)	What is broadcast routing? How it is implemented?	04
	(c)	Write a short note on Distance Vector routing algorithm.	07
		OR	
Q.5	(a)	Explain TCP slow start at transport layer.	03
	(b)	Explain use of Telnet protocol.	04
	(c)	Write a short note on NAT(Network Address Translation Protocol).	07

****

1