Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA – SEMESTER-IV   EXAMINATION –SUMMER-2020

Subject Code: 4649301   **Date:** 04-11-2020
Subject Name: Computer Networking (CN)
Time: 02:30 PM TO 05:00 PM   **Total Marks: 56**
Instructions:
   1. **Attempt any FOUR questions out of EIGHT questions.**
   2. **Make suitable assumptions wherever necessary.**
   3. **Figures to the right indicate full marks.**

Q.1	**(a) Attempt any seven in one or two sentences.**	**07**
	1. What is the main advantage of Piggybacking?	
	2. What is Demodulation?	
	3. Define Circuit Switching, Packet Switching.	
	4. What is webmail?	
	5. What is URL, URI and URN?	
	6. Explain with example 'burst error'.	
	7. What is a flag byte?	
	8. In which layer term "Packets" is used?	
	9. What is checksum?	
	(b) Explain OSI reference model with brief functionality of each layer.	**07**
Q.2	**(a)** Define Computer Network? What are different types of networks?	**07**
	(b) What are Multimode Optic Fibers? Compare UTP, Coaxial cable & Fiber Optic.	**07**

OR

	(b) What is electromagnetic spectrum? What are radio waves & Micro waves?	**07**
Q.3	**(a)** List different type of framing techniques? What is Byte stuffing? With suitable example discuss use of flag byte?	**07**
	(b) What is delayed duplicates problem? Explain Three-way handshake method to establish a connection.	**07**

OR

Q.3	**(a)** Explain simplex Stop and Wait and Stop and Wait ARQ protocol.	**07**
	(b) Explain the elements of transport protocols and blue army problem in connection release in transport layer.	07
Q.4	**(a)** Explain carrier sense multiple access protocol.	**07**
	(b) Explain in brief	
	1. Explain Link State Routing Algorithm with all steps.	**04**
	2. What is congestion? How the congestion is detected at transport layer?	**03**

OR

Q.4	**(a)** Explain Aloha and Slotted Aloha in detail.	**07**
	(b) Differentiate the following:	
	1. Connection- oriented vs Connectionless Forwarding	**04**
	2. TCP and UDP protocols	**03**

1

Q.5 **(a)** Write the advantages of hierarchy of domain name space   **07**
       (b) Write the answer in brief.
              1. Compare virtual circuit and datagram networks.   **04**
              2. Explain POP3 and IMAP protocol.   **03**

                                                OR

Q.5 **(a)** What is domain resource record? Explain DNS resource record types.   **07**
       (b) Write the answer in brief.
              1. Explain in brief HTTP query and response?   **04**
              2. Define the architecture of WWW.   **03**

                                      ****