GUJARAT TECHNOLOGICAL UNIVERSITY
MCA – IV-SEMESTER– • EXAMINATION – WINTER - 2018

Subject Code:3640002   **Date:19/11/ 2018**
Subject Name: Basic Computer Science 3 – Computer Networking
Time:10.30 am - 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.**

Q.1	**(a)**	Define Computer Network? What are different types of networks?	**07**
	(b)	List different type of framing techniques? What is Byte stuffing? With suitable example discuss use of flag byte?	**07**
Q.2	**(a)**	What is OSI Model? Explain the functions and protocols and services of each layer?	**07**
	(b)	What is electromagnetic spectrum? What are radio waves & Micro waves?	**07**
		OR	
	(b)	What is Modulation? List modulation techniques and explain any one in detail.	**07**
Q.3	**(a)**	What are Multimode Optic Fibers? Compare UTP, Coaxial cable & Fiber Optic.	**07**
	(b)	Write a note on Aloha & Slotted Aloha.	**07**
		OR	
Q.3	**(a)**	Write a short note on Hidden station and Exposed station problem	**07**
	(b)	Differentiate between 1) Connection less vs. Connection oriented 2) LEOs vs. MEOs	**07**
Q.4	**(a)**	Discuss CSMA/CD in details	**07**
	(b)	What are duties of Network Layer?	**07**
		OR	
Q.4	**(a)**	Explain IEEE 802.3 and DIX frame structure in detail	**07**
	(b)	Explain Distance Vector Routing Algorithm	**07**
Q.5	**(a)**	What is Three way Handshake?	**07**
	(b)	Write the advantages of hierarchy of domain name space.	**07**
		OR	
Q.5	**(a)**	Write a note on HTTP?	**07**
	(b)	What is Bluetooth? Explain its architecture.	**07**

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