Seat No.: _____ **Enrolment No._____**

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–V- EXAMINATION – SUMMER 2016

Subject Code: 150702 **Date: 21/05/2016**

Subject Name: Computer Network

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.**

Q.1	**(a)**	Write a note on Guided and Un-Guided transmission medium.	**07**
	(b)	What is OSI model? Draw Diagram and Explain Physical, Data link and Network layer with its functions.	**07**
Q.2	**(a)**	Explain Ethernet Frame structure.	**07**
	(b)	Explain Sliding Window Protocol.	**07**
		OR	
	(b)	What is ALOHA? Explain variants of ALOHA protocol.	**07**
Q.3	**(a)**	What is the difference between error detection and correction? Explain any one error correction technique with suitable example.	**07**
	(b)	Explain IPv4 datagram format and importance of each filed.	**07**
		OR	
Q.3	**(a)**	Explain subnetting with an example.	**07**
	(b)	Compare the IPv4 and IPv6.	**07**
Q.4	**(a)**	Explain Link-State Routing algorithm.	**07**
	(b)	What is count-to-Infinity problem? Explain it with example.	**07**
		OR	
Q.4	**(a)**	Explain the working of electronic mail protocols SMTP, IMAP and POP3 in brief with suitable diagram.	**07**
	(b)	Explain ARP and justify why ARP query sent within a broadcast frame and ARP response sent within a frame with specific destination MAC address?	**07**
Q.5	**(a)**	Draw and explain TCP packet header.	**07**
	(b)	Differentiate the following: (i) Connection Oriented Services and Connection Less Services (ii) OSPF and BGP	**07**
		OR	
Q.5	**(a)**	What is the role of Domain Name Server (DNS) in Internet? Explain the hierarchy of various domain names.	**07**
	(b)	Explain the following terms in brief: (i) Bandwidth (ii) Propagation delay (iii) Queuing Delay (iv) Throughput (v) FDM (vi) MIME (vii) Burst Error	**07**

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