Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

MCA - SEMESTER–V • EXAMINATION – WINTER • 2014

Subject Code: 2650010 **Date: 08-12-2014**

Subject Name: Advance 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)**	Answer the followings.	
		1. What is the private address? List IPV4 Classless Inter-Domain Routing (CIDR) blocks reserved for the private networks.	**03**
		2. What is ARP? Explain working of ARP with proper diagram.	**04**
	(b)	Answer the followings.	
		1. What is class full IP addressing scheme? Draw block diagram of different classes of IPV4 addresses available and explain purpose of each of the classes.	**03**
		2. How the default route is used in the routing table? Explain with example.	**04**
Q.2	**(a)**	Explain the IPV6 datagram format. What is extension header in IPV6 datagram format? How extension headers are used?	**07**
	(b)	What is sub networking? How it is useful? Explain with example.	**07**
		OR	
	(b)	Host is more rely on router for updating its forwarding table. Explain with proper example.	**07**
Q.3	**(a)**	What is direct and indirect delivery of IP datagram? Explain.	**07**
	(b)	Draw the TCP finite state machine and explain each state in brief.	**07**
		OR	
Q.3	**(a)**	What is Random Early Detection (RED)? Why does router use it? How it works?	**07**
	(b)	How Network Address Translation (NAT) is used in the network having private address? List and explain the headers of NAT table in details.	**07**
Q.4	**(a)**	What is Dynamic Host Configuration Protocol (DHCP)? When a system is connected with more than one network, how DHCP works? How does it handle renewing request?	**07**
	(b)	Explain Simple Mail Transfer Protocol and Mail Retrieval Protocol.	**07**
		OR	
Q.4	**(a)**	While designing the traffic scheduling policy, which are the criteria which should be followed? What are Weighted Round Robin (WRR) and Deficit Round Robin (DRR)?	**07**
	(b)	What is Internet Control Message Protocol (ICMP)? Which are the main functions of ICMP? What is the purpose of ping command?	**07**
Q.5	**(a)**	Explain IPsec Authentication Header in detail.	**07**
	(b)	What is ZigBee IPv6 Protocol Stack? Explain in detail.	**07**
		OR	
Q.5	**(a)**	What is stateful firewall? Explain state management in stateful firewall.	**07**
	(b)	Write a note on SSL,TLS and proxy.	**07**

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