

**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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