

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA - SEMESTER-V • EXAMINATION – WINTER • 2014

Subject Code: 650010

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 following in brief. (Any Seven) **07**
1. Explain any two field of DHCP Header.
 2. What is default mask for class B?
 3. What is the full form of NFS & XDR?
 4. What is active open & passive open?
 5. Define: ARP & RARP
 6. What do you mean by RTT & RTO?
 7. What do you mean by default router?
 8. List the protocols at network layer.
 9. What is the main difference between HTTP & HTTPS?
- (b)** Answer the following in brief. (Any Seven) **07**
1. What is SSL? Why it is needed?
 2. Write the port no. used by SMTP & IMAP.
 3. What is the need of PING command?
 4. What is port? Why two ports are required by FTP?
 5. What is active monitoring in firewall?
 6. What is the need of TTL field in IP Header?
 7. Define: VPN & NAT
 8. List any two UDP based application with their port number.
 9. List the names of Top-level domains.
- Q.2 (a)** Answer Any One. **07**
1. What is the range of Class A To E in Decimal & Binary. List and explain the special addresses in Classful Internet Addresses.
 2. Explain ARP protocol format. Also explain the ARP cache timeout & ARP refinements.
- (b)** What is Direct & Indirect Delivery? Explain Table-Driven IP Forwarding, Next-Hop Forwarding & Host-Specific Routes with example. **07**
- OR**
- (b)** What is firewall? Explain Packet Filtering firewall in detail. **07**
- Q.3 (a)** Answer Any One. **07**
1. Explain Subnetting & Supernetting with suitable example.
 2. Explain UDP message format. Also explain UDP Pseudo Header.
- (b)** What is the need of IPv6? Compare IPv4 with IPv6. Explain General Form Of An IPv6 Datagram. **07**
- OR**
- Q.3 (a)** Explain VPN Addressing & Routing. Also explain Multi-Address NAT & Port-Mapped NAT. **07**

- (b) Explain TCP State Machine in detail. 07
- Q.4 (a) Answer Any One. 07**
1. Explain properties of Reliable Stream Delivery. Explain Closing a TCP Connection in detail.
 2. Explain DHCP transition diagram in detail.
- (b) Show How IPSec tunneling takes place using both ESP & AH header. 07
- OR**
- Q.4 (a) What is Telnet & SSH? Explain IAC, IP, AO, AYT & GA Telnet commands. 07**
- Q.4 (b) Explain Alias Expansion in E-mail. Also explain MIME Multipart Messages in detail. 07**
- Q.5 (a) Explain IP options in detail. 07**
- (b) Explain the process of Domain Name Resolution. Also explain DNS resource records with example. 07**
- OR**
- Q.5 (a) Explain the types of packets used in TFTP with the format. 07**
- (b) List ICMP Query & Error messages. Explain Error messages in detail. 07**
