

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA - SEMESTER-V • EXAMINATION – WINTER • 2015

Subject Code: 2650010

Date: 10-12-2015

Subject Name: Advance Networking (AN)

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)** What is Address Resolution Protocol (ARP) ?. Explain ARP Message Format. **07**
- (b)** Answer the followings.
- (1) Explain IPv4 Subnet Addressing. **04**
- (2) Discuss IPv6 Neighbor Discovery. **03**
- Q.2 (a)** Explain how ICMP is an error reporting mechanism? Also discuss ICMP Message Format. **07**
- (b)** What is the purpose of Internet Protocol (IP)?. Draw and explain IPv6 Base header format. **07**
- OR**
- (b)** Explain IPv6 Fragmentation and Path MTU Discovery (PMTUD). **07**
- Q.3 (a)** Why is the UDP checksum separate from the IP checksum ? Explain UDP Encapsulation and Protocol Layering. **07**
- (b)** What is Virtual Private Networks (VPN) ? . Explain VPN Addressing and Forwarding Mechanism. **07**
- OR**
- Q.3 (a)** Answer the followings.
- (1) Explain DHCP Message Format. **04**
- (2) Write a short note on Simple Network Management Protocol(SNMP). **03**
- (b)** Discuss Real-Time Transport Protocol (RTP). **07**
- Q.4 (a)** Discuss (i) Post Office Protocol (POP) and (ii) Internet Message Access protocol (IMAP) of Mail Retrieval And Mailbox Manipulation Protocols. **07**
- (b)** Answer the followings.
- (1) Explain NAT Translation Table Creation. **03**
- (2) Discuss RTCP Operation. **04**
- OR**
- Q.4 (a)** Explain IPsec Encapsulating Security Payload. **07**
- (b)** Draw and explain SDN Architecture with an external controller. **07**
- Q.5 (a)** Discuss the ZigBee IPv6 Protocol Stack. **07**
- (b)** What is Firewalls ? Explain Firewall Rules and the 5-Tuple. **07**
- OR**
- Q.5 (a)** Explain Forwarding in a ZigBee Route-Over Mesh. **07**
- (b)** What is OpenFlow Technology? . Explain basic actions a Type 0 OpenFlow Switch can associate with a classification pattern. **07**
