Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA - SEMESTER– V EXAMINATION – WINTER - 2016

Subject Code:650010   **Date: 28/11/ 2016**
Subject Name: Advanced Networking
Time:10.30 am to 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 questions.   **07**
1. Explain: IPv4 Loopback Address.
2. What is the use of TTL field in IPv4 header?
3. Explain: Window Advertisement.
4. Explain: Supernet.
5. The IP address specifies network connection and not an individual computer. (T/F). Justify.
6. What is the default mask for class B?
7. What is Active Open & Passive Open?

(b) Explain ARP protocol format. Also explain the ARP cache timeout & ARP refinements.   **07**

Q.2 **(a)** Explain three-way handshake for establishing a TCP connection.   **07**
(b) Draw the block diagram of UDP pseudo-header and explain checksum computation.   **07**

OR

(b) Explain Original class full Addressing scheme with example.   **07**

Q.3 **(a)** What is the purpose of ping command? Draw and explain the message format of the ICMP message type that helps us execute ping.   **07**
(b) What is the need of IPv6? Compare IPv4 with IPv6. Explain General Form Of An IPv6 Datagram.   **07**

OR

Q.3 **(a)** Explain TCP State Machine in detail   **07**
(b) Write Short Note on Virtual Private Network.   **07**

Q.4 **(a)** Explain Explicit feedback mechanisms.   **07**
(b) What is TCP? Discuss TCP segment format.   **07**

OR

Q.4 **(a)** What is Network address Translation? Where it is used?   **07**
(b) Explain sliding window protocol with example.   **07**

Q.5 **(a)** Explain firewall and types of firewall.   **07**
(b) List and explain the characteristics of HTTP.   **07**

OR

Q.5 **(a)** What is the use of IPsec? Explain IPsec Authentication Header.   **07**
(b) Write down short note on Simple Mail Transfer Protocol.   **07**

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