Seat No.: _____ **Enrolment No._____**

GUJARAT TECHNOLOGICAL UNIVERSITY

MCA SEM-V Examination- Dec.-2011

Subject code: 650010 **Date: 21/12/2011**

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)** Attempt the following with explanation (1 Mark for Each) **07**

(1) Define how many subnetworks are created if the subnet mask for class C address is 255.255.255.240?

(2) Define how many subnetworks are created if the subnet mask for class B address is 255.255.224.0?

(3) Define how many subnetworks are created if the subnet mask for class A address is 255.248.0.0?

(4) What is the subnet address if one of the hosts address is 192.168.100.100 and subnet mask given is 255.255.255.224?

(5) What can be the subnet mask if Class C address block is divided into 32 subnetworks?

(6) What can be the subnet mask if Class B address block is divided into 16 subnetworks?

(7) What can be the subnet mask if Class A address block is divided into 64 subnetworks?

(b) Explain the following terms with suitable example **07**

(1) Decimal Dotted Notation for IP address.

(2) Loopback Address

(3) Default Mask

(4) Network Address

(5) Limited Broadcast Address

(6) Subnet

(7) Supernet

Q.2 **(a)** A company is granted with an IP address that is 100.100.100.0/24. A company wants to divide single network into 4 equal size sub networks from the available IP addresses. Define the range of all the subnetworks. Also define the subnet mask and number of hosts in each subnetwork. **07**

(b) Explain what is an ARP (Address Resolution Protocol) and the concept of resolution with static binding and dynamic binding. **07**

OR

(b) Explain the following process with UDP protocol **07**

(i) Encapsulation- Decapsulation

(ii) Multiplexing – Demultiplexing

Q.3 **(a)** Write a short note sender window and receiver window with TCP protocol. **07**

(b) Write a short note on Virtual Private Network **07**

OR

Q.3	**(a)**	Explain TCP connection Establishment and Termination process in detail.	**07**
	(b)	Write a short note on DHCP. Also explain different DHCP Message format.	**07**
Q.4	**(a)**	Write a short note on Flat Namespace and Hierarchical Namespace	**07**
	(b)	Write a short note on FTP protocol	**07**
		OR	
Q.4	**(a)**	Write a short note on Delegation of Authority for DNS	**07**
	(b)	Write a short note TELNET protocol.	**07**
Q.5	**(a)**	Explain IP Security Authentication Header.	**07**
	(b)	Explain Internet security with packet filtering specification.	**07**
		OR	
Q.5	**(a)**	Explain HTTP trace command.	**07**
	(b)	Write a short note on Firewall with packet filtering and proxy firewall.	**07**

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