	<u>Unedh</u>
Name :	(4)
Roll No.:	An Alasman Of Commission 2 and Excellent
Inviailator's Sianature:	

2011 INTERNET TECHNOLOGY

Time Allotted: 3 Hours Full Marks: 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

GROUP - A (Multiple Choice Type Questions)

1.	Choose the	correct	alternatives	for any	ten	of the	following
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 $10 \times 1 = 10$

- i) The transport layer port address uniquely indentifies a
 - a) Process
- b) Host

c) Server

- d) all of these.
- ii) If address with host part containing all 1's is
 - a) Broadcast address
- b) Multicast address
- c) Base address
- d) none of these.
- iii) Which one of the following is not a Dynamic Routing Protocol?
 - a) IGRP

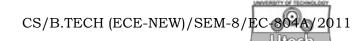
b) RIP

c) ICMP

d) OSPF.

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iv)		sending non-ASCII data	a thr	ough mail, the protocol		
	wcc	130 13				
	a)	SMTP	b)	MIME		
	c)	POP	d)	none of these.		
v)	For	or a class B subnetted IP address, which will be th				
	proper mask from the following?					
	a)	255.0.0.0	b)	255.255.255.0		
	c)	255.255.0.0	d)	201.34.12.72.		
vi)	A datagram is fragmented into 3 smaller datagrams					
	Which of the following is true?					
	a)	The 'do not fragmen	ıt' bi	t is set to 1 for all		
		3 datagrams.				
	b)	The 'more fragments	bit	is set to 0 for all		
		3 datagrams.				
	c)	The 'identification'	field	is same for all		
		3 datagrams.				
	d)	all of these.				
vii)	H.32	H.323 is a standard for				
	a)	BOOTP	b)	LAN		
	c)	IPv6	d)	VOIP.		



- viii) What is the supernet mask for a supernet composed of 16 class C addresses?
 - a) 255.255.240.16
- b) 255.255.16.0
- c) 255.255.248.0
- d) 255.255.240.0.
- ix) The process-to-process delivery of the entire message is the responsibility of layer.
 - a) Network
- b) Transport
- c) Application
- d) Physical.
- x) BGP is based on
 - a) Distance vector routing
 - b) Link state routing
 - c) Path vector routing
 - d) Both (a) and (b).
- xi) A subnet mask in class A has fourteen 1's. How many subnets does it define?
 - a) 32

b) 64

c) 8

d) 128.



- xii) SSL is located between
 - a) Network, Data Link
 - b) Application, Transport
 - c) Transport, Network
 - d) Data Link, Physical.

GROUP - B

(Short Answer Type Questions)

Answer any *three* of the following. $3 \times 5 = 15$

- 2. What is a firewall? Discuss each type of firewall briefly. 2 + 3
- 3. a) Discuss the concept of subnet addressing. Why is it used? 2+1
 - b) What is limited broadcast? How does it differ from directed broadcast? 1 + 1
- 4. a) What do you mean by Fully Qualified Domain Name and Partially Qualified Domain Name?
 - b) Define Root Server. 3 + 2

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5. Differentiate between connection oriented and connectionless delivery systems? Differentiate between Reliable and Unreliable delivery systems with respect to TCP and UDP.

2 + 3

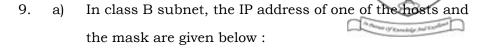
6. Describe link state routing algorithm and also state its advantages and disadvantages.

GROUP - C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

- 7. What is DHCP? How many different types of messages are there? Explain DHCP message format. Explain the least renewal process. What are interior routing and exterior routing?
 2+2+3+4+4
- 8. What is Broadboad Communication? How is it different from Dial up Connections? Differentiate between High speed dedicated WAN services and switched WAN services. What is VPN? What is DSL?
 3+3+4+3+2



IP Address: 125.134.112.66

Mask: 255.255.224.0

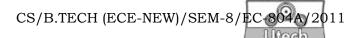
What is the first address (network address) and the last address (broadcast address) in this subnet?

- b) An organization granted a block of address with the beginning address 14.24.74.0/24. There is 256 addresses in this block. The organization needs to have 11 sunets. 2 subnets each have 64 addresses. 2 subnets each have 32 addresses. 3 subnets each have 16 addresses. 4 subnets each have 4 addresses. Design the subnets.
- c) What is the size of an Ethernet frame carrying an ARP packet ? Is the size of ARP packet fixed ? Explain.
- d) What is multicast addressing? Describe the working principle of transport gateway? 2 + 5 + (1 + 3) + (1 + 3)
- 10. a) Differentiate between circuit switching and packet switching.

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- b) What is VIN?
- c) What is Digital Signature? Explain. 5 + 4 + 6

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11. Write short notes on any three of the following:

 3×5

- a) Telnet
- b) ATM
- c) BGP
- d) B-ISDN
- e) DNS.

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