	Utech
Name :	
Roll No.:	To Special of Exercising and Explana
Invigilator's Signature :	

# CS/B.TECH(ECE)/SEM-8/EC-804A/2012 2012

## **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 )

 $1. \quad \hbox{Choose the correct alternatives for the following}:$ 

 $10 \times 1 = 10$ 

- i) UDP is
  - a) connection oriented
- b) connection-less
- c) both (a) and (b)
- d) none of these.
- ii) Which central authority is responsible for allocating IP addresses on the Internet ?
  - a) IETF

b) IANA

c) IEEE

- d) None of these.
- iii) Which network address is belongs to group C?
  - a) 123.0.0.0
- b) 221.45.71.0
- c) 141.14.0.0
- d) none of these.

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iv)				blocks are reserved for
	private address.			
	a)	64	b)	32
	c)	16	d)	8.
v)	In IPV4 datagram header consists of a fixed			
	a)	10-byte section	b)	20-bytes section
	c)	40-byte section	d)	none of these.
vi)	Default mask for 201.70.64.32 is			
	a)	255.0.0.0	b)	255.255.0.0
	c)	255.255.255.0	d)	none of these.
vii)	One shortcoming associated with RIP protocol is			
	a)	convergence	b)	authentication
	c)	failure	d)	all of these.
viii)	Communication circuits that transmit data in both directions but not at the same time are operating in			
	a)	simplex mode	b)	
		•		•
	c)	full duplex mode		•
ix)	Which of the following is required to communicate between two computers?			quired to communicate
	a) Communication software			
	b)	Protocol		
	c)	Communication hardw	are	
	d)	All of these.		
x)	In C	OSI network architectu	ıre, t	he routing is performed
	a)	network layer	b)	data link layer
	c)	transport layer	d)	session layer.

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#### **GROUP - B**

### (Short Answer Type Questions)

Answer any three of the following.

- $3 \times 5 = 15$
- What is Net Mask? How is it implemented to obtain the
  Network address? Explain with an example.
- What are ARP and RARP? Explain in brief the ARP packet format.
- 4. What is an 'Autonomous system' ? Categorize IGP and EGP with respect to an autonomous system.2 + 3
- 5. Explain Internet datagram format with a neat diagram. 5
- 6. What is VLAN? How does it differ from physical LAN? 3 + 2

#### **GROUP - C**

## (Long Answer Type Questions)

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

- 7. a) What do you mean by 'Classful' and 'Classless' addressing?
  - b) What is a 'Unicast' and a 'Multicast' address? How can you differentiate between them?
  - A block of address is granted to a small organization.
    We know that one of the addresses is
    - 205. 16. 37. 39/28. Find out the first address, last address and total number of addresses in the block.
  - d) Explain in brief the IPv4 datagram format with diagram.

3 + 4 + 3 + 5

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- 8. a) Explain Distance Vector Routing with an example
  - b) How many types of timer are used in RIP? Explain.
  - c) Explain the different types of the packet used in OSPF.

6 + 4 + 5

- 9. a) Differentiate between Circuit switching and Packet switching.
  - b) What is WAN? Differenciate beween High speed dedicated WAN and Circuit switched WAN.
  - c) Explain the concept of 'Frame relay'. 4 + 5 + 6
- 10. a) What is the difference bewteen a 'Broadband' and a 'Dial-up' connection?
  - b) What are 'Wi-Fi' and 'Wi-Max'?
  - c) Explain in brief the implementation of DNS.
  - d) What do you mean by a 'Packet-Filter' firewall and a 'Proxy' firewall? 3 + 3 + 5 + 4
- 11. Write short notes on any *three* of the following:  $3 \times 5$ 
  - a) VPN
  - b) RIP
  - c) TELNET
  - d) HELLO
  - e) BOOTP.

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