

B4.5-R3: INTERNET TOOLS AND TECHNOLOGIES

NOTE:

1. Answer question 1 and any FOUR questions from 2 to 7.
2. Parts of the same question should be answered together and in the same sequence.

Time: 3 Hours

Total Marks: 100

1.
 - a) Differentiate between www, hypertext and hypermedia?
 - b) How does the three-way handshake, for creating a TCP connector, works?
 - c) What is a broadcast IP address? What is IP multicasting?
 - d) Explain the client server model of communication? What is the difference between client server architecture and web architecture?
 - e) What do you understand by IP spoofing?
 - f) What are the advantages of client side scripting?
 - g) What does SNMP enable network managers do, and why is this important?

(7x4)

2.
 - a) How IP addresses are classified? What is the use of classifying IP addresses? What is the possible range of IP addresses for the different classes?
 - b) What are the advantages of ATM that uses small and fixed length packets?
 - c) Why does TELNET protocol require a time sharing operating system?

(6+6+6)

3.
 - a) What is an Applet? How Applets are invoked? Do applets have constructors? Compare and contrast applets and servlets.
 - b) Describe the role that XSL can play when dynamically generating HTML pages from a relational database. What is SOAP and how does it relate to XML?
 - c) What is a firewall? What is the purpose of packet filters and application gateways?

(6+6+6)

4.
 - a) What are the benefits of DSL? How can a DSL line be shared among multiple users?
 - b) What are the reasons for using JPEG? What are the disadvantage of JPEG?
 - c) What is the Domain Name System? What does it mean to "register" a domain name? What's the difference between forward lookup and reverse lookup in DNS?

(6+6+6)

5.
 - a) What is TCP? Connection termination in TCP is symmetric, whereas connection establishment is not. Why?
 - b) Discuss how a user gets connected to the Internet using an ISP.
 - c) Write a short note on Baseband Technology and Broadband Technology, with a special reference to advantages and the latest status of Broadband in India.

(6+6+6)

6.

- a) How does ICMP software on a host know to which other host it should send an error message?
- b) What are Viruses? What are the different types of viruses? Explain, how viruses work on the Internet?
- c) How does FTP work? What is the difference between passive and active FTP?

(6+6+6)

7.

- a) Write at least three problems associated with IPv4 addressing. What are some of the solutions that have been proposed to overcome these problems?
- b) What is ARP cache? What is the normal expiration time of an entry in ARP cache? Why does ARP request message carry the IP address and the link layer address of the sender?
- c) What is the difference in the subnet mask for a Class A address with 16 bits for the subnet ID and a class B address with 8 bits for the subnet ID? Is the subnet mask 255.255.0.255 valid for a Class A address?

(6+6+6)