

B4.5-R3: INTERNET TECHNOLOGIES AND TOOLS

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) What is Domain Name System (DNS)? Differentiate between forward lookup and reverse in DNS.
- b) What is SMTP? How it can be used to send spam?
- c) What is the MPEG-1 standard?
- d) What are static Web pages? How are they different from Dynamic Web pages?
- e) What is IP address? Why is it needed? What is the difference between Public and Private IP Addresses?
- f) Compare the role of a firewall with that of a proxy server.
- g) How do ports on host machine enable communication between them?

(7x4)

2.

- a) What is VoIP? What are the advantages of using VoIP as compared to PSTN? What are basic steps used to setup a VoIP communication channel?
- b) What do you understand by Internet Protocols? Which body does have control on them? List any four Internet Protocols along with their basic functions.
- c) Explain in brief the importance of scripting and the main features of Microsoft ASP. Name a common scripting language that is used for web servers.

(6+6+6)

3.

- a) Write the salient features of the following basic network utilities:
 - i) IPConfig
 - ii) Ping
 - iii) Traceroute
- b) What are major differences between XML and HTML coding?
- c) Define the term encryption and decryption. What are drawbacks of single key encryption? Explain, how asymmetric key encryption solves them.

(6+6+6)

4.

- a) What is the network prefix of IP address 192.110.50.3/24? Explain the difference between a network IP and a network prefix.
- b) A network contains two routed subnets: Subnet A and Subnet B. Subnet B contains a Windows 2000 server configured as a DHCP server. This server has scopes created for both Subnet A and Subnet B. Subnet A does not contain DHCP server. The clients on Subnet A are not receiving IP addresses from the DHCP server. What is done to enable clients in Subnet A to receive dynamically assigned IP addresses? Choose all that apply.
- c) Explain briefly cookie and its uses. What information does a cookie contain?

(6+6+6)

5.

- a) What is IPSec (IP Security Protocol Suite)? How is it similar to SSL?
- b) Define GIF and JPEG image formats.
- c) How are files downloaded using the HTTP and FTP Protocols?

(6+6+6)

6.

- a) Choose any two scenarios from the following in which BGP is recommended.
 - i) You need a default route to connect to a single ISP.
 - ii) When you need to connect to two or more ISPs.
 - iii) When you are sending traffic through one AS to get to another AS.
 - iv) When you need a simple routing on your intranet.
- b) What is VPN? What are its salient features?
- c) Discuss in brief the Multiprotocol Label Switching (MPLS).
- d) What is an Applet? Should applets have constructors?

(6+4+4+4)

7. Write short notes on **(any three)**.

- a) HTTP
- b) Multicast-addressing
- c) LAN topologies
- d) Integrated Services Digital Network (ISDN)
- e) Disadvantages of JAVA

(3x6)