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)   Describe in brief one method by which web servers can create pages dynamically on demand.
b)   Why is XML used to publish and exchange database contents?
c)   What is FTP? How it can be used?
d)   How can IPv4 address be converted to an equivalent IPv6 address?
e)   What layer protocol is the ICMP? How the ICMP data is passed to the data link layer.
f)   Which transport technique is most appropriate for multimedia service: packet switching, circuit switching or ATM cell switching. Why?
g)   What is the difference between plain text and cipher text. Explain stream cipher.

(7x4)

2.
a)   Describe the role of IPv6 in real time services?
b)   What is VOIP? What are the motivations for transmitting voice over IP?
c)   Explain in brief the important components (title, prologue and links) of the head section of an HTML document.

(6+6+6)

3.
a)   Discuss two protocols used for transmitting data securely over the World Wide Web.
b)   What do you understand by Java applets?
c)   Explain the differences between authentication methods and encryption methods. Give examples of each.

(6+6+6)

4.
a)   With respect to multicasting scenario, answer the following:
   i)   What should be the MAC address that can be used to send IP packet to a group?
   ii)   How do the hosts get registered to a multicast group?
b)   What does DNS stand for? What is its main purpose?
c)   What is working of IRC?

(8+6+4)

5.
a)   Describe the concept of VPN. Why is security a concern when using VPN?
b)   What is a firewall? What are the typical tasks of a firewall?
c)   How is Java strongly associated with Internet?

(6+6+6)

6.

a) Explain the following terms:
   i) URL
   ii) Router
   iii) Telnet
   iv) Virus scanning software
   v) RARP
b) What is TCP? What are the features, which make TCP a reliable protocol?
c) What is xDSL technology?

(10+4+4)

7.

a) What is static routing? How it differs from dynamic routing.
b) Discuss Simple Mail Transfer Protocol.
c) Discuss differences between GET and POST commands of (HTML) web technology?

(6+6+6)