B4.5-R3: INTERNET TECHNOLOGIES & 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 TCP/IP? Discuss the layers of TCP/IP.
b) What is IP Host address? Discuss in detail.
c) What is virtual reality? Describe its applications.
d) What is a Proxy Server? What are its functions?
e) What is file compression? How is it achieved?
f) What is Domain Name System? Explain.
g) What are digital certificates? Explain their role in Internet Security.

(7x4)

2.
a) What is Internet? Describe the Architecture of Internet. Explain how a router works.
b) What are Cookies? How are they different from Microsoft Passports?
c) What is email Spam? Explain, how, it can be blocked?

(6+6+6)

3.
a) What is Client/Server architecture? Explain the advantages and disadvantages of two-tier and three-tier architecture in detail.
b) What is multimedia? What are the requirements for multimedia? Explain standardized data formats for Multimedia-based programming.

(9+9)

4.
a) What are Firewalls? How do they work?
b) What are Viruses? What are the different types of viruses? Explain, how viruses work on Internet?
c) Write short notes on:
   i) Smurf Attacks
   ii) CGI Scripts

([2+2]+[2+2+4]+[3+3])

5.
a) Explain briefly, the new features in IPv6 as compared to IPv4.
b) Explain briefly, how IPv6 handles multiple headers? What is the purpose of multiple headers? Explain IPv6 addressing.

(6+[4+4+4])

6.

a)   Explain, how graphic images are embedded in a web page?

b)   Explain the browser architecture.

c)   Explain caching in web browsers.

d)   What is Telnet?

(4+5+5+4)

7.

a)   What are the different aspects of Network Security? What do you mean by Accountability and Authorization?

b)   Discuss the following techniques to ensure the data against accidental damage:
   i)   parity bits
   ii)   checksum
   iii)   Cyclic redundancy Checks

c)   What is Internet Multicast Protocol? Explain Internet Group Management Protocol.

(6+6+6)