

B4.5-R4: INTERNET TECHNOLOGY AND WEB SERVICES

NOTE:

1. Answer question 1 and any FOUR from questions 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) How does the handshake for creating a TCP connection work?
 - b) Discuss POP and SMTP servers in brief. How is IMAP different from POP?
 - c) How does a web browser works? Why HTTP is called a stateless protocol? Why is it so?
 - d) What is the full form the acronyms SOAP, UDDI and WSDL? Give their definitions and explain them in brief.
 - e) What are digital certificates used for? Who issues these certificates?
 - f) Design a firewall policy for your college. Which packet types will you permit to pass through? Why?
 - g) Explain in brief broadcast and multicast method of delivery.

(7x4)

2.
 - a) What is XML? Discuss three applications that make use of XML technology.
 - b) Why applications such as interactive audio and video typically run RTP on top of UDP. What is the purpose of RTP Control Protocol (RTCP)?
 - c) What is a router? What is its role in internetworking? How does it work?

(6+6+6)

3.
 - a) Draw a flowchart and a program (in any language of your choice) to demonstrate the translation of 32 bit IPv4 address to the decimal dotted form.
 - b) What is the difference between physical address and logical address on a network? How a router finds out the physical address of another host on its networks?
 - c) Why is IP called a best-effort delivery protocol? Explain the error reporting mechanism of the IP protocol.

(6+6+6)

4.
 - a) If you have to build your own website, which scripting language will you prefer: Visual Basic or PHP? Why?
 - b) Discuss the idea of HTML tags with an example. Describe any three HTML tags. What is meant by a hyperlink? How is it useful?
 - c) What is the purpose of FTP? Discuss the FTP connection mechanism between the client and the server.

(6+6+6)

5.
 - a) What is meant by virtual reality? Give two examples of the special hardware needed to interact with a virtual reality system. Give two advantages of using virtual reality. Give an example of an application which uses virtual reality.

- b) When do we say that web contents are dynamic not static. Discuss in brief Common Gateway Interface (CGI) the widely used technology for building dynamic web contents. In a CGI program, if the header consists of the following line, what does it mean?

Content-type: text/html

- c) How can two parties use public key encryption to sign a contract that is then sent to a third party?

(6+6+6)

6.

- a) Explain how does SNMP work? Explain the SNMP Basic Functions?
b) What is IP version 6 (IPv6)? Why is it required?
c) Discuss why many web applications use MySQL as the database component. Also discuss disadvantages of using MySQL. What is LAMP software stack?

(6+6+6)

7.

- a) What is AVI? What is its relation with QuickTime?
b) What are World Wide Web and DNS? Why is DNS so important for the World Wide Web?
c) What do you understand by Active Server Pages (ASP)? Which editor will you use for developing ASP applications?

(6+6+6)