

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) What is an IP address? Write and explain various IP addressing schemes with an example.
- b) Write the role of a Web Server and a Web Browser. List names of atleast three different Web Servers and Web Browsers.
- c) What is an API? Explain how it is different than a general program module and write its characteristics.
- d) What is a Common Gateway Interface (CGI) and its role? Explain the POST and GET methods that are used with HTTP protocol with an example.
- e) Discuss the features of ActiveX.
- f) What do you understand about Open Source Software? Write its merits and limitations?
- g) List and explain any FOUR vulnerabilities that are to be addressed in a Web Application development.

(7x4)

2.

- a) Explain in detail TCP/IP protocol stack. List atleast TWO protocols of each layer and explain in brief.
- b) Explain the 3-Tier architecture for Web-based Systems with a diagram. How it is well suited for development of any business application?

(9+9)

3.

- a) Write a sample PHP script for the following tasks:

- i) Connection to the database
- ii) Select database to work
- iii) Execute SQL query and return records
- iv) Fetch the data from database
- v) Close the database connection

Note: Presume that there is a MySQL database having few records and each record has different Fields.

- b) What is a Java Servlet? Explain, the life cycle of a Servlet with an example.

(10+8)

4.

- a) Draw the Real-time Transport Protocol (RTP) packet header and explain each field of it.
- b) Write the characteristics of Simple Object Access Protocol (SOAP). Explain various layers in a SOAP architecture.

(9+9)

5.

- a) Discuss the recommendation of H.323.
- b) What is a LAMP Server? Explain each component of it. Write merits and limitations of LAMP Server.
- c) Explain the role of Client side and Server side scripting in a Web development.

(6+6+6)

6.

- a) What is a Virtual Private Network (VPN)? List and explain in brief various secure VPN Protocols.
- b) What do you understand about Cross Site Scripting (XSS) attack? Explain how, XSS attack can be Prevented.
- c) What is Secure Electronic Transaction (SET)? Explain various components/participants involved in achieving SET.

(6+6+6)

7.

Write short notes on **any three** of the following:

- a) Apache Server
- b) Voice Over IP (VoIP)
- c) Digital Signature
- d) Web Graphics

(6x3)