Sl. No.

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**

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1. (a) Define Web browser. List and explain basic functions of Web browser.

   (b) What is a Proxy Server and how do they protect the computer network ?

   (c) What is Multicast ? List and explain all protocols used in Multicast.

   (d) Design a registration page using HTML for e-mail sign up. Consider these fields : Name (Text box), Username (Text box), Gender (Radio button), Contact Number (Text box), Address (Text area) and Submit button.

   (e) Explain the term ''Open Source''. Why do people prefer using open source software ?

   (f) What is UDDI ? Explain features of UDDI. Which language is used by UDDI ?

   (g) Describe different roles of HTTP. Explain the meaning of following HTTP Response codes :

   (i) 500 Internal Server Error

   (ii) 404 Not Found

   (iii) 401 Unauthorized

   (iv) 200 Ok   **(7x4)**

2. (a) What output will be produced by the following JavaScript code snippet on console ?

   console.log(''0 = = 1 = '' + (0 = = 1));

   console.log(''1 || 2 = '' + (1 || 2));

   console.log(''0 && 1 = '' + (0 && 1));

   console.log(''1 && 2 = '' + (1 && 2));

   console.log((true && false)||(false || true));

   console.log(3 > 2 > 1);

   (b) How does E-commerce work ? Briefly explain various applications of E-commerce.

   (c) What is Servlet ? Explain Servlet life cycle with example.   **(6+6+6)**

3. Differentiate between **any THREE** of the following :

   (a) TCP and UDP

   (b) Session and Cookie

   (c) JPEG and MPEG

   (d) Active Server Pages and Java Server Pages   **(6+6+6)**

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4. (a) How does Web Server handle the request and generate response ? Describe all steps involved with it.

(b) Define Cryptography along with its benefits. What are the major threats to any data or information for which it needs cryptography ? What type of information can be secured with Cryptography ? **(9+9)**

5. (a) ''SMTP and FTP are examples of two widely used higher-level protocols that are used to communicate over TCP connections''- Justify this statement.

(b) What is Denial of Service (DoS) attack ? What preventive measures one can take to protect DoS attack ?

(c) Explain the role of each software component of a LAMP server. **(4+6+8)**

6. Write Short Notes on **any THREE** of the following :

(a) VoIP

(b) SQL Injection

(c) Layers of TCP/IP Model

(d) Virtual Reality **(6+6+6)**

7. (a) Design webpage and write PHP script to search book records from database by Author name entered by user in Text Box and display them on page. Assume these fields in database : Book_No, Author, Publication and Price. Consider that MySQL has been used to store book records.

(b) What is XML ? What do namespaces have to do with web services ? Give some examples of valid namespaces. **(9+9)**

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