Total Pages : 4   Roll No. ....

MCS-E-1

WEB TECHNOLOGY

(MCA)

3rd Semester Examination, 2024 (June)

Time : 2:00 Hrs.   Max. Marks : 70

Note **:–** This paper is of Seventy (70) marks divided into Two (02) Sections 'A' and 'B'. Attempt the questions contained in these Sections according to the detailed instructions given therein. ***Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.***

Section–A

(Long Answer Type Questions)   2×19=38

Note **:–** Section 'A' contains Five (05) Long-answer type questions of Nineteen (19) marks each. Learners are required to answer any *two* (02) questions only.

1. Describe the evolution from HTML to XHTML (extensible Hypertext Markup Language). Discuss the key differences between HTML and XHTML, focusing on syntax rules, document structure, and the benefits XHTML brings to web development. Provide examples of XHTML code and explain how it aligns with XML principles.

2. Elaborate on common design patterns used in JavaScript development. Also explain connection between Javascript and DOM.

3. Define closures in JavaScript and explain their significance. Discuss how closures are created, how they capture and retain variables from their lexical scope, and provide examples to illustrate practical use cases of closures in JavaScript.

4. Describe the lifecycle of a Java Server Page (JSP). Discuss the phases such as translation, compilation, and execution. Explain how JSP translates into a servlet and the role of the JSP container in managing the lifecycle. Provide examples to illustrate each phase of the JSP lifecycle.

5. Explain the concept of connection pooling and its significance in a JSP application with JDBC. Discuss how connection pooling enhances performance and resource management.

Section–B

(Short Answer Type Questions)   4×8=32

Note **:–** Section 'B' contains Eight (08) Short-answer type questions of Eight (08) marks each. Learners are required to answer any *four* (04) questions only.

1. Explain the role of CSS (Cascading Style Sheets) in conjunction with markup languages.

2. Elaborate on the concept of event handling in JavaScript. Discuss different functions for event handling.

3. Discuss variables, data types, and control structures in JavaScript. Provide examples to illustrate how these elements are used to create dynamic and interactive web pages.

4. Discuss life cycle of JSP pages, JSP enginess and comparison of servlets with JSP.

5. Discuss the concept of transactions in JDBC. Explain how developers can manage transactions, including the

methods for starting, committing, and rolling back transactions.

6. Explain the life cycle of a servlet. What are the different phases a servlet goes through during its life cycle ?

7. What are the differences between the doGet( ) and do Post( ) methods in a servlet ? When would you override one over the other ?

8. Explain the purpose of XML validation and the tools that can be used for XML validation.

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