

**WEB TECHNOLOGY
(MCAP 2202)**

Time Allotted : 3 hrs

Full Marks : 70

Figures out of the right margin indicate full marks.

Candidates are required to answer Group A and any 5 (five) from Group B to E, taking at least one from each group.

Candidates are required to give answer in their own words as far as practicable.

**Group - A
(Multiple Choice Type Questions)**

1. Choose the correct alternative for the following: **10 × 1 = 10**
- (i) Which HTML attribute specifies an alternate text for an image, if the image cannot be displayed?
(a) href (b) title
(c) alt (d) src
- (ii) What is the observation made in the following JavaScript code?
var count = [1,,3];
(a) The omitted value takes "undefined"
(b) This results in an error
(c) This results in an exception
(d) The omitted value takes an integer value
- (iii) Which one of the following regular expression matches any string containing zero or one p?
(a) p+ (b) p* (c) P? (d) p#
- (iv) Which one of the following does not describe a validating filter?
(a) Are used to allow or disallow specific characters in a string
(b) Are used to validate user input
(c) Strict format rules
(d) Returns the expected type on success or FALSE on failure
- (v) Which one of the following function is used to start a session?
(a) start_session() (b) session_start()
(c) session_begin() (d) begin_session()
- (vi) Which of the following selector selects all elements of E that have the attribute attr that ends with the given value?
(a) E[attr#=value] (b) E[attr\$=value]
(c) E[attr^=value] (d) E[attr!=value]

- (vii) Which event occurs when the user clicks on an HTML element?
(a) onchange (b) onmouseleave
(c) onclick (d) onmouseover
- (viii) If para1 is the DOM object for a paragraph, what is the correct syntax to change the text within the paragraph?
(a) "MCA SEM IV"?
(b) para1.value=" MCA SEM IV ";
(c) para1.firstChild.nodeValue= " MCA SEM IV ";
(d) para1.nodeValue=" MCA SEM IV ";
- (ix) When trying to access a URL, the following message is displayed on the browser:
Server; Error 404.
What could be the reason for the message?
(a) The requested HTML file is not available
(b) The path to the interpreter of the script file is invalid
(c) The first line of the output from the script is not a valid HTTP header
(d) The requested HTML file or CGI script has insufficient permission
- (x) Which variable is used to collect form data, sent with both the GET and POST methods?
(a) \$BOTH (b) \$_BOTH
(c) \$REQUEST (d) \$_REQUEST

Group - B

2. (a) What is the web application? Describe the types of web applications with suitable example.
- (b) What are the main components of a browser's conceptual high level structure? State functionality of each of them.
- (c) Describe Fitt's Law.
- (1 + 2) + 7 + 2 = 12**
3. (a) What is the purpose of wire-framing? In web design explain different types of wireframes with example.
- (b) Explain the key differences between logical tags and physical tags.
- (c) Create one HTML Form with one button element. On click of that the button it will display one alert message "Welcome to Web Tech Exam".
- (2 + 4) + 2 + 4 = 12**

Group - C

4. (a) Create a web page, using selectors and pseudo classes and elements, which display the following output.
Title : Web Technology

Table of content

1. HTML

2. CSS

I. Introduction

II. Adding style sheets

a. External

i. External style sheets are useful

b. Inline

III. Browser incompatibility

3. XML.

(b) Differentiate between adjacent sibling selector and general sibling selector in CSS with proper examples.

(c) Explain if there is any difference between inline style sheet and embedded style sheet ways of inserting the CSS file.

5 + 4 + 3 = 12

5. (a) Create one student database in XML format. Store the student details of Degree, roll number, name, year of joining, HS marks. Retrieve the student details according to Degree wise and display their name and HS marks using SimpleXML Parser. Draw the XML Tree structure of the above database.

(b) What is an XML schema? What are the limitations of Document Type Definitions (DTDs)? How these limitations are overcome using XML schema?

(2 + 3 + 2) + (1 + 2 + 2) = 12

Group - D

6. (a) What are the components of a HTTP response?

(b) Compare and contrast pull method and push method in cache consistency.

(c) Using JavaScript validate a customer registration HTML form containing Cno, first name, middle name, last name, password, date of birth, mobile number, email address obtained with the following validation rules

1. All the fields except for middle name cannot be empty.

2. Cno will be consisting of digits only

3. First name, middle name (if present), last name will be consisting of alphabets only.

4. Password length will be 6 to 14, containing alphabets, digits and special characters @, \$, #, _ and must contain at least one alphabet, at least one digit and at least one of the special characters.

5. Age must be at least 18 years.

6. Mobile number will be 10 digits not starting with zero.

7. Email must be in a valid email format.

2 + 3 + 7 = 12

7. (a) Why the traditional HTTP protocol is called stateless?

(b) Mention any two HTTP response status codes and state their interpretation.

- (c) Explain with an example the difference between the operators == and ===.
- (d) Explain the shift() and getHours() methods of Date in JavaScript with proper example.
- (e) Write JavaScript program that accepts a string as a parameter and converts the first letter of each word of the string in upper case.
INPUT : the students of mca second year
OUTPUT : The Students Of Mca Second Year.

2 + 2 + 2 + 3 + 3 = 12

Group - E

- 8. (a) Write down the difference between include() and require() function using PHP script.
- (b) Explain the use of arsort() with example using PHP script.
- (c) What are cookies? Write a PHP script that checks whether cookies are enabled or not.
- (d) What is PHP Sessions? How does it work?
- (e) Write PHP scripts to sanitize and validate a URL.

2 + 2 + (1 + 3) + 2 + 2 = 12

- 9. Using PHP develop a program to accept the book information details (Accession number, title, authors, edition and publisher) from web page and store the information in a MySQL database. Develop another page that helps to search for the details of book according to the title specified by the user and display the search results with proper headings.

12

| Department & Section | Submission Link |
|---------------------------------|---|
| MCA | https://classroom.google.com/c/MzExOTIzMDIxNzA4/a/Mzc0MTUwNjU3MTEy/details |