

**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 of the following is not a difference between HTML and XHTML?
 (a) Charset in html is "text/html" where as in xhtml it is "application/xml+xhtml"
 (b) Charset in both html and xhtml is "text/html"
 (c) Tags and attributes are case-insensitive in HTML but not in XHTML
 (d) Special characters must be escaped using character entities in XHTML unlike HTML.
- (ii) What indicates the content in file is HTML when delivered on the network?
 (a) The extension of the file ".html"
 (b) The "content-type" header
 (c) Both ".html" extension and "content-type" header
 (d) The "content_type" header.
- (iii) In css what does "font-size" can be called as?
 (a) Selector (b) Rule
 (c) Property (d) Property-Name.
- (iv) In PHP, which operator is used to check if two values are equal and of same data type?
 (a) = (b) == (c) === (d) !==
- (v) What will be the output of the following PHP code?

```
<?php
$state = array ("Karnataka", "Goa", "Tamil Nadu",
"Andhra Pradesh");
echo (array_search ("Tamil Nadu", $state) );
?>
```

 (a) True (b) True1 (c) False (d) 2.

- (vi) HTTP client requests by establishing a _____ connection to a particular port on the server.
 (a) user datagram protocol (b) transmission control protocol
 (c) broader gateway protocol (d) address resolution protocol.
- (vii) Which of the following is not a valid aggregate function in MySQL?
 (a) COMPUTE (b) MIN
 (c) COUNT (d) MAX.
- (viii) Which one of the following function is used to start a session?
 (a) start_session() (b) session_start()
 (c) session_begin() (d) begin_session()
- (ix) In CSS, which selector is used to specify a group of elements?
 (a) id (b) class (c) tag (d) name.
- (x) What is the reason for avoiding the attributes property in the HTML DOM?
 (a) Found unnecessary
 (b) Attributes don't have attributes
 (c) Attributes have attributes
 (d) none of the mentioned.

Group - B

2. (a) What are the main components of a browser's conceptual high level structure? State functionality of each of them.
 (b) Describe Fitt's law.
 (c) Why dynamic web pages are required? Write the difference between static web page and dynamic web page.
(3 + 2) + 2 + (3 + 2) = 12
3. (a) What is user-centered design (UCD)? What are the general phases of the UCD process?
 (b) Why HTML Tags are used? What is the difference between logical tags and physical tags?
 (c) What is sitemap?
 Suppose you have a 200 × 200-pixel image named quarters.gif in your web page. When viewers click the upper-left quarter of the image, you want them to get page named topleft.html. When they click the upper-right quarter, they should get topright.html. Clicking the lower left should bring up bottomleft.html, and the lower right should lead to bottomright.html. Write HTML to implement this as an image map.
(2 + 2) + (1 + 2) + (2 + 3) = 12

Group – C

4. (a) How can I eliminate the extra space after a tag using CSS.
 (b) What is xml? What is dom and how does it relate to xml?
 (c) What is XML tree structure? Explain with example.
- 3 + 3 + 6 = 12**
5. (a) What are the different ways of adding styles (CSS) to web page? State the advantages and drawbacks of each of them. State their application hierarchy.
 (b) Differentiate between class selector and id selector in CSS with proper examples.
- 8 + 4 = 12**

Group – D

6. (a) What are the advantages and limitations of client side scripting?
 (b) Using JavaScript validate a form containing username and e-mail id with the following validation rules
- Both the fields are to be filled.
 - E-mail id should be in a proper format.
 - Username should not consist of numbers only.
- 4 + 8 = 12**
7. (a) Explain the use of arsort() with example using PHP script.
 (b) What are PHP filters? Why are PHP filters used? What is the difference between validating data and sanitizing data? Explain with example.
 (c) Write a PHP program to store current date-time in a COOKIE and display the 'Last Visited on' date-time on the web page upon reopening of the same page.
- 2 + 4 + 6 = 12**

Group – E

8. Develop script(s) with PHP and MySQL to implement the following web application:
 The user is first served a login page which takes users name and password. After submitting the details the server checks these values against the data from a database and takes the following decisions:

- if name and password matches, serves a welcome page with user's full name
 - if name matches and password doesn't match then serves password mismatch page
 - if name not found in database, serves a registration page where users full name is asked and on submitting the full name, it stores the login name, password and full name in the database
- (HINT: Use session for storing the submitted login name and password.)
- 12**
9. (a) Create people database in MySQL, then create a table to store persons' information. Create a form to insert data into the table then print the contents of the table in another page using PHP.
 (b) What is IP spoofing? How can one generate such attack? Write down the security solutions to avoid such attacks.
 (c) What is man-in-the-middle-attack (MITM)? How can one generate such attack? Write down the security solutions to avoid such attacks.
- 6 + 3 + 3 = 12**