

1200

12

(v) Write the jQuery code to change the background color of a <div> with the ID content when the mouse hovers over it.

(5)

(c) Write a jQuery function to test whether a given date lies between January 1, 2024, and December 31, 2024.

(5)

(200)

[This question paper contains 12 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 1200, I

Unique Paper Code : 2343010014

Name of the Paper : Introduction to Web Programming

Name of the Course : BSc. (Prog.) – DSE

Semester : V

Duration : 3 Hours

Maximum Marks : 90

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. This question paper has **two** sections **A** and **B**.
3. **Section A** is compulsory.
4. Attempt any **four** questions from **Section B**.
5. All parts of a question should be answered together.

P.T.O.

Section A

1. (a) Write HTML code to create a table on a webpage with the following data:

Name	Age	Country
ABC	28	USA
DEF	34	India
GHI	22	Russia

Apply basic table styles such as borders, padding, and background color to the table. (5)

- (b) What is the output of following code segment?

(i) `<script>`

```
var a = true + true + true * 3;
```

```
document.write(a);
```

`</script>`

- (iii) To remove the list items of `<ol>` element.
- (iv) To change the text of `<div>` element to "Hello world".
- (v) To toggle the visibility of an element with the ID `#toggle`. (5)

- (b) Discuss the purpose and usage of jQuery selectors and events through the following tasks :

- (i) Write the jQuery selector to select all `<p>` elements on a webpage.
- (ii) Write the jQuery selector to select an element with the ID `myDiv`.
- (iii) Write the jQuery selector to select all elements with the class `highlight`.
- (iv) Write the jQuery code to display an alert message when a button with the ID `submitBtn` is clicked.

1200

10

(c) Dropdown Menu: Allow users to choose a "Course" from at least three options.

(d) Text Area: Add a section labeled "About Yourself" for detailed input.

(e) Radio Buttons: Include options to select "Male" or "Female" or "Other" for "Gender."

(f) Buttons: Include a "Submit" button to send data and a "Clear" button to reset the form.

Ensure the form layout is user-friendly, with clear labels for each field and a logical organization.

(15)

7. (a) Write a single line jQuery code for the following:

(i) To insert the text "Welcome to jQuery" at the end of a <p> element.

(ii) To remove the <div> element.

1200

3

(ii) <script>

```
var a = 1;
```

```
var b = 0;
```

```
while (a <= 3)
```

```
{
```

```
    a++;
```

```
    b += a * 2;
```

```
    document.write(b);
```

```
}
```

```
</script>
```

(iii) <script>

```
var count = 0;
```

```
while (count < 10) {
```

```
    count++;
```

```
    if (count %2==1)
```

```
        continue;
```

```
    document.write(count);
```

```
}
```

```
</script>
```

(iv) <script>

```
var x = 5;
```

```
document.write(x + "5");
```

```
</script>
```

(v) <script>

```
var x = 10;
```

```
function test() {
```

```
var x = 5;
```

```
document.write(x); }
```

```
test();
```

```
document.write(x);
```

```
</script>
```

(5)

(c) Define the following terminology with respect to the Internet.

(i) Node

(b) Write a JavaScript program to analyse a given string "JavaScript was invented by Brendan Eich in 1995". The program should count:

(i) The number of words in the string.

(ii) The number of whitespace characters.

(iii) Occurrence of each character in the string.

(9)

6. Design a webpage that includes a structured HTML form with the following fields :

(a) Text Inputs: Collect user details such as "FirstName", "LastName", "Course", and "UniquePaperCode"

(b) Checkbox Options: Provide selections for PaperName "Web Design", "Machine Learning", and "Software Engineering."

4. (a) What is the purpose of a site map in website design, and how do linear, hierarchical, and webbed website structures organize and present content for navigation? (5)
- (b) Create a webpage that displays a heading and a paragraph. Apply the CSS text properties (font family, size, weight, and alignment) to style the heading and paragraph with different set of values. Also, apply CSS color to set the background color of the webpage. (5)
- (c) Describe the CSS Box Model and any four components of the box model, along with their contribution to the total size of an element. (5)
5. (a) What are the various types of dialog boxes used in JavaScript? Provide one example for each. (6)

- (ii) Network
- (iii) Internet of things
- (iv) World wide web
- (v) Internet service provider (5)
- (d) Differentiate between `<p>` and `<div>` elements in HTML and list three common attributes that can be used with it. (5)
- (e) What is a wireframe, and how does the use of active and passive white spaces improve the design and readability of a webpage? (5)
- (f) Discuss at least three differences between HTML attributes and CSS properties with suitable examples. (5)

Section B

2. Create a website with two pages: index.html (homepage) and contact.html. with following elements:

(a) **Table:** table must contain the contact details like name, email id and contact number.

(b) **Image:** Logo on each page with proper alt attributes.

(c) **Lists:** Nested list of items.

(d) **Forms:** Include textbox, submit button and radio button.

(e) **Additional Element:** include anchor tag, font (Bold, Italics), and line break tag. (15)

3. (a) How does the Internet Protocol (IP) work with the Domain Name System (DNS) to convert a web URL into its corresponding IP address, and why is this process necessary? (5)

(b) Describe the purpose of each of the following event handlers and illustrate how they can improve user interaction on a webpage with relevant examples :

(i) onBlur

(ii) onClick

(iii) onFocus

(iv) onMouseOver

(v) onSelect (10)