

- Add one cup of cold water to the lemon juice.
- Stir in the sugar (optional) until fully dissolved.
- Mix well and add ice cubes if desired.
- Stir again and enjoy your refreshing lemon juice!

3. *Additional Information:*

- **Serving Size:**
1 glass
- **Calories:**
Approximately 40 calories per serving (without sugar).
- **Preparation Time:**
5 minutes
- **Storage:**
Best served fresh, but can be stored in the fridge for up to 24 hours.

[This question paper contains 12 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 4665

J

Unique Paper Code : 2344002004

Name of the Paper : Introduction to Web Programming

Name of the Course : **Computer Science Generic Elective**

Semester : IV

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. Question 1 in **Section A** is compulsory.
4. Attempt any 4 questions from **Section B**.
5. Parts of a question must be attempted together.
6. **Section A** carries 30 marks and each question in **Section B** carries 15 marks.

Section – A

1. (a) Which text color will be applied to each paragraph in the HTML/CSS document given below? (3)

```
<html>
```

```
<head>
```

```
<style>
```

```
p {color:green;}
```

```
#p3 {color:blue;}
```

```
.p3 {color:brown;}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<p>Welcome to paragraph 1</p>
```

```
<p style="color:red;">Here goes paragraph 2</p>
```

```
<p id="p3" class="p3">This is the last para</p>
```

```
</body>
```

```
</html>
```

- (b) What will be the output of the following JavaScript code? Give reason. (2)

7. (a) Write the HTML code to create the table given below : (4)

A			M
C	D	E	
H	I	J	N

- (b) Design a feedback form using HTML with input fields name, email, and message. Using jQuery, validate the form to check that all fields are filled before submission. Display a suitable error message next to the fields left blank. Print a success message if all fields are filled. (5)
- (c) Write HTML code to create a web page showing a recipe as shown below. Using all three types of list elements. (6)

1. Ingredients

- 1 fresh lemon
- 1 cup of cold water
- 1 tablespoon sugar (optional)
- Ice cubes (optional)

2. Cooking Steps

- Cut the lemon in half and squeeze out the juice into a glass.

6. (a) What is a sitemap? Briefly describe any two website structures. (5)

(b) Design a web form with a paragraph and drop-down list that lets the user choose a font style for the paragraph. The available options in drop-down are :

Arial, Times New Roman, and Courier New. Write JavaScript code to apply the font selected by the user to the paragraph. (5)

(c) Create an HTML page that includes a navigation bar with an unordered list of links. Use internal CSS to do the following : (5)

- Apply a border to the navigation bar using the ID selector.
- Use the element selector to remove the bullet point from the list.
- Style the hyperlinks inside the list items to have a hover effect.
- Use a combined selector to apply a common style to both and <a> tags.

```
<script>
```

```
let x = 10;
```

```
let y = ++x + 5;
```

```
document.writeln(x + " and " + y)
```

```
</script>
```

(c) Which is more secure: Intranet or Internet? Justify your answer. (2)

(d) Which of the following HTML element is inline or block : (2)

(i) <div>

(ii)

(e) Using HTML, create a button and a <div> element. Write jQuery statements to hide the <div> element when the button is clicked. (3)

(f) How do GET and POST methods differ in web development? (3)

(g) What is the CSS box model? Explain its components. (4)

- (h) Write HTML statement to define a <div> element and using the inline CSS set the background colour, font style, and text alignment. (4)
- (i) What is the purpose of <video> tag? Write HTML code to embed a video abc/gt. mp4 in your webpage. (3)
- (j) Define a function print_even() in JavaScript to print all even numbers between 1 and 20. Write the statement to call this function. (4)

Section – B

2. (a) What is JSON? How is it different from JavaScript objects? Write the output of the code snippet given below : (4)

```
let person = {
    name: "Bob",
    age: 30,
    city: "Delhi"
};

let jsonData = JSON.stringify(person);
document.write(jsonData);
```

```
(ii) for (let i = 0; i < 5; i++)
{
    document.writeln(i)
}
```

- (b) Design a web page containing a paragraph element and a button. When the button is clicked for the first time, the paragraph should slide up and hide, and the button text should change to “Show”. When the button is clicked again, the paragraph should slide down and show, and the button text should change back to “Hide”. Write the complete HTML and jQuery code. (5)

- (c) Briefly describe DOM (Document Object Model). (2+4)

Write a JavaScript function to :

- Change the background colour of a <div> element when a button is clicked.
- Update the text of a paragraph inside the <div> to “Colour Changed!” when the background colour changes.

(c) Design an HTML page with embedded CSS to create a table with 3 rows and 2 columns with formatting as given below : (6)

- Background color of the header row is "blue".
- Header text color is "white".
- The table border color is "black" and should be "2px" thick.
- Alternate rows should have a light gray background color.

5. (a) Identify the error(s) in the code snippets given below. Give reasons. (4)

(i) var x = 10;
let y = 20;
const z = 30;

x = 40;
y = 50;
z = 60;
document.write(x, y, z);

(b) Differentiate between following : (6)

- (i) Radio button and Checkbox
- (ii) id and class attribute
- (iii) <hr> and

(c) Write the output of the following JavaScript code : (2+3)

(i) <!DOCTYPE html>

<html>

<body>

<h2>JavaScript Output Example</h2>

<p id="demo"></p>

<script>

function outer() {

let x = 5;

function inner() {

let y = 10;

document.getElementById("demo").innerHTML = x + y;

}

inner();

}

```

        outer();
    </script>

</body>

</html>

(ii) <script>
    function test()
    {
        var x = 20
        let y = 40
        const z = 30
        {
            var x = 10
            let y = 20
            const z = 100
            document.writeln(x)
            document.writeln(y+z)
        }
        document.writeln(x+y+z)
    }
    test()
</script>

```

3. (a) Explain the difference between absolute and relative URLs. Give an example for each. (4)
- (b) Write HTML and JavaScript code to design a webpage with one button and one paragraph element. When the button is clicked, the paragraph text should toggle between "Hello, World!" and "Goodbye, World!". (5)
- (c) What is an external style sheet? Mention any two advantages of using external style sheet? (3)
- (d) Define an external style sheet darkmode.css which sets background color of entire document as black, text color as white and hyperlinks in yellow color.

Write the statement to include the style sheet darkmode.css in a HTML document. (3)
4. (a) Write a jQuery function to change the text color of a heading when the mouse hovers over it. (4)
- (b) Design a webpage using HTML and JavaScript that takes a number as input from user and displays whether the number is even or odd. (5)