

ACADEMIC YEAR 2024-2025(ODD)

24IT1501- INFORMATION TECHNOLOGY ESSENTIALS

UNIT 2- QUESTION BANK

BATCH: 2024-2028 YEAR/SEM:I/I

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| **SYLLABUS**  **UNIT 2- WEB DEVELOPMENT ESSENTIALS**  **Creating a Website** - Basic structure of an HTML document - Creating an web page using HTML Tags, Lists, Tables and Frames - Working with Forms and controls - Introduction to CSS - CSS Properties Designing website - Working with Templates -Bootstrap |
| **IMPORTANT TOPICS\***  **T1. Creating basic webpage using HTML Tags**  **T2. Creating basic webpage using HTML Tables**  **T3. Working with forms and controls**  **T4. CSS**  **T5: Bootsrap** |
| CO3: Apply testing strategies to test and maintain software project.   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **CO** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO 10** | **PO 11** | **PO12** | **PSO1** | **PSO2** | | 3 | 3 | 2 |  | 2 |  |  |  |  |  | 2 |  | 3 | 2 | 3 | |
| **Course Instructor: Ms. R Shirly Myrtle, AP/IT , Mrs. .Nancy Lydia AP/IT** |

# PART – A

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| **Q.No** | **Question** | **Max. Marks** | **Topic** | **CO** | **BL** | **KC** | **PI** |
| 1. | What is the purpose of the <head> and <body> tags in HTML?  *Answer:* The <head> tag contains meta-information about the document, such as the title, character set, and links to external stylesheets or scripts. The <body> tag contains the actual content of the web page, such as text, images, links, and other elements. | 2 | T1 | 1 | K2 | C | 2.4.1 |
| 2 | |  |  | | --- | --- | | **HTML Tag** | Description | | <ul> | Creates an ordered list with numbers or letters. | | <ol> | Creates an unordered list with bullet points. | | <li> | Represents a list item within a list. |   **Correct Answer:**  A - 2: <ul> creates an unordered list with bullet points.  B - 1: <ol> creates an ordered list with numbers or letters.  C - 3: <li> represents a list item within a list. | 2 | T1 | 1 | K2 | F | 2.3.2 |
| 3. | **How do you insert an image in an HTML page?**  *Answer:* You can insert an image using the <img> tag with the src attribute. Example: <img src="image.jpg" alt="Description">. | 2 | T2 | 1 | K2 | C | 2.1.1 |
| 4. | Explain the difference between the <ul> and <ol> tags in HTML.  **Answer:** The <ul> tag is used to create an unordered list, where items are marked with bullet points. In contrast, the <ol> tag is used to create an ordered list, where items are marked with numbers or letters.  <!-- Unordered List Example -->  <ul>  <li>Apples</li>  <li>Bananas</li>  <li>Cherries</li>  </ul>  <!-- Ordered List Example -->  <ol>  <li>Apples</li>  <li>Bananas</li>  <li>Cherries</li>  </ol> | 2 | T2 | 1 | K2 | P | 2.4.4 |
| 5. | How do you link a CSS file to an HTML document?  *Answer:* You link a CSS file to an HTML document using the <link> tag in the <head> section of the HTML file. Example:  <link rel="stylesheet" href="styles.css"> | 2 | T3 | 1 | K2 | C | 3.1.2 |
| 6. | **What is the difference between padding and margin in CSS?**  *Answer:* Padding is the space between the content and the border of an element, while margin is the space outside the border, between the element and other elements. | 2 | T4 | 1 | K2 | F | 2.4.4 |
| 7. | Match the Following    **Correct Answer:**  A - 3: margin determines the space outside the element, separating it from other elements.  B - 1: padding controls the space inside the element, between the content and its border.  C - 4: border sets the style, width, and color around an element.  D - 2: font-family specifies the font style, color, and size of the text within an element. | 2 | T5 | 1 | K2 | C | 4.1.2 |

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| 8 | How do you center text using CSS?  **Ans**  You can center text using the text-align property with the value center..  p {  text-align: center;  } | 2 | T5 | 1 | K2 | C | 3.4.1 |

**PART – B**

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| **Q.No** | | **Question** | **Max. Marks** | **Topic** | **CO** | **BL** | **KC** | **PI** |
| 1. |  | You are designing a web page for a recipe blog. Create a structure using HTML to display a recipe with the following details: Ingredients (unordered list) and Steps (ordered list). Ensure that the steps are properly numbered.  **Ans:**  <h2>Recipe: Chocolate Cake</h2>  <h3>Ingredients:</h3>  <ul>  <li>2 cups of flour</li>  <li>1 cup of sugar</li>  <li>1/2 cup of cocoa powder</li>  <li>1 cup of milk</li>  </ul>  <h3>Steps:</h3>  <ol>  <li>Preheat the oven to 350°F (175°C).</li>  <li>Mix all the dry ingredients together.</li>  <li>Gradually add milk and stir well.</li>  <li>Bake for 30 minutes.</li>  </ol>  **Explanation:**  <h2> and <h3> Tags:   * + <h2> is used to create the main heading "Recipe: Chocolate Cake."   + <h3> is used for subheadings "Ingredients" and "Steps" to structure the content.   Unordered List (<ul>) for Ingredients:   * + The <ul> tag creates an unordered list for the ingredients.   + Each ingredient is listed using the <li> tag, which stands for "list item."   + Unordered lists are typically used when the order of items does not matter (like a list of ingredients).   Ordered List (<ol>) for Steps:   * + The <ol> tag creates an ordered list for the steps to make the chocolate cake.   + Each step is also created using the <li> tag.   + Ordered lists are used when the sequence is important, which is the case with the steps to follow in a recipe | 13 | T1 | 1 | K3 | P | 2.2.4 |
| 2. |  | Imagine you are creating a webpage to showcase a school timetable. Design a table that displays the timetable for each day of the week, with subjects listed in different time slots. How would you use table tags effectively to structure the data?  Ans:  . <table border="1">  <tr>  <th>Day</th>  <th>9 AM - 10 AM</th>  <th>10 AM - 11 AM</th>  <th>11 AM - 12 PM</th>  </tr>  <tr>  <td>Monday</td>  <td>Math</td>  <td>Science</td>  <td>History</td>  </tr>  <tr>  <td>Tuesday</td>  <td>English</td>  <td>Math</td>  <td>Geography</td>  </tr>  </table>  **Table Explanation:**   * **<table> Tag**: Creates a table. The border="1" attribute adds a visible border around the table. * **Table Headers**:   + **<tr>**: Defines a table row.   + **<th>**: Defines a table header, with text that is bold and centered. Headers include:     - "Day"     - "9 AM - 10 AM"     - "10 AM - 11 AM"     - "11 AM - 12 PM" * **Table Data**:   + Each subsequent <tr> holds data for a day.   + **<td>**: Represents table data. For example:     - **Monday**: "Math," "Science," "History."     - **Tuesday**: "English," "Math," "Geography."   **Visual Example:**   | **Day** | **9 AM - 10 AM** | **10 AM - 11 AM** | **11 AM - 12 PM** | | --- | --- | --- | --- | | Monday | Math | Science | History | | Tuesday | English | Math | Geography | | 13 | T1 | 1 | K | P | 3.1.2 |

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| 3 |  | A company wants to create an online job application form that collects the applicant's name, email, phone number, position applied for, and resume (file upload). Design the form using appropriate HTML tags and input controls.  Ans:  <form action="/submit\_application" method="post">  <label for="name">Name:</label>  <input type="text" id="name" name="name" required><br><br>  <label for="email">Email:</label>  <input type="email" id="email" name="email" required><br><br>  <label for="phone">Phone Number:</label>  <input type="tel" id="phone" name="phone" required><br><br>  <label for="position">Position Applied For:</label>  <input type="text" id="position" name="position" required><br><br>  <label for="resume">Upload Resume:</label>  <input type="file" id="resume" name="resume" required><br><br>  <input type="submit" value="Submit Application">  </form>  Explanation   **<form> Tag**: Starts the form. The action is where the data is sent when submitted, and method="post" is used to send the data securely.   **Input Fields**:   * **Name**: Text input for the user’s name. * **Email**: Email input ensuring a valid email format. * **Phone Number**: Telephone input for the user’s phone number. * **Position**: Text input for the job position being applied for. * **Resume**: File input to upload the user’s resume.    **Submit Button**: The button to submit the application. | 13 | T2 | 1 | K3 | P | 2.2.3 |
| 4. | i) | You need to create a simple HTML page with a heading, a paragraph, and a link to another webpage. Write the HTML code to achieve this.  Ans:  <!DOCTYPE html>  <html>  <head>  <title>My Web Page</title>  </head>  <body>  <h1>Welcome to My Web Page</h1>  <p>This is a paragraph of text on my webpage.</p>  <a href="https://www.example.com">Visit Example</a>  </body>  </html>  **Explanation:**   1. **<!DOCTYPE html>**: Declares the document type and version of HTML being used (HTML5). 2. **<html> Tag**: Marks the beginning of the HTML document. 3. **<head> Section**:    * **<title>**: Sets the title of the webpage that appears in the browser tab ("My Web Page"). 4. **<body> Section**: Contains the content displayed on the webpage:    * **<h1>**: A top-level heading that displays "Welcome to My Web Page."    * **<p>**: A paragraph element that contains text: "This is a paragraph of text on my webpage."    * **<a>**: A hyperlink that links to "<https://www.example.com>" with the clickable text "Visit Example." | 9 | T2 | 1 | K3 | P | 3.6.2 |
|  | ii) | You need to display a list of items in HTML with the following details: "Apples," "Bananas," and "Cherries." Write the code for both ordered and unordered lists  Ans:  <h3>Unordered List</h3>  <ul>  <li>Apples</li>  <li>Bananas</li>  <li>Cherries</li>  </ul>  <h3>Ordered List</h3>  <ol>  <li>Apples</li>  <li>Bananas</li>  <li>Cherries</li>  </ol>  **Explanation:**   * **<h3> Tags**: Define headings for the lists ("Unordered List" and "Ordered List"). * **Unordered List (<ul>)**:   + Displays items with bullet points.   + Items: Apples, Bananas, Cherries. * **Ordered List (<ol>)**:   + Displays items with numbers.   + Items: Apples, Bananas, Cherries. | 4 | T2 | 1 | K3 | P | 2.5.2 |

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| 5 | i) | You are asked to create a registration form that includes fields for first name, last name, email address, and a submit button. Write the HTML code for this form.  Ans:  <!DOCTYPE html>  <html>  <head>  <title>Registration Form</title>  </head>  <body>  <h2>Registration Form</h2>  <form action="#" method="post">  <label for="firstName">First Name:</label>  <input type="text" id="firstName" name="firstName" required><br><br>  <label for="lastName">Last Name:</label>  <input type="text" id="lastName" name="lastName" required><br><br>  <label for="email">Email Address:</label>  <input type="email" id="email" name="email" required><br><br>  <input type="submit" value="Register">  </form>  </body>  </html>  **Explanation:**   * The <form> element is used to create a form on the web page. * The action attribute specifies where the form data should be sent upon submission. * The method attribute (post) indicates the type of request when submitting the form. * The <label> elements are used to provide descriptions for the form fields. * The input elements with types text and email create fields for user data entry. * The required attribute ensures that the user cannot submit the form without filling out these fields. * The submit button allows the user to submit the form. | 13 | T3 | 2 | K3 | P | 2.3.1 |
| 6 |  | Write the CSS code to center a div with a class of content-box both vertically and horizontally on the page, and set its width to 60% with a shadow effect.  Ans:  .content-box {  width: 60%;  margin: auto;  position: absolute;  top: 50%;  left: 50%;  transform: translate(-50%, -50%);  box-shadow: 0 0 10px rgba(0, 0, 0, 0.5);  padding: 20px;  background-color: white;  }  Explanation  This CSS code styles an element with the class .content-box to center it on the page and give it a visually appealing look:   * **width: 60%;**: Sets the width of the element to 60% of its containing element. * **margin: auto;**: Centers the element horizontally within its parent container. * **position: absolute;**: Positions the element relative to its nearest positioned ancestor, allowing for precise placement. * **top: 50%; and left: 50%;**: Positions the element's top-left corner at the center of the parent container. * **transform: translate(-50%, -50%);**: Offsets the element's position by 50% of its own width and height, effectively centering it both vertically and horizontally. * **box-shadow: 0 0 10px rgba(0, 0, 0, 0.5);**: Applies a shadow effect around the element for depth. * **padding: 20px;**: Adds 20 pixels of space inside the element, creating space between the content and the borders. * **background-color: white;**: Sets the background color of the element to white | 13 | T4 | 1 | K2 | P | 4.1.1 |
| 7 |  | Using Bootstrap, create a responsive grid layout with three columns in a row for large screens, but stack the columns vertically on smaller screens.  <div class="container">  <div class="row">  <div class="col-lg-4 col-md-6 col-sm-12">  <p>Column 1</p>  </div>  <div class="col-lg-4 col-md-6 col-sm-12">  <p>Column 2</p>  </div>  <div class="col-lg-4 col-md-6 col-sm-12">  <p>Column 3</p>  </div>  </div>  </div>  Explanation  This HTML code creates a responsive layout using Bootstrap's grid system.   * **<div class="container">**: This class wraps the content in a responsive fixed-width container. * **<div class="row">**: This class defines a horizontal group of columns, ensuring they align properly. * **<div class="col-lg-4 col-md-6 col-sm-12">**: Each column uses Bootstrap's grid classes:   + **col-lg-4**: On large screens (≥ 992px), each column takes up 4 out of 12 grid spaces (1/3 of the row).   + **col-md-6**: On medium screens (≥ 768px), each column takes up 6 out of 12 grid spaces (1/2 of the row).   + **col-sm-12**: On small screens (< 768px), each column takes up the full width (12 out of 12 grid spaces). * **<p>**: Each column contains a paragraph element that displays the text "Column 1", "Column 2", and "Column 3", respectively. | 13 | T5 | 1 | K3 | P | 3.1.6 |
| 8 |  | You want to create a button that changes its color to green when the user hovers over it. How would you achieve this using CSS?  .hover-button {  background-color: blue;  color: white;  padding: 10px 20px;  border: none;  cursor: pointer;  }  .hover-button:hover {  background-color: green;  }  Explanation   **Base Styles**:   * **background-color: blue;**: Sets the initial background color of the button to blue. * **color: white;**: Sets the text color to white. * **padding: 10px 20px;**: Adds padding of 10 pixels vertically and 20 pixels horizontally for spacing. * **border: none;**: Removes any default border from the button. * **cursor: pointer;**: Changes the cursor to a pointer when hovering over the button, indicating it’s clickable.    **Hover Effect**:   * **.hover-button:hover**: When the button is hovered over, the background color changes to green. | 13 | T5 | 1 | K4 | P | 3.1.6 |

# PART – C

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| **Q.No** | | **Question** | **Max. Marks** | **Topic** | **CO** | **BL** | **KC** | **PI** |
| 1 |  | Create an HTML table to display a list of three students with their names, roll numbers, and grades. Write the HTML code for this table.  <!DOCTYPE html>  <html>  <head>  <title>Student List</title>  </head>  <body>  <h2>Student List</h2>  <table border="1">  <tr>  <th>Roll Number</th>  <th>Name</th>  <th>Grade</th>  </tr>  <tr>  <td>101</td>  <td>John Doe</td>  <td>A</td>  </tr>  <tr>  <td>102</td>  <td>Jane Smith</td>  <td>B</td>  </tr>  <tr>  <td>103</td>  <td>David Johnson</td>  <td>A+</td>  </tr>  </table>  </body>  </html>  **Explanation:**   * The <table> element is used to create the table. * The border attribute is used to set the border of the table. * <tr> defines a table row. * <th> is used for table headers, and <td> is used for table data cells. * This structure clearly organizes student data into rows and columns. | 15 | T1 | 1 | K3 | P | 2.7.1 |
| 2 |  | Discuss the concept of CSS (Cascading Style Sheets), its types, and the CSS Box Model. Include examples to illustrate how CSS can be used to style HTML elements effectively.  Cascading Style Sheets (CSS) is a stylesheet language designed for describing the presentation of a document written in HTML or XML. It enables developers to separate content from design, allowing for greater flexibility and control over the layout, colors, fonts, and overall appearance of web pages. By using CSS, developers can ensure that web pages are visually appealing and consistent across different devices and screen sizes.  **Types of CSS** There are three main ways to apply CSS to HTML:  **Inline CSS**: Inline CSS is applied directly within an HTML element using the style attribute. It affects only that specific element.  **Example**  <h1 style="color: blue; text-align: center;">Welcome to My Web Page</h1>  **Internal CSS**: Internal CSS is defined within a <style> tag in the <head> section of an HTML document. It applies styles to elements throughout the entire document.  **Example**:  <head>  <style>  body {  background-color: lightgray;  }  p {  font-size: 16px;  color: darkgreen;  }  </style>  </head>  **External CSS**: External CSS is defined in a separate .css file, which is linked to the HTML document using the <link> tag. This method promotes reusability across multiple HTML pages.  **Example**:  <head>  <link rel="stylesheet" type="text/css" href="styles.css">  </head>  **CSS Box Model** The CSS Box Model is a fundamental concept that describes the structure of HTML elements as rectangular boxes. Each box consists of four components:   1. **Content**: The innermost area where the actual content (text, images) is displayed. 2. **Padding**: The space between the content and the border. Padding creates breathing room around the content. 3. **Border**: A line that wraps around the padding (if any) and content. Borders can have different styles, widths, and colors. 4. **Margin**: The outermost space that separates the element from other elements. It creates distance between boxes.   **Example**:  .box {  width: 300px; /\* Content width \*/  padding: 20px; /\* Padding around content \*/  border: 5px solid black; /\* Border around padding \*/  margin: 10px; /\* Margin outside border \*/  } | 15 | T2 | 1 | K2 | C | 2.7.1 |

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| **Topic** | **Part A** | | **Part B** | | **Part C** | |
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| **T1. Creating basic webpage using HTML Tags** | 2 | 4 | 2 | 26 | 1 | 13 |
| **T2. Creating basic webpage using HTML Tables** | 2 | 4 | 2 | 26 | 1 | 15 |
| **T3. Working with forms and controls** | 1 | 2 | 1 | 13 |  |  |
| **T4. CSS** | 1 | 2 | 1 | 13 |  |  |
| **T5: Bootsrap** | 2 | 4 | 2 | 26 |  |  |
| **TOTAL** | **10** | **16** | **8** | **104** | **2** | **30** |