

Group B (Short Answer Questions)

1. Define web technology with its importance in web design.

Web technology refers to the tools and techniques used to design, develop, and maintain websites and web applications.

Importance:

Helps in creating interactive and user-friendly websites.

Allows sharing of information globally.

Supports e-commerce, education, and entertainment.

2. Explain the application of HTML in different sectors.

The different sectors where HTML is applied are given below:

Web Development :

HTML is used for creating websites with the structure and content of web pages as headings, paragraphs, lists, images, link and many more.

Email Templates

HTML is used to design attractive email newsletters and marketing mails. It allows adding images, buttons, and hyperlinks for better communication.

Electronic Publications

E-books, online articles, and magazines often use HTML for layout and formatting.

Web Forms

HTML helps to create forms, registration forms, feedback forms etc for collecting user input on websites.

3. Differentiate between singular and paired tags.

Singular Tag

A singular tag does not require a closing tag.

A singular tag is written as a single tag such as `
` or ``.

A singular tag performs its function instantly, like inserting a line break or an image.

Examples of singular tags are `<hr>` and `<input>`.

Paired Tag

A paired tag always requires both an opening and a closing tag.

A paired tag is written in pair such as `<p>...</p>` or `...`.

A paired tag defines and formats the content placed between the tags.

Examples of paired tags are `<h1>Title</h1>` and `<div>Content</div>`.

4. Write the basic structure of HTML document.

```
<!DOCTYPE html><html><head>
  <title>My First Page</title></head><body>
  <h1>Hello World!</h1>
  </body>
</html>
```

5. Describe any two formatting tags with syntax.

Bold tag: `Text` → Makes text bold.

Italic tag: `<i>Text</i>` → Makes text italic.

6. What is HTML table? Describe `<table>` tag with its syntax.

An **HTML table** is a way of arranging data in rows and columns on a webpage. It is used to display information like timetables, price lists, marksheets, and structured data in tabular form.

`<table>` Tag and Its Syntax

The `<table>` tag in HTML is used to define a table. Inside it, rows are created using `<tr>` (table row), and within each row, data is placed inside `<td>` (table data) or `<th>` (table heading).

Syntax:

```
<table>
  <tr>
    <th>Heading 1</th>
    <th>Heading 2</th>
  </tr>
  <tr>
    <td>Data 1</td>
    <td>Data 2</td>
  </tr></table>
```

7. Differentiate between ordered and unordered lists in HTML.

Ordered List

An ordered list displays items in a specific sequence using numbers or letters.

It is created using the `` tag in HTML.

Each list item is written inside the `` tag and is numbered automatically.

Ordered lists are useful when the sequence or ranking of items matters.

Unordered List

An unordered list displays items without any particular order, using bullets or symbols.

It is created using the `` tag in HTML.

Each list item is written inside the `` tag and is marked with a bullet by default.

Unordered lists are useful when the sequence of items does not matter.

7. Define hyperlink in HTML and write the use of anchor tag.

A **hyperlink** is a clickable link in a webpage that allows users to navigate from one page to another, either within the same website or to an external website.

Uses:

- To link web pages within the same website.
- To link to external websites.
- To link to specific sections within a page.

Group C (Long Answer Questions)

1. Define web page? Compare and contrast between static and dynamic web page.

A **web page** is a document on the World Wide Web that is displayed in a web browser. It contains information such as text, images, videos, links, and other multimedia elements. Web pages are written using HTML and can be accessed using a URL. A collection of web pages forms a website.

Comparison and contrast between static and dynamic web page are given below:

Static Web Page	Dynamic Web Page
A static web page displays fixed content that does not change unless manually updated.	A dynamic web page displays content that can change automatically based on user interaction or database updates.
Content remains the same for all users and rarely changes.	Content can be customized for each user and changes frequently.
It does not require server-side processing and is built using only HTML.	It requires server-side processing using languages like PHP, ASP, or JavaScript.
Static pages load faster because they are simple and lightweight.	Dynamic pages may load slower due to server-side processing and database access.
Suitable for small websites like portfolios, informational sites, and personal pages.	Suitable for websites that need frequent updates or interactivity, such as e-commerce sites, social media, and news portals.
Both static and dynamic web pages are accessed through web browsers and use HTML as the base language.	Both static and dynamic web pages are accessed through web browsers and use HTML as the base language.

2. Describe the concept of UI/UX with their features.

· User Interface (UI):

UI refers to the **visual and interactive elements** of a digital product that a user interacts with. It includes the layout, buttons, icons, colors, typography, and other design elements that make the interface appealing and easy to use. The goal of UI is to **create an interface that is visually attractive, consistent, and easy to navigate**.

· Features of UI:

Visual Design: Focuses on colors, typography, images, and overall aesthetic appeal.

Consistency: Ensures that similar elements look and behave the same throughout the product.

Responsiveness: Works well on different devices like desktop, mobile, and tablets.

Interactive Elements: Includes buttons, menus, sliders, forms, and icons that allow users to perform actions.

Accessibility: Ensures that the interface is usable by people with disabilities.

· User Experience (UX):

UX refers to the **overall experience a user has while interacting** with a website, app, or software. It focuses on **ease of use, satisfaction, efficiency, and the emotional response** of the user. Good UX ensures that users can achieve their goals quickly, efficiently, and enjoyably.

· Features of UX:

Usability: The product is easy to navigate and understand.

Functionality: All features work as expected without errors or confusion.

Efficiency: Users can complete their tasks quickly and with minimum effort.

Accessibility: UX also ensures inclusivity and usability for all types of users.

User Satisfaction: The overall experience is enjoyable and encourages continued use.

3. What is wireframe? Write the simple process to create a wireframe design.

A **wireframe** is a **basic visual guide** that represents the structure and layout of a web page or application. It focuses on **placement of elements** such as headers, images, menus, buttons, and content sections without worrying about colors, graphics, or detailed design. Wireframes are used to plan and communicate the design concept before creating the actual user interface.

Wireframes help designers, developers, and clients **visualize the layout, user flow, and functionality** of a website or app in a simple and clear way. They save time by allowing changes at the early design stage.

Simple Process to Create a Wireframe Design

Understand Requirements: Gather all necessary information about the website or app, including its goals, target users, and features needed.

Sketch Layout: Create rough sketches on paper or digitally, showing the placement of elements like headers, menus, content areas, and footers.

Add Elements: Include key interface components such as buttons, forms, images, and links in the layout.

Define Structure and Flow: Organize the elements logically to show how users will navigate through the site or app.

Review and Refine: Get feedback from stakeholders and make adjustments to improve usability and functionality before moving to the detailed design stage.

4. What is HTML? Describe its merits and demerits in web development.

HTML (Hypertext Markup Language) is the standard language used to create web pages. It provides the structure and content of a website using tags like headings, paragraphs, links, and images.

Merits of HTML

HTML is simple and easy to learn for beginners.

It works on all browsers and operating systems.

HTML allows embedding images, audio, and video in web pages.

Demerits of HTML

HTML alone cannot create interactive or dynamic features.

HTML pages are static and need other languages for dynamic content.

HTML does not provide security features for websites

5. Define HTML tags. Explain the general rules and guidelines while writing tags and attributes with examples.

An **HTML tag** is a code element used to define and structure content on a web page. Tags are usually written in **pairs**: an opening tag and a closing tag, like `<p>` and `</p>`. Some tags are **singular** and do not need a closing tag, like `
`.

General Rules and Guidelines

Tags must be enclosed in angle brackets `< >` and paired tags should match exactly.

Tags should be properly nested; inner tags must close before outer tags.

Attributes give extra information about tags and should be written inside the opening tag with values in quotes.

Tag and attribute names should not contain spaces, and using lowercase is recommended for consistency.