Q1. List out the features of HTML?
ans.HTML (Hypertext Markup Language) is the standard markup language for creating web pages. It provides the structure and content of a webpage. Here are some of the key features of HTML

1. Structural Elements HTML provides a variety of structural elements to define the overall structure of a webpage, including headings, paragraphs, lists, tables, and more.

2. Hyperlinks HTML allows the creation of hyperlinks that enable navigation between different web pages. Hyperlinks are defined using the `<a>` (anchor) element.

3. Images and MultimediaHTML supports the inclusion of images, videos, audio files, and other multimedia elements on a webpage. The `<img>`, `<video>`, and `<audio>` elements are used for embedding multimedia content.

4. Scripting Support HTML supports the inclusion of client-side scripts, primarily JavaScript, which enables interactivity and dynamic behavior on web pages. Scripting can be used for form validation, DOM manipulation, and other interactive features.

5. MetadataHTML includes elements to define metadata about a webpage, such as the title, author, description, and keywords. These metadata elements are crucial for search engine optimization (SEO) and social sharing.
6. Accessibility HTML incorporates features to enhance web accessibility, allowing people with disabilities to access and navigate web content effectively. Semantic elements, alt attributes for images, and other accessibility features aid in creating inclusive web experiences.

7. Cross-Browser Compatibility HTML is designed to be compatible with various web browsers, ensuring that web pages can be viewed consistently across different platforms and devices.

These are some of the key features of HTML that make it a versatile and essential language for building web pages and applications.

Q2.What are HTML Entities? List out 5 commonly used HTML entities?

Ans.HTML entities are special characters that are represented by their entity name or entity number instead of the actual character itself. They are used to display reserved characters or characters that have a special meaning in HTML. Here are five commonly used HTML entities:

1. `&lt;` - Entity for less than symbol (<): This entity is used to display the less than symbol without it being interpreted as an opening tag.

2. `&gt;` - Entity for greater than symbol (>): This entity is used to display the greater than symbol without it being interpreted as a closing tag.

3. `&amp;` - Entity for ampersand (&): This entity is used to display the ampersand symbol without it being interpreted as the start of an entity.

4. `&quot;` - Entity for double quotation mark ("): This entity is used to display double quotation marks without interfering with attribute values enclosed in double quotes.

5. `&copy;` - Entity for copyright symbol (©): This entity is used to display the copyright symbol.

These entities are just a few examples of the many HTML entities available. They are essential for displaying reserved characters correctly and ensuring proper rendering of HTML documents.

Q3.What is web accessibility? List some of the assistive devices which play a major role in providing accessibility?
Ans.Web accessibility refers to the practice of designing and developing websites and web content in a way that makes them usable and accessible to people with disabilities. It aims to ensure that individuals with diverse abilities, including visual, auditory, cognitive, and motor impairments, can perceive, understand, navigate, and interact with web content effectively. Web accessibility promotes inclusivity, equal access to information, and a better user experience for all users.

Here are some assistive devices and technologies that play a major role in providing web accessibility:

Screen Readers: Screen readers are software applications that read aloud the content of a web page to individuals who are blind or have low vision. They convert text and other elements into synthesized speech or Braille output. Examples of screen readers include JAWS, NVDA (NonVisual Desktop Access), and VoiceOver.

Screen Magnifiers: Screen magnifiers help users with low vision by enlarging the content displayed on the screen. They make it easier for individuals with visual impairments to read and interact with web pages.

Q4.List any 3 ways which help us in improving the accessibility of HTML?

Ans.Improving the accessibility of HTML involves making web content more inclusive and usable for individuals with disabilities. Here are three ways to enhance the accessibility of HTML:

Use Semantic HTML: Semantic HTML involves using appropriate HTML elements to convey the meaning and structure of the content. By utilizing semantic elements such as <header>, <nav>, <main>, <article>, <section>, and <footer>, you provide clear and organized structure to your webpage. This helps individuals using assistive technologies to navigate and understand the content more easily.

Provide Alternative Text for Images: Images play a vital role in web content, but they need alternative text (alt text) to ensure accessibility. Alt text provides a textual description of the image, which is read by screen readers or displayed in place of the image when it cannot be loaded. Adding descriptive alt text allows individuals with visual impairments to understand the content and context of the images.

Q5. Write a short note on the tab index?

Ans.The tabindex attribute in HTML is used to control the order in which elements receive focus when navigating through a webpage using the keyboard. It specifies the tabbing order of interactive elements and allows users to navigate through them using the "Tab" key.

Here are a few key points to note about the tabindex attribute:

Tab Order: By default, when users press the "Tab" key on their keyboard, focus moves through the interactive elements in the order they appear in the HTML source code. The tabindex attribute allows you to customize this order and control which elements receive focus first.

Values: The tabindex attribute accepts numerical values and can be set on any focusable element, such as links (<a>), buttons (<button>), form elements (<input>, <select>, <textarea>), and other interactive elements. The value of tabindex determines the order in which elements are focused. Elements with a lower tabindex value are focused first, followed by elements with higher values.

It's important to use the tabindex attribute judiciously to maintain a logical and predictable focus order. It is recommended to follow the natural order of elements in the HTML source code whenever possible and avoid modifying the tab order unnecessarily. Keeping the tab order consistent with the visual layout of the webpage helps improve the usability and accessibility of keyboard navigation

Q6.List any 5 semantic tags in HTML along with their descriptions?

Ans.Semantic tags in HTML are elements that provide meaning and structure to the content within a webpage. They help both humans and machines understand the purpose and relationship of different sections within the document. Here are five commonly used semantic tags in HTML along with their descriptions

1. `<header>`: The `<header>` element represents the introductory content or a container for the header section of a webpage. It typically includes the site logo, site title, navigation menus, and other introductory elements. The `<header>` tag is usually placed at the top of the page or within specific sections.

2. `<nav>`: The `<nav>` element represents a section of a webpage that contains navigation links. It is used to define a block of navigation links that allows users to move between different pages or sections within the website. The `<nav>` tag is often placed within the `<header>` element.

3. `<main>`: The `<main>` element represents the main content of a webpage. It is used to encapsulate the primary content that is unique to the document, such as articles, blog posts, or the central focus of the webpage. There should typically be only one `<main>` element per page.

4. `<section>`: The `<section>` element represents a standalone section of a webpage that is thematically related. It groups together content that forms a cohesive unit within the document. `<section>` can be used for articles, chapters, or any other content that needs to be logically organized within the page.

5. `<footer>`: The `<footer>` element represents the footer section of a webpage. It typically contains information such as copyright notices, contact details, related links, or acknowledgments. The `<footer>` tag is commonly placed at the bottom of the page or within specific sections.

These semantic tags provide structural meaning to the content, making it easier to understand and navigate for both users and assistive technologies. By using these elements appropriately, you can improve the accessibility, maintainability, and search engine optimization of your HTML documents.

Q.7 What are the benefits of using semantic tags in our webpage?

Ans.Using semantic tags in web pages offers several benefits:

1. **Accessibility**: Semantic tags provide meaning and structure to the content, which aids in accessibility. Assistive technologies, such as screen readers, rely on the semantic structure to navigate and present the content to users with disabilities. Semantic tags help improve the accessibility and usability of webpages, making them more inclusive for all users.

2. **Search Engine Optimization (SEO)**: Search engines rely on understanding the structure and context of web content to provide relevant search results. Semantic tags assist search engines in better understanding the content and its organization. By using semantic tags appropriately, you can improve the search engine visibility and ranking of your webpage.

3. **Code Maintainability**: Semantic tags enhance code maintainability. They provide a clear structure to the HTML code, making it easier for developers to read and understand the document's layout and purpose. Semantic tags also enable better collaboration among developers, as the purpose and organization of the webpage are communicated more effectively.

4. **Future Compatibility**: Semantic tags are designed to be forward-compatible. They provide a standardized way of describing the purpose and structure of content, ensuring that your webpage remains compatible with future web standards and technologies. Using semantic tags helps future-proof your code and reduces the need for major structural changes when adopting new technologies or standards.

5. **Content Reusability**: Semantic tags make it easier to reuse and repurpose content across different webpages or platforms. By structuring the content using semantic tags, you separate the ontent from its presentation, making it more adaptable and flexible for different contexts. This can

save time and effort when creating variations of the same content or when repurposing content for different devices or platforms.

Overall, using semantic tags brings clarity, accessibility, and maintainability to your webpages. It improves the user experience, search engine visibility, and future compatibility of your code, making it a valuable practice in web development.