Answer: 1

1. Semantic Elements: HTML5 introduced new semantic elements such as `<header>`, `<footer>`, `<nav>`, `<section>`, `<article>`, `<aside>`, `<main>`, and more. These elements provide a clearer structure and meaning to the content, making it easier for search engines and assistive technologies to understand the page.

2. Audio and Video Support: HTML5 includes native support for embedding audio and video content without the need for third-party plugins like Flash. It introduced the `<audio>` and `<video>` elements, allowing developers to include media directly in their web pages.

3. Canvas: HTML5 introduced the `<canvas>` element, which provides a drawing API for dynamically rendering graphics, charts, animations, and other visual elements using JavaScript. It enables developers to create interactive and visually rich content within the browser.

4. Geolocation: HTML5 added the Geolocation API, allowing web applications to access the user's geographical location information. This feature enables location-based services, mapping applications, and other location-aware functionality.

5. Offline Web Applications: HTML5 introduced the concept of offline web applications using the Application Cache API. Developers can define a list of resources that should be cached by the browser, allowing the application to continue functioning even when the user is offline.

6. Web Storage: HTML5 provides two new mechanisms for client-side data storage: localStorage and sessionStorage. These APIs allow developers to store data locally on the user's browser, providing a more persistent and efficient alternative to cookies.

7. Web Workers: HTML5 introduced the Web Workers API, which enables multi-threading in web applications. Web Workers allow developers to run scripts in the background, separate from the main execution thread, improving performance and responsiveness.

8. Drag and Drop: HTML5 includes built-in support for drag and drop interactions. Developers can use the Drag and Drop API to create intuitive interfaces that allow users to drag elements and drop them onto designated targets.

9. Form Enhancements: HTML5 introduced several enhancements to form elements and input types. It introduced new input types like email, url, number, date, and range, providing better input validation and user experience. Additionally, HTML5 introduced the `<datalist>` element, which allows developers to provide a list of predefined options for an input field.

10. Improved Accessibility: HTML5 incorporates improved accessibility features, including better support for screen readers and assistive technologies. The introduction of semantic elements and ARIA (Accessible Rich Internet Applications) attributes makes it easier to create accessible web content.

Answer: 2

HTML entities are special characters that are represented by a specific code or name in HTML to ensure proper rendering and encoding of characters that have special meaning in HTML syntax. These entities are used to display characters that are not typically supported or directly representable in HTML.

Here are five commonly used HTML entities:

1. `&amp;` - Represents the ampersand character (&). It is used to display an ampersand in HTML without it being interpreted as the start of an entity.

2. `&lt;` - Represents the less-than symbol (<). It is used to display a less-than symbol in HTML without it being interpreted as the opening tag of an element.

3. `&gt;` - Represents the greater-than symbol (>). It is used to display a greater-than symbol in HTML without it being interpreted as the closing tag of an element.

4. `&quot;` - Represents the double quotation mark ("). It is used to display a double quotation mark in HTML without it interfering with attribute values that are wrapped in double quotes.

5. `&copy;` - Represents the copyright symbol (©). It is used to display the copyright symbol in HTML.

Answer: 3:

Web accessibility refers to the inclusive practice of designing and developing websites, web applications, and digital content in a way that ensures people with disabilities can perceive, understand, navigate, and interact with them effectively. It aims to remove barriers and provide equal access and opportunities to individuals with disabilities.

Assistive devices play a crucial role in providing accessibility to individuals with disabilities. Some major assistive devices used in web accessibility include:

1. **Screen Readers**: Software applications that read out the content of a web page or application to individuals with visual impairments. They convert text into synthesised speech or braille output.

2. **Screen Magnifiers**: Software or hardware solutions that enlarge the content displayed on the screen, making it easier for people with visual impairments to read.

3. **Braille Displays**: These devices provide tactile output by displaying braille characters, allowing people with visual impairments to read the content displayed on the screen.

4. **Alternative Input Devices**: These include devices such as joysticks, trackballs, mouth sticks, or eye-tracking systems, which enable individuals with motor impairments to interact with web content effectively.

5. **Keyboard Accessibility**: Ensuring that web content can be navigated and interacted with using a keyboard alone is crucial for individuals who cannot use a mouse or other pointing devices.

6. **Captions and Transcripts**: Providing synchronised captions or transcripts for multimedia content, such as videos and audio recordings, allows individuals with hearing impairments to understand the information presented.

7. **Text-to-Speech (TTS) Software**: TTS software converts text into synthesised speech, aiding individuals with reading difficulties or visual impairments in consuming written content.

8. **Voice Recognition Software**: Voice recognition software enables individuals with mobility impairments or those who have difficulty using a keyboard to navigate websites and interact with content using voice commands.

Answer: 4:

Certainly! Here are three ways to improve the accessibility of HTML:

1. Use Semantic HTML

2. Provide Alternative Text for Images

3. Use Proper Form Markup

Additionally, make sure to provide clear and concise instructions for form completion and consider using additional form attributes, such as `placeholder` and `autocomplete`, to further enhance accessibility.

By following these practices, you can significantly improve the accessibility of HTML content and enhance the overall user experience for individuals with disabilities.

Answer: 5:

The **`tabindex`** attribute in HTML is used to control the tabbing order of elements on a web page. When users navigate through a web page using the keyboard, they typically use the Tab key to move focus from one interactive element to another, such as links, form fields, or buttons. The `tabindex` attribute allows you to customise and modify the default tab order to meet specific accessibility requirements.

Answer: 6:

1. `<header>`:

- **Description:** Represents the introductory content or a container for a set of navigational links at the beginning of a document or section.

2. `<nav>`:

- **Description:** Represents a section of a page that contains navigation links allowing users to navigate within the website or to different parts of the document.

3. `<main>`:

- **Description:** Represents the main content of a document or the primary content within a `<body>` element.

4. `<article>`:

- **Description:** Represents a self-contained composition, such as a blog post, news article, or forum post.

5. `<footer>`:

- **Description:** Represents the footer of a document or a section, typically containing information about the author, copyright notice, links to related documents, or contact details.

Answer: 7:

Semantic tags enhance accessibility, improve search engine visibility, facilitate code maintainability, support future compatibility, promote standardisation, aid in responsive design, and foster effective collaboration.

By leveraging semantic HTML, you can create webpages that are more inclusive, user-friendly, and easily maintainable in the long run.