**Q.2 Explain Semantic tags in html? And why do we need it?**

**Ans:-** Semantic tags in HTML are elements that carry meaning or define the structure and purpose of the content within the tags. These tags provide a way to describe the significance of different parts of a web page, making it easier for search engines, assistive technologies, and developers to understand the content and its context.

Here are some commonly used semantic tags in HTML5:

1. `<header>`: Represents the introductory content or a container for the site's header.
2. `<nav>`: Defines a section for navigation links.
3. `<main>`: Indicates the main content area of the document.
4. `<article>`: Represents a self-contained composition or a discrete piece of content, such as a blog post or news article.
5. `<section>`: Defines a thematic grouping of content.
6. `<aside>`: Represents content that is tangentially related to the main content, such as sidebars or callout boxes.
7. `<footer>`: Represents the footer of a document or a section.
8. `<figure>` and `<figcaption>`: Used together to associate a caption with an image or graphical content.
9. `<time>`: Represents a specific date, time, or duration.

Semantic tags are important for several reasons:

1. **Accessibility**: Semantic tags enhance the accessibility of web content by providing clear structural information. Assistive technologies, such as screen readers, can better interpret and present the content to users with disabilities.

2. **Search Engine Optimization (SEO)**: Semantic tags help search engines understand the meaning and context of the content, improving the visibility and ranking of web pages in search results.

3. **Code Maintenance and Readability**: Semantic tags improve the readability and maintainability of HTML code by providing a logical structure. It makes the code easier to understand for developers, facilitating collaboration and future updates.

4. **Future Compatibility**: Semantic tags are designed to be forward-compatible, meaning they can accommodate future developments and technologies. They allow new features and functionality to be added to web pages without significant changes to the underlying structure.

Overall, semantic tags play a crucial role in creating well-structured and accessible web pages, improving search engine visibility, and ensuring compatibility with evolving web standards and technologies.