9. What are self-closing tags? Write a brief note on meta tags.

Self-closing tags, also known as void elements, are HTML tags that do not require a closing tag because they don't have any content or children elements. These tags are used to represent elements that are standalone and don't contain any nested content.

In HTML, self-closing tags are written with a trailing slash before the closing angle bracket, like this: `<tag />`. Some commonly used self-closing tags include `<br />`, `<img />`, `<input />`, `<link />`, `<meta />`, and `<hr />`.

Now let's focus on meta tags. Meta tags are HTML elements that provide metadata or additional information about an HTML document. They are placed in the head section of an HTML document and are not displayed on the web page itself but rather provide instructions or information to the browser and search engines.

Here are a few commonly used meta tags and their purposes:

1. `<meta charset="UTF-8">`: This meta tag specifies the character encoding for the HTML document. It ensures that the browser interprets and displays the text correctly.

2. `<meta name="viewport" content="width=device-width, initial-scale=1.0">`: This meta tag is used to control the viewport behavior on mobile devices. It ensures that the webpage adapts to different screen sizes and provides a responsive layout.

3. `<meta name="description" content="Description of the web page">`: This meta tag specifies a brief description of the web page's content. It is often used by search engines to display a snippet of information in search results.

4. `<meta name="keywords" content="keyword1, keyword2, keyword3">`: This meta tag allows you to specify a list of keywords or phrases related to the web page's content. Although search engines give less importance to keywords nowadays, some may still consider them for indexing purposes.

5. `<meta name="author" content="Author Name">`: This meta tag is used to specify the author of the web page.

6. `<meta http-equiv="refresh" content="5; url=http://example.com/">`: This meta tag redirects the browser to another web page after a specified time interval (in this case, 5 seconds).

Meta tags play an important role in providing information to browsers, search engines, and other web services. They help improve accessibility, SEO (Search Engine Optimization), and user experience by providing relevant information about the web page.