CSS – Assignment-16

**Q.1) Define responsive design and its importance in modern web development ?**

Responsive design is a web design approach that ensures websites adapt and display correctly on different devices and screen sizes, such as desktops, tablets, and smartphones. It involves flexible layouts, images, and CSS rules that adjust based on the user's device.

**Importance:**

* Enhances user experience by providing easy navigation and readability on all devices.
* Reduces the need for separate mobile and desktop versions of a site.
* Improves SEO rankings as search engines favor mobile-friendly websites.
* Ensures wider audience reach and accessibility.

**Q.2) Explain the role of media queries in responsive design ?**

Media queries are a CSS feature that allows developers to apply specific styles depending on the characteristics of the user's device, such as screen width, height, resolution, and orientation.

**Role:**

* Enable design changes for different screen sizes (e.g., layout shifts for mobile vs desktop).
* Allow hiding or showing elements based on device type.
* Help in adjusting font sizes, images, and navigation for better usability on smaller or larger screens.

**Q.3) Describe how viewport settings affect mobile displays ?**

The viewport setting in HTML tells the browser how to control the page's dimensions and scaling. It is usually set using the <meta> tag:

html

<meta name="viewport" content="width=device-width, initial-scale=1.0">

**Effects:**

* Ensures the page matches the device’s screen width instead of scaling down a desktop layout.
* Controls the zoom level when the page loads (initial-scale).
* Helps achieve consistent display and responsiveness across different mobile devices.