Q.1 What is a Media Query in CSS, and what is its purpose?
Ans:
A media query is an HTML/CSS functionality that allows the content of a Web page to adapt to the type of media that the page is being rendered in, such as a computer screen or that of a phone or tablet. This is considered as a core technology for implementing responsive Web design and was recommended for implementation as a standard in June of 2012 together with other CSS3 functionalities.

syntax:

```
@media screen and (min-width: 480px) {
  body {
    background-color: lightgreen;
  }
}
```

Purpose of media query :

The CSS Media Query gives you a way to apply CSS only when the browser and device environment matches a rule that you specify, for example "viewport is wider than 480 pixels". Media queries are a key part of responsive web design, as they allow you to create different layouts depending on the size of the viewport, but they can also be used to detect other things about the environment your site is running on, for example whether the user is using a touchscreen rather than a mouse. In this lesson you will first learn about the syntax used in media queries, and then move on to use them in a working example showing how a simple design might be made responsive.

Q-2: How do you define a media query in CSS?
Ans: `@media` rule, introduced in CSS2, made it possible to define different style rules for different media types.

CSS Media queries are a way to target browser by certain characteristics, features, and user preferences, then apply styles or run other code based on those things. Perhaps the most common media queries in the world are those that target particular viewport ranges and apply custom styles, which birthed the whole idea of responsive design.

```
/* When the browser is at least 600px and above */
@media screen and (min-width: 600px) {
```

```
  .element {
    /* Apply some styles */
  }
}
```

Q.3 Explain the concept of Breakpoints in Responsive Web Design and How They are used in Media Queries.

Ans:

very website is accessed via devices with different screen sizes and resolutions. The software has to render perfectly across each screen size. Content or images cannot be distorted, cut out, or obscured.

To allow this, developers have to use CSS breakpoints. These are points defined in the code. Website content responds to these points and adjusts itself to the screen size to display the accurate layout.

Since CSS breakpoints for responsive design are implemented with media queries, they are also sometimes termed media query breakpoints.

With CSS breakpoints in place, the website content will align itself with screen size and displays itself in a way that pleases the eye and facilitates visual consumption.

How They are used in Media Queries:

```
/* Extra small devices (phones, 600px and down) */
@media only screen and (max-width: 600px) {...}

/* Small devices (portrait tablets and large phones, 600px and up) */
@media only screen and (min-width: 600px) {...}

/* Medium devices (landscape tablets, 768px and up) */
@media only screen and (min-width: 768px) {...}
```

```
/* Large devices (laptops/desktops, 992px and up) */
@media only screen and (min-width: 992px) {...}

/* Extra large devices (large laptops and desktops, 1200px and up) */
@media only screen and (min-width: 1200px) {...}
```

Q.4 :What is the purpose of using Media Queries for Print Media?
Ans: Media queries to specify which CSS to use for paged media (aka printing). CSS to turn off the display of content that is not appropriate for the printed page, such as as navigation bar or page header. CSS to properly format the remaining content for print (appropriate font, colors, sizes, etc.)

Using the @media rule in your CSS allows you to target different media types, and screen sizes, from a single stylesheet. Using media queries with max-widths is integral to the current push towards responsive design. They can also be used to create your print styles using @media print. You'll notice this used on modern base templates such as the HTML5 Boilerplate. In fact, the Boilerplate has a great bunch of default print styles to start with

Q.5 What is the purpose of the orientation media feature?
Ans: The orientation CSS media feature can be used to test the orientation of the viewport (or the page box, for paged media).
Syntax
The orientation feature is specified as a keyword value chosen from the list below.
portrait
The viewport is in a portrait orientation, i.e., the height is greater than or equal to the width.

landscape

The viewport is in a landscape orientation, i.e., the width is greater than the height.

Example: code:

```
@media (orientation: landscape) {
  body {
    flex-direction: row;
  }
}

@media (orientation: portrait) {
  body {
    flex-direction: column;
  }
```