**1) What is Selenium? What are the different Selenium components? Explain about Selenium WebDriver?**

Selenium is an open-source tool that automates web browsers. Selenium has four major components – Selenium IDE, Selenium RC, Selenium Web driver, Selenium GRID.

**2) How does Selenium communicate with the Web browsers?**

To communicate between server and client (browser), selenium web driver uses JavaScript Object Notation(JSON). JSON Wire Protocol is a REST API that transfers the information between HTTP servers. Each Browser Driver has its own HTTP server.

**3.What are the locators available to find an element using Selenium?**

Selenium supports 8 different types of locators namely id, name, className, tagName**,** linkText, partialLinkText, CSS selector and xpath.

**4. Why ID is preferable than X-Path?**

ID is considered as unique key so there cannot be more than 1 elements for same ID while Xpath is created using relative path/position of elements, so there can be cases when we can get 2 or more elements for same Xpath.

**5.How to select value in dropdown?**

The value of the selected element can be found by using the value property on the selected element that defines the list. This property returns a string representing the value attribute of the <option> element in the list. If no option is selected then nothing will be returned.

**Syntax:**

selectElement.value

**6) What is the difference between Absolute Path and Relative Path?**

An absolute path is defined as specifying the location of a file or directory from the root directory(/). In other words,we can say that an absolute path is a complete path from start of actual file system from / directory.

Relative path is defined as the path related to the present working directly(pwd). It starts at your current directory and **never starts with a /.**

**8)Difference between System.setProperty and WebDriverManager?**

The setProperty() method of Java system class sets the property of the system which is indicated by a key.

WebDriverManager in Selenium, is a class that allows us to download and set the browser driver binaries without us, as developers, having to put them in automation scripts manually.

**9) Write the syntax for preceding and following x-paths?**

**Syntax for XPath**Tagname: Tagname of the particular node**.** @: Select attribute. Attribute: Attribute name of the node. Value: Value of the attribute.

**10) How to get an attribute value using Selenium WebDriver?**

getAttribute() is a method of IWebElement Interface. The IWebElement interface helps in performing all the interactions or operations on the web page elements.