Qn: Java script role in Web Development

* Adding interactivity to web pages (e.g., forms, dynamic content updates).
* Enhancing user interfaces with animations and effects.
* Communicating with servers through asynchronous requests (AJAX).
* Manipulating HTML and CSS to update the web page dynamically (DOM manipulation).

Qn: Non- browser environment that use Javascript

* Node.js for server-side programming.
* Apache CouchDB and other NoSQL databases.
* Adobe Acrobat for scripting PDF documents.
* Desktop and mobile app development using frameworks like Electron and React Native.

Qn: Javascript as a prototype- based language

* Uses prototypes to share properties and methods across objects.
* Objects can inherit directly from other objects.
* Supports dynamic object creation and inheritance.

Qn: JavaScript considered a multi-paradigm language

* Supports object-oriented programming (OOP) through prototypes and classes.
* Enables functional programming with first-class functions, closures, and higherorder functions.
* Allows imperative and declarative styles.
* Dynamic language in the context of JavaScript

Qn: Dynamic language in the context of JavaScript

* Supports dynamic typing: variables can hold values of any type.
* Functions and objects can be modified at runtime.
* Supports runtime evaluation of code (e.g., eval function).

Qn: Role of ECMAScript in defining JavaScript standards:

* ECMAScript is the standardized specification for JavaScript.
* Defines syntax, types, statements, keywords, and more.
* Ensures consistency across different JavaScript engines and environments.

Qn: Why is it mentioned that JavaScript is a single-threaded language?

* Executes code in a single thread (one operation at a time).
* Uses an event loop and asynchronous callbacks to handle concurrent operations.
* Avoids the complexity of multi-threading and potential issues like race conditions.

Qn: Imperative vs. declarative programming styles in JavaScript

* Imperative: Specifies step-by-step instructions for how to perform a task (e.g., using loops and conditional statements).
* Declarative: Describes what should be done, without specifying how (e.g., using functions like map, filter, and reduce)