What is JS?

helps to make websites interactive and dynamic. Is used for programming the behavior of web pages.

Is JS strongly or loosely typed? Its loosely typed.

What are the datatypes of JS? **Number, String, Boolean, Undefined, Null, Symbol, Object =>** collection of key-value pair where keys are string (symbols) and data can be any data type

What are the different ways to declare variables in JS? Let, const and var.

What is the difference between var and let?   
scope = let is block scoped while var is function and/ global scoped.  
Hoisting = variables are hoisted and accessed before declaration in var, in let vars are hoisted but not initialized until the actual declaration is reached  
Re-declaration = possible with var not allowed with let (with in the same scope).  
**Diff between const and let** = Mutability (let mutable while const immutable)

With let variables can be redeclared within the same block while in const its not allowed.

How is a JS script attached to an HTML file?

Inline script <script> </script> . External <script> src= ‘script.js’></script> Event handler (button onclick)

What are the scopes featured in JS? Function block and global

What is type coercion? Type Coercion refers to the process of automatic or implicit conversion of values from one data type to another.

What are truthy and falsy values? If it coerces to false a value is considered falsy and vise versa.   
“false”, “0”, “ ’ ’ ”(empty string) , null, undefined and NaN are considered falsy.

What is the difference between == and ===? == performs type coercion. === compares without coercion

What are some of the different ways to interact with Arrays in JS?

Let array = [], iterating over => let array =[] array.foreach(element=> console.log(element)  
array,push => add element to the end, array.pop remove from the end array. Unshift + to the beginning and array.shift remove from beginning. Array.indexof(0) find the element at the index array.sort etc..

What is the DOM?

* + Document Object Model
  + Tree of objects that makes up the web page - HTML elements
* How do you select something from the DOM in Javascript?

|  |  |
| --- | --- |
| document.getElementById(*id*) | Find an element by element id |
| document.getElementsByTagName(*name*) | Find elements by tag name |
| document.getElementsByClassName(*name*) | Find elements by class name |

What is bubbling and capturing?

What is the event loop in JS?

Allows asynchronous operations to be executed in a non-blocking manner.

What do async and await do in JS?  
Async is a key word used to declare an asynchronous function which returns a promise inside an async function. Await is used inside async to pause the function until a promise is resolved.

What is a callback function?  
is passed as an argument to another function and executed after some operation is completed.

What is an event listener and why do we use it?  
is a function that waits for specific event to occur and then executes a specified block of code in response.  
Event listeners => used to handle user interactions like clicking the button, submitting form etc.

What is hoisting? Where variable and function are moved to top of their containing scope during compilation. Regardless of where vars. And functions declared they are treated as if they are declared at the top of their scope.

What does ‘strict mode’ do?  
makes it easier to write "secure” JS code. Disallows the use of undeclared variables. Eliminates “this” coercion. Disallows duplicate property names or parameter values etc.

What features were introduced in ES6?  
Arrow function, let and const, default parameters, template literals, classes, modules, promises, rest and spread operators.

What are arrow functions? Are defined using => syntax const add =(a,b) => a + b ;  
useful for callbacks and short anonymous functions.

What are template literals?  
used to define strings and support interpolation (allow to embed expression inside `${}`

What are spread & rest operators?  
 spread: expands elements of an array or any iterable objects into individual elements, can be used to make a shallow copy of an array or merge multiple arrays together.   
rest: allows a function to accept indefinite number of arguments as an array.

What is a promise?

An object that represents the eventual completion(failure) of an asynchronous op and its resulting values. There are 3 states (pending, fulfilled, rejected).

What are closures?  
a condition when an inner function has access to an outer function’s variables, even after the outer function has finished executing.