Q:1 what are the scopes of variable in javascript?

⇒ The scope of a variable is the region of your program in which it is defined. Javascript variable have only two scopes.

- Global variable : A global variable has global scope which means it can be defined anywhere in your java script code.

- Local variable : A local variable will be visible only within a function where it is defined.

Q:2 what is callback?

⇒ A javascript callback is a function which is to be executed after another function has finished execution.

Q:3 what is closure? Give an example.

⇒ closure can capture variables in block scopes and module scopes as well.

⇒ ex: the following creates a closure over block-scoped variable y:

```
const x = 5;
if (Math. random() > 0.5)
```

⇒ ex:

```
const add = (function() {
    let counter = 0;
    return function() {counter += 1; return
    counter}
})();
```

Q:4 what is difference between call and apply?
⟹ The call() Method takes arguments seperately.
- The apply() Method takes arguments as an array.
- The apply() method is very handy if you want to b use an array instead of an argument list.

Module: 2

Q:1 what is Node.js? where can you use it?
⟹ Node.js is a popular programming environment that can be used for building high-scale applications that need to support multiple concurrent requests.
⟹ Node.js is commonly used develop real-time applications.

Q:2 Explain callback in Node.js.
⟹ callback are a special type of function passed as an argument to another function.
⟹ They are called when the function that contains the callback as an argument completes its execution, and allow the code in the callback to run in the meantime.

Q:3 What are the advantages of using promises insted of callbacks?

⇒ They are composable, unlike callbacks, therefore we can avoid callback hells.

⇒ You can easily execute code with promise...

⇒ You can wait for only one result from concurrent pending promises with the help of promises.

⇒ You can write asynchronous code in a synchronous manner if you use it in conjunction with.

Q:4 What are the modules in Node.js? Explain.

⇒ Modules are the blocks of encapsulated code that communicate with an external application on the basis of their related functionality.

⇒ Modules can be a single file or a collection of multiple files / folders.