

# ASSIGNMENT QUESTIONS

1) What are the programming languages that can be used for web design apart from javascript?

A)

3 main languages are used in web development are

HTML, CSS, JAVASCRIPT

Other languages are

a) Python

b) C++

c) Java

d) C#

e) Php

f) perl

Pros and Cons :

Pros : speed, simplicity, server load, popularity, extend functionality

Cons : client-side security, Browser support, single inheritance,  
Rendering stopped

2) What kind of programming language is used for web development?

A)

- Javascript
- Python
- Typescript
- PHP
- Ruby
- HTML & CSS

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3) What is the benefits of javascript over other programming languages?

A)

Javascript is a interpreted language.

It reduces time by other programming languages for compilation.

Speed, Popularity, Versatility, Simplicity, Server load

4) Difference between HTML and CSS?

A)

HTML :

- Standard markup language for creating webpages and web applications.
- Hyper Text Markup Language.
- Consists of tags surroundings content.
- CSS used in html files.
- Used to build the structure of web page.

CSS :

- Stylesheet language is used for describing the presentation of documents.
- Cascading Style sheet
- Consists of selectors succeed by a declaration block.
- HTML cannot be used in CSS files.
- Used to make the webpage more presentable.

5) What technologies browser can understand?

A)

- Browsers
- Programming languages
- Frameworks

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- Databases
- Protocols
- HTML & CSS

6) Why is not possible to create a website without HTML?

A)

HTML gives the basic structure of website and easy to understand.

(using content management systems – word press, Drupal to develop a website without writing a code for HTML.

7) Why let and const was introduced?

A)

ES6 introduced two new ways to declare variables let and const. Both provides better block scoping than var.

Variables declared with let and const eliminate the specific issue of hoisting because they are scoped to block, not to function.

8) What is ES? New features?

A)

ES6 is the version of the ECMA script programming language.

ECMA – European Computer Manufacture's Association.

Features –

Modules, class declaration, Destructing patterns, iterators, proper tail calls, etc...

9) What is Hoisting?

A)

It is a javascript mechanism where variables and function declarations are moved to the top of their scope before code execution.

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10) what is dev tools?

A)

Dev (or) Developer (or) Development tools.

These are **programs that allow a developer to create, test and debug software**. They inspect and debug the page's HTML, CSS, and JavaScript, allow to inspect the network traffic it causes, make possible to measure it's performance, and more.

Web authoring and debugging tools built right into the browser. They provide developers deeper access into their web applications and the browser.

11) What is a web server?

A) Web server is to store, process, and deliver web page to the user.

This intercommunication is done using HTTP.

Apache, IIS, Lighttpd, Jigsaw , NGINX

12) What is HTTP status code? List popular codes?

A) Status codes are issued by a server in response to a clients request made to the server.

All HTTP response status codes are separated into 5 classes.

- 1xx – informational
- 2xx – success
- 3xx – redirection
- 4xx – client error
- 5xx – server error

200 – success/ok

301 – Permanent redirect

302 – temporary redirect

304 – not modified

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401 – unauthorized error

403 – forbidden

404 – not found

409 – conflict

500 – internal server

501 – not implemented

502 – bad gateway

503 – service unavailable

504 – gateway timeout

13) Difference between static and dynamic client server architecture?

A)

Static :

Static websites use only client side html and css code.

Updates can be tedious and prone to errors.

More control and flexibility as each page design is unique.

Dynamic :

This uses both client side and server side scripting languages like js, php or asp. When we access dynamic website the site can be changed through code that is run in the browser.

Design updates can be much simpler.

User has complete control over updating the design and changing the content.

14) What is a cookie? Usage?

A)

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Cookie file is saved to your pc. If you go back to that website again the website knows already you have visited before.

They give websites the ability to remember and improve.

Cookies are persistent or session.

## 15) What is a database ? uses?

A)

It is a system for storing and taking care of data.

Database engine can sort, change or serve the information on the Database.

Information stored in many ways like card files, printed books, etc...,

## 16) Why javascript is single-threaded?

A)

It has only one call stack.

It has only one call stack that is used to execute the program.

## 17) Why java is multi-threaded?

A)

It provides simultaneous execution of two or more parts of a program to maximise the utilize the CPU time.

A multi-threaded program contains two or more parts that can run concurrently.

## 18) Difference between single and multi thread?

A)

Single :

Refers to executing an entire process from beginning to end without interruption by a thread.

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A single thread executes a process in single threading.

Multi :

Refers to allowing multiple threads with in a process such that they execute independtly but share their resources.

Multiple threads execute a process in multi threading.

## 19) How does call stack work?

A) When a function call made, function arguments pushed on stack. These arguments are further referenced by base pointer.

When the function returns to its caller, the arguments of the returning function are popped from the stack by LIFO method.

## 20)What are synchronous and asynchronous ?

A)

Synchronous :

A callback in which the code execution waits for an event before continuing.

Programmer can use when it is necessary to execute tasks in a sequence and when it does not require much time for execution.

Happens at same time.

The program will not execute until an event returns a response. Call backs are perform all the tasks before returning to the call statement.

Asynchronous :

A callback that does not block the execution of the code.

Programmer can use when the tasks are not dependent on each other and when it takes time for execution.

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Doesn't happens at same time.

When the call returns from the event, the call returns back to the callback function.

➤ Javascript is a synchronous execution model.

21) How creation and execution phase works?

A) In creation phase the main stack is added and the functions are also added one by one like top of another. In execution phase the functions are excute and pop out and there go the Add queue and it waits for event loop and then the event loop picks that function and send it to main stack.