

Part-Papers-2022

Short Questions:-

- i) Write an HTML code for unordered list having three items with list style type disc.

```
<!DOCTYPE html>
<head>
    <title> Unordered list </title>
    <style>
        ul {
            list-style-type: disc;
        }
    </style>
</head>
<body>
    <ul>
        <li> item 1 </li>
        <li> item 2 </li>
        <li> item 3 </li>
    </ul>
</body>
</html>
```

(ii) Write the SQL query to login a user based on his or her email and password.

```
SELECT *  
FROM users  
WHERE email = 'user@example.com'  
AND password = 'Password123';
```

(iii) Write a javascript program to check two given numbers and return true if one of the numbers is 50 or if their sum is 50?

```
<script>  
function checkNumbers (n1, n2)  
{
```

```
    if (n1 === 50 || n2 === 50 ||  
        n1 + n2 === 50)
```

```
}
```

```
    return true;
```

```
}
```

```
else
```

```
{  
    return false;  
}  
}
```



```
console.log (checkNumbers (50, 20)); //true  
console.log (checkNumbers (40, 30)); //false
```

Q) What is 200 OK status response code?

⇒ The "200 OK" status code is an http response code indicating a successful request.

⇒ it means the server understood and completed the request without any issues.

⇒ it is a part of the 2xx series of status codes.

⇒ it is commonly used when retrieving or submitting data, confirming that the requested action was successful.

(v) What is Grid property

CSS?

- ⇒ The grid property is a shorthand property for:
 - grid-template-rows
 - grid-template-columns
 - grid-template-areas
 - grid-auto-rows
 - grid-auto-columns
 - grid-auto-flow

- ⇒ Responsive webpages are created easily with a CSS grid.
- ⇒ It offers a grid-based layout system, with rows and columns, making it easier to design responsive pages without floats and positioning.
- ⇒ It is a two-dimensional layout system.

Syntax:

```
grid: none | grid-template-rows |  
grid-template-columns | grid-template-  
-areas | grid-template-rows / [grid-a-  
-flow] grid-auto-columns | [grid- auto-  
-flow] grid-auto-rows / grid-template-  
-columns | initial | inherit;
```

Q) How can we make a website responsive?

Responsive web design automatically adjusts for different screen sizes and viewports.

Responsive web design is about creating web pages that look good on all devices.

Responsive web design is about using HTML & CSS to resize, hide, shrink, or enlarge a website, to make it good on all devices.

How to make?

To create a responsive website, the following <meta> tag should be included to all web-pages:

e.g.

```
<meta name="viewport"  
content="width=device-width,  
initial-scale=1.0">
```

Using CSS media queries

Using a responsive framework such as Bootstrap.

o media-query syntax:

```
@media notonly mediatype and  
(expressions)  
{  
    css-code;  
}
```

(vii) Why it is better to use Div tables than table tag to structure a website

=> `<div>` element is used to define section of document. It is a container.

=> Div based layout is more flexible than table-based.

=> It is easier to maintain.

=> It is good for fixed and liquid layouts.

=> It is good for small screens but `<table>` is not good for small screens.

=> It renders fast on browser.

`<div>` promotes modular, maintainable code and reusability while table layouts tend to be more complex and harder to maintain.

`<div>` also require less code. Less code equals smaller files which equals faster load times.

What is CDN?

CDN stands for content delivery network.

It is also known as content distribution network.

CDN is transparent backbone of the internet in charge of content delivery.

It is a network of interconnected servers that are geographically distributed that speeds up web-page loading for data-heavy applications.

A CDN improves website performance.

Q What are the versions of jQuery?

- => jQuery is basically a javascript library that greatly simplifies javascript programming.
- => It is fast, small, lightweight and cross-platform.
- => jQuery provides various features that makes web-development very quick and easy.
- => The basic versions of jquery are as follows:
 - 3.x
 - 2.x
 - 1.x

=> The latest version is 3.7 that was released in 2023.

Q Write difference b/w numeric and associative array?

Numeric array:

- o An array with a numeric index is called numeric array.

Values are stored in a linear and accessed in linear fashion.

The index (keys) start from 0 and increment by 1 for each element.

Elements are typically accessed using their index values.

They are used when identify things by their position.

It behave like single-column table. They are not maps.

Associative array:

An array with strings as index. The Associative array stores elements are like in key-value pairs.

Elements are accessed using their keys instead of numerical indices.

The order of elements is not necessarily significant as they are organized based on their key value associations.

Associative array are unique keys

To access elements in an unordered manner. Also known as map.

Q. What is difference b/w relative & absolute position?

Already solved

Q. What is difference b/w session & Cookies?

Already solved

Q. Why use external CSS rather than internal or inline CSS?

Already solved

**What is difference b/w `<div>` and `
` tag?**

Already solved

Q. What kind of popup box does javascript provides?

⇒ Popup boxes are used for displaying or showing information to the user.

⇒ Generally, javascript provides action moves to the next three types of popup boxes:

o Alert box

o Confirmation box

o prompt box

Alert Box:-

An alert box warns the user about actions performed during form filling.

When an alert box appears user has to click OK to move to the next step.

Syntax:-

```
alert("message");
```

Confirmation Box:-

A Confirmation box is used for taking confirmation authentication from the user to move a further step.

When a prompt box pops up, the user must press "OK" or "Cancel" to proceed.

If user press "OK" then the

step for proceeding.

if the user press "Cancel",
action is canceled, stopping the
process itself.

Syntax:

```
confirm ("click Yes or No")
```

(3) Prompt box:

A prompt box is used to ask the user to enter dynamic values. After entering the value, click Enter to read the value from the user into our code.

Syntax:

```
prompt ("message", "userText")
```

Example

In an application form, the user wants to enter his age; he has dynamically entered the value.

At this point, we used the prompt popup box to enter user input.

2 What is keyframe in CSS?

A keyframe is used in animations to define intermediate steps between the starting and ending points of an animation. It allows precise control over how an element changes over time.

Keyframes allow to specify the styles and properties that an element should have at specific point during animation.

Keyframes are defined using the keyframes rule to define specific stages of the animation using either percentage values (0%, 25%, 50% etc) or keywords from and to.

Keyframes provide a powerful way to create smooth & complex animations in CSS.

=> The animation is controlled by property changing from one style to another. CSS styles can be changed many times using syntax:

@keyframes animation-name {

/* define key frame */

}

OR

@keyframes animation-name {

from {

styles;

}

to {

styles;

}

Example:

@keyframes my {

0% {

height: 200px;

}

30% {

width: 300px;

?

-----.

Describe the Purpose of HTML5?

The purpose of HTML5 is to improve and enhance the structure, presentation and functionality of web pages.

Some key purposes of HTML5 are:

(1) Improved multimedia support

- provide support for audio and video elements, eliminating the need for third-party plugins like Adobe Flash.

(2) Semantic markup

- Includes a set of new semantic elements such as:

- `<header>`
- `<footer>`
- `<nav>`
- `<section>`
- `<article>`

(3) Cross-platform support
- HTML5 is designed to be consistent across different devices and platforms.

(3) Offline web application.
- it enables the web application to work even when the user is offline.

(4) Canvas & graphics
- <canvas> allows to draw & render graphics without relying on plugins.

(5) Drag & Drop support
Improved user performance & experience.

(6) Better support for accessibility

Describe the purpose of MySQL.

MySQL is a SQL based RDBMS for web databases. MySQL determines the speed of when things load on your site and how fast you can access that stored data. It has a direct impact on site performance, which makes it an integral part of web design. MySQL is free and open-source.

MySQL is ideal for both small and large applications.

it is cross-platform.

Purposes:

Data storage & Retrieval:-

Provides reliable way to store data.

Purpose of dynamic pages:

A dynamic web page is a web page that includes content that is updated regularly.

This type of page is often used for:

- news sites

- Blogs

where new content is added sequentially.

A dynamic page displays the different content for different users while retaining the same layout & design.

They take more time to reload than simple static pages.

it displays different content each time it's viewed.

Personalization

Real time information / data

User interaction

Q. What is CSSC3?

- o CSSC3, also known as cascading style sheets level 3.
- o it is more advanced version of the successor of CSS2.

CSS VS CSSC3

o it is basic version with the basic formatting functionality.	o latest iteration of the CSS language that extends functionality of CSS2.
o Does not support responsive design & cannot handle media queries.	o Supports responsive design & can handle media queries quite well.
o Does not support 3D transformations & animations.	o Create 3D transformation animations.
o Cannot be split into varied modules.	o Can be split into varied modules.

Part Paper Questions

Q. What is http response headers?

- ⇒ There are several generated messages sent along with the requested web page to provide additional information to the client browser, such as status codes, content type, and caching directives.

Q. What is SSH?

- ⇒ It is cryptographic network protocol that provides a secure communication b/w two computers.

⇒ SSH encrypts all data transmitted b/w the client and server.

⇒ It makes it difficult for hackers or other malicious actors to read and intercept sensitive information.

⇒ It provides secure authentication.

Encryption of data

Confidentiality
of communication.

Q. What are web services?

⇒ Web services are software components that allow different applications or services to communicate and exchange data with each other over the internet.

⇒ They use standard web-based protocols such as HTTP, XML or JSON and are based on client server architecture.

⇒ It provides a standard way for different components of an application to communicate with each other, regardless of the PL, OS or hardware platform used.

⇒ There are different types of web services:

- SOAP

- REST

- XML

- RPC

Q. what is the difference b/w SOA and a web service?

⇒ Service oriented architecture & web services are related concepts.

⇒ SOA is an architectural approach that emphasizes the design of systems as a collection of reusable, independent service that can be created to build more complex applications.

⇒ These services are designed to be platform independent, language independent and can communicate with each other with standard protocol.

⇒ Web services: based on client server architecture.

⇒ Web services can be used to implement SOA.

Q. what is WAMP?

⇒ Stands for:

- Windows

- Apache

- MySQL

- PHP

⇒ It is a software stack that is used for web development on windows OS.

⇒ It provides an integrated platform for developing and running web applications.

Apache: an open-source web server software that provides HTTP services capability for serving web content.

⇒ WAMP is free and open source.

Q. What is POP?

- o Post office protocol
- o used for retrieving email messages from a mail server.
- o when an email is sent to the user, it is stored on a mail server until the user retrieves it.
- o POP allows the user to download the email from the server onto their local device.
- o Once the email is downloaded, it is removed from the server.

Limitations:

- o it is a "pull" protocol; means the email client must request the messages from the server.

Q. What is ARPANet?

⇒ one of the earliest computer networks

⇒ Developed in 1960 by DARPA

⇒ Precursor to the modern internet.

⇒ was the first network to implement TCP/IP protocols.

⇒ was also the first network to use email, FTP and RLP.

⇒ was officially decommissioned in 1990.

Q. What is FTP?

⇒ Standard network protocol used for transferring files b/w two computers on the internet.

⇒ it works by establishing a connection b/w an FTP client and FTP server, enabling files to be transferred using commands such as GET, PUT, LIST.

⇒ commonly used for loading website files and downloading software updates.

⇒ it has security issues so we use SFTP or FTPS when sending transmitted data.

Q. What is web 3.0?

- O Also known as Semantic web is the next generation.
- O It involves a shift to more intelligent and intuitive web that use AI and machine learning technique.
- O It makes search faster and easier by acting as a personal assistant.
- O The browser may remember the interest of the user while browsing.
- O The user can be more specific in the searches.