CS571 Fall 2023: Web Technologies Exam 2 - Results   ✕

Attempt 1 of 1

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Attempt Score **92.6 / 100 - 92.6 %**

Overall Grade (Highest Attempt) **92.6 / 100 - 92.6 %**

HTML5 Questions

Question 1   2 / 2 points

[2 points] Which of the following are <u>new</u> features in HTML5. Select all that apply.

- ✓ ☑ **Canvas**
- ✓ ☑ **Web Forms improvements**
- ✓ ☑ **Offline web applications**
- ✓ ☐ **Network-based storage**
- ✓ ☐ **Local SQL database**

Question 2   1.2 / 2 points

[2 Points} Select all properties of the SVG element. Select al that apply.

- ➡ ✓ ☑ Resolution independent
- ➡ ✗ ☐ Slow

⇒ ✔ ☑ Good font rendering

✖ ☑ Well-suited for graphics

✔ ☐ No support for event handlers

Responsive Website Design (RWD) Questions

Question 3   2 / 2 points

[2 Points] Switching between display `x.style.display` = `"block"`;
and `x.style.display` = `"none"`; may be used in RWD.

✔ ⦿ a) True

○ b) False

Question 4   2 / 2 points

[2 Points] The major difference between different versions of Bootstrap is the number of grid tiers.

✔ ⦿ a) True

○ b) False

Question 5   2 / 2 points

[2 points] What are properties of the Responsive Web Design (RWD) approach? Select all that apply.

✔ ☐ **Uses CSS3 media queries, adaptive grids and flexible images**

✔ ☑ **No panning if possible, unless required by the application**

✔ ☐ **Easy reading with a minimum of scrolling**

✔ ☑ **Adapts to viewing environment**

Question 6   2 / 2 points

[4 points] Select which concepts are the basis of Responsive Website Design. Select all that apply.
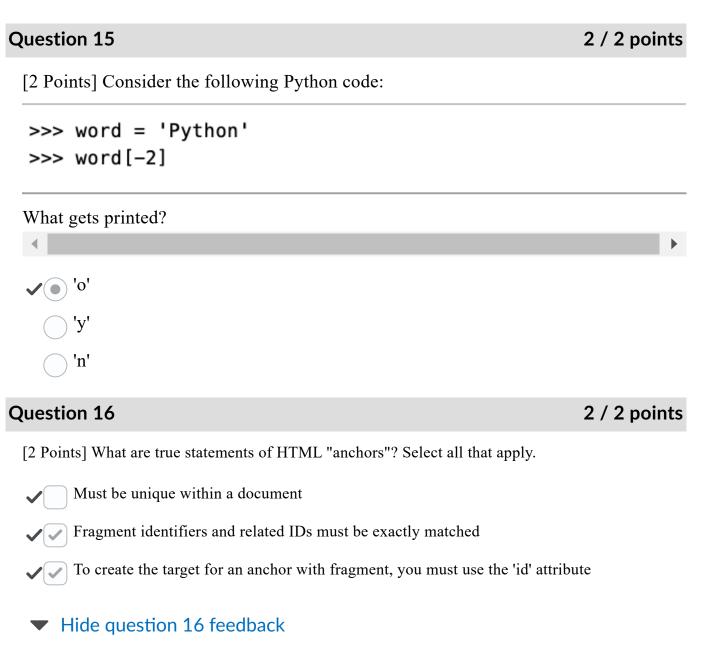
✔ ☑ **CSS3 media queries**

✓ ☑ **fluid grids**

✓ ☑ **flexible images**

✓ ☐ **content reduction**

REST Questions

Question 7   1 / 1 point

[1 Point] In REST Web Services, POST requests should be used for creation of data.

✓ ⦿ A) True

○ B) False

Question 8   1 / 1 point

[1 Point] In REST Web Services, except in very specific cases, HTML is not acceptable as a response format.

✓ ⦿ A) True

○ B) False

Question 9   1 / 1 point

[1 Point] In REST Web Services, it is best practice to use URIs that are logical over URIs that are physical.

✓ ⦿ A) True

○ B) False

Question 10   1 / 1 point

[1 Point] In REST Web Services, it is best practice to use nouns in the logical URI, not verbs.

✓ ⦿ A) True

○ B) False

Question 11   1 / 1 point

[1 Point] In REST Web Services, logical URIs allow the resource implementation to change without impacting client applications.

✓ ● A) True

○ B) False

Question 12   1 / 1 point

[1 Point] in REST Web Services, GET requests should be for read-only queries.

✓ ● A) True

○ B) False

Question 13   2 / 2 points

[2 points] For REST Web Services, what of the following statements are true? Select all that apply.

✓ ☑ POST requests can also be used for read-only queries

✓ ☑ GET requests should be used for read-only queries

✓ ☑ POST requests should be used for creating data

✓ ☐ Use of query strings should be maximized

✓ ☐ REST protocol includes handling encryption

Question 14   0.4 / 2 points

[2 points] For REST Web Services, select the statements that are <u>TRUE</u>. Select all that apply.

✓ ☐ REST provides security and encryption

✗ ☑ JSON-RPC is an example of REST

➡ ✗ ☐ In REST resources are uniquely identified by URLs

✗ ☑ 3 Fundamentals aspects of REST Design Patterns are clients, servers and operations

➡ ✗ ☐ Complex REST services may use as many as 10 HTTP methods

1St Half Course Questions

Question 15

2 / 2 points

[2 Points] Consider the following Python code:

```
>>> word = 'Python'
>>> word[-2]
```

What gets printed?

✓ ◉ 'o'

◯ 'y'

◯ 'n'

Question 16

2 / 2 points

[2 Points] What are true statements of HTML "anchors"? Select all that apply.

✓ ☐ Must be unique within a document

✓ ☑ Fragment identifiers and related IDs must be exactly matched

✓ ☑ To create the target for an anchor with fragment, you must use the 'id' attribute

▼ Hide question 16 feedback

You can have as many anchors in an HTML document, as you wish.

Question 17

0 / 2 points

[2 Points] Consider the following example from w3schools.com.

```
<!DOCTYPE html>
<html>
<body>
<p id="demo"></p>
<script>
const obj = {name: "John", age:
function () {return 30;}, city:
"New York"};
const myJSON = JSON.stringify(obj);
document.getElementById("demo").innerHTML
= myJSON;
</script>

</body>
</html>
```

What string is displayed in the browser window?

⇒ ○ A) {"name":"John","city":"New York"}

✗ ◉ B) {"name":"John","age":"function () {return 30;}","city":"New York"}

○ C) {"name":"John","age":30,"city":"New York"}

▼ Hide question 17 feedback

See https://www.w3schools.com/js/tryit.asp?
filename=tryjson_stringify_function

Question 18	2 / 2 points

[2 Points] Consider the following example from w3schools.com.

```
<!DOCTYPE html>
<html>
<body>

<p id="demo"></p>

<script>
const fruits = ["Banana", "Orange",
"Apple"];
fruits[6] = "Lemon";

let fLen = fruits.length;
let text = "";
for (i = 0; i < fLen; i++) {
  text += fruits[i] + "<br>";
}

document.getElementById("demo").innerHTML
= text;
</script>

</body>
</html>
```

What output will be displayed on the page?

○ A) Banana
Orange
Apple

Lemon

○ B) Banana
Orange

Apple
null
null
null
Lemon

✓◉ C) Banana
Orange
Apple
undefined
undefined
undefined
Lemon

◯ D) Banana
Orange
Apple
Lemon

▼ Hide question 18 feedback

See: https://www.w3schools.com/js/tryit.asp?filename=tryjs_array_holes

Question 19   2 / 2 points

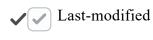[2 Points] Consider the following example from w3schools.com:

```
<!DOCTYPE html>
<html>
<body>

<p>This is a p element</p>
<p>This is also a p element.</p>
<p>This is also a p element.</p>
<button onclick="myFunction()">Try it</button>

<script>
function myFunction() {
   var x =
document.getElementsByTagName("P");
   var i;
   for (i = 0; i < x.length-1; i++)
{
      x[i].style.backgroundColor =
"red";
   }
}
</script>
</body>
</html>
```

What happens when one clicks the "Try it" button?

○ changes the background color of all 3 P elements in this document

✓● changes the background color of the first 2 P elements in this document

○ changes the background color of the last 2 P elements in this document

Question 20
2 / 2 points

[2 Points] Select any header that is used to improve cache performance. Select all that apply.

✓ ☑ Last-modified

✓ ☑ Etag

Question 21
2 / 2 points

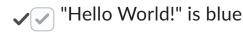[2 Points] Consider the following example from w3schools.com.

```
<!DOCTYPE html>
<html>
<head>
<style>
* {
  text-align: center;
  color: blue;
}
</style>
</head>
<body>

<h1>Hello world!</h1>

<p>It's happening</p>
<p id="para1">Me too!</p>
<p>Not me!</p>

</body>
</html>
```

Select all the actual behaviors of this code. Select all that apply.

✓ ☑ "Hello World!" is blue

✓ ☐ "Not me!" is black

✓ ☑ "It's happening" is centered

✓ ☐ "Me too!" is flush left

Serverless Questions

Question 22   2 / 2 points

[2 points] Select which of the following are <u>true</u> of Serverless Architectures. Select all that apply.

✓ ☑ **Execution environment provided by service**

✓ ☑ **Provide authorization and authentication services**

✓ ☑ **No compute resource to manage**

✓ ☐ **Provisioning and scaling handled by the client**

Question 23   1 / 2 points

[2 Points] What are issues that need additional work for FaaS? Select all that apply.

✓ ☐ Billing

➡ ✗ ☐ Polyglot language support

➡ ✓ ☑ Remote debugging

➡ ✗ ☐ IDE's

Question 24   2 / 2 points

[2 points] Select features of a "container." Select all that apply.

✓ ☑ **portable**

✓ ☑ **made mainstream by Docker**

✓ ☐ **requires a VM**

Question 25   2 / 2 points

[2 points] Which of the following are <u>true</u> of AWS Lambda? Select all that apply.

✓ Cost of idle time is small

✓ Does not have servers behind it

✓ ✓ Functions can be triggered by events

✓ Functions and classes are unit of deployment

Cookies and Privacy Questions

Question 26   2 / 2 points

[2 points] Which of the following are different types of cookies? Select all that apply.

✓ ✓ **Persistent cookies**

✓ ✓ **Non-secure cookies**

✓ ✓ **Client-side cookies**

✓ ✓ **Non-secure cookies**

✓ ✓ **Server-side cookies**

✓ ✓ **Conversion-tracking cookies**

✓ **Fourth-party cookies**

Question 27   2 / 2 points

[2 points] What are the parties involved in Web advertising? **Select all that apply.**

✓ ✓ **Ad network**

✓ **Third-parties**

✓ ✓ **Advertisers**

✓ ✓ **Website visitors**

✓ ✓ **Website owners**

Question 28   2 / 2 points

[2 points] Select all ways to "opt out" of cookies. Select all that apply.

✓✓ **Use cookie management tool in browser**

✓✓ **Install browser extensions**

✓✓ **Select "do not track" in browser**

✓✓ **Download opt-out cookie**

✓✓ **Change account Preferences on registration sites**

JavaScript Frameworks Questions

Question 29   2 / 2 points

[2 Points] Consider the following Express code.

```
var express = require('express');
var app = express();


//respond with "hello world" when a GET request is made
to the homepage
app.get('/', function (req, res) {
  << missing code>>
});


//server listening on port 3000
app.listen(3000);
```

What code is missing to display "Hello Word" in a browser?

- ○ res.end('Hello World')
- ○ req.send('Hello World')
- ✓◉ res.send('Hello World')
- ○ res.open(); res.send('Hello World')

Question 30   2 / 2 points

[2 points] Which of the following are <u>true</u> of Node.js? Select all that apply.

✓ ✓ **Provides POSIX functions for File I/O**

✓ ☐ **Includes modules that handle IP**

✓ ✓ **Is bundled with 'npm'**

Question 31   2 / 2 points

[2 points] Which of the following are <u>true</u> of TypeScript? Select all that apply.

✓ ✓ **Supports Optionals**

✓ ☐ **Supports MVC**

✓ ✓ **Includes support for classes and modules**

Question 32   2 / 2 points

[2 points] Select which of the following are <u>true</u> of Angular (version 2+). Select all that apply.

✓ ☐ **Uses services to increase usability and flexibility**

✓ ✓ **Can be used to build Single Page Applications, by rendering plain HTML at the server side**

✓ ☐ **Architecture based on services**

Ajax Questions

Question 33   2 / 2 points

[2 points] Consider the following code snippet:

```
j = eval("(" + text + ")");
```

Select all answers that are TRUE for such code.

✓ ☐ **It only works with some browsers**

✓ ✓ **It is very unsafe**

✓ ✓ **It is part of JSON.parse()**

Question 34   2 / 2 points

[2 points] Which JavaScript method is used primarily with JSON?

○ **exec()**

○ run()

✓ ⦿ eval()

Question 35   2 / 2 points

[2 points] Which of the URLs below have the same "origin" as https://mobile.ibm.com? Select all that apply.

✓ ☐ **http://mobile.ibm.com**

✓ ☑ **https://mobile.ibm.com/top.html**

✓ ☐ **https://mobile.ibm.net**

Question 36   1 / 1 point

[1 Point] During AJAX open(), what does it mean to pass in <false> to the third parameter and why is it poor practice?

○   A)   False means the request will be executed synchronously. It is bad because a time-consuming synchronous request on the main thread will crash the browser.

○   B)   False means the request will be executed asynchronously. It is bad because the flow of the application gets disrupted and the order of code execution becomes ambiguous

✓ ⦿   C)   False means the request will be executed synchronously. It is bad because a time-consuming synchronous request on the main thread will degrade UX.

○   D)   False means the request will be executed asynchronously. It is bad because it breaks form validation

▼ Hide question 36 feedback

False == synchronous. Synchronous requests on the main thread can be easily disruptive to the user experience and should be avoided; in fact, many browsers have deprecated synchronous XHR support on the main thread entirely. Synchronous requests are permitted in Workers.

Question 37   1 / 1 point

[1 Point] Which of the following are true about AJAX?

○ a) AJAX stands for Asynchronous JavaScript and XML.

○ b) AJAX allows for just part of a page to be reloaded with direct access to the server.

○ c) AJAX uses JavaScript and HTML DOM to display the data.

✓◉ d) All of the above

Question 38   1 / 1 point

[1 Point] Which statement below about Ajax is _false_?

○ a) AJAX stands for Asynchronous JavaScript And XML

○ b) AJAX applications can transport data as JSON text

○ c) AJAX uses a browser built-in XMLHttpRequest object

✓◉ d) Updates to a page made via AJAX will not be displayed until the client's window is refreshed

Question 39   **1 / 1 point**

[1 Point] What is the major difference between jQuery AJAX and XMLHttpRequest (XHR)?

✓◉ A) There is no major difference aside from syntactical sugar

○ B) jQuery is optimized for asynchronous use cases while XHR is not

○ C) jQuery does not support all browsers while XHR does

○ D) jQuery is Google's re-implementation of XHR from scratch for improved usability and efficiency

▼ Hide question 39 feedback

XMLHttpRequest is the raw browser object that jQuery wraps into a more usable and simplified form and cross browser consistent functionality. All jQuery functions use XMLHttpRequest object in the background, but provide additional functionality that you don't have to do yourself.

Question 40   **0 / 1 point**

[1 Point] What code is embedded in JSON.parse() ?

✗◉ A) evaluate()

○ B) XMLHttpRequest.status

⇒○ C) eval()

D) JSON.stringify()

Question 41   0 / 1 point

[1 Point] What is true of the fetch() API?

➡ ○ A) Provides a more powerful and flexible feature set than
        XMLHttpRequest()

○ B) It is identical to jQuery's .ajax()

○ C) Unlike jQuery ajax(), cannot set CORS mode

✖ ◉ D) All of the above

Question 42   1 / 1 point

[1 Point] Netscape 7 and Mozilla Firefox 1.0 were the first browsers to "clone"
XMLHttpRequest functionality from Internet Explorer.

✔ ◉ A) True
○ B) False

Question 43   1 / 1 point

[1 Point] The XMLHttpRequest object can be used to upload a file.

✔ ◉ True
○ False

Question 44   1 / 1 point

[1 Point] Images do not have cross-domain issues.

✔ ◉ A) True

B) False

Images are considered "safe" and can be retrieved cross-domain

Question 45   1 / 1 point

[1 Point] Synchronous XMLHttpRequest() has been deprecated.

✓ ◉ True

○ False

Question 46   1 / 1 point

[1 Point] CORS and server proxy are good ways to avoid cross-domain browser restrictions.

✓ ◉ True

○ False

Web Security Questions

Question 47   1 / 1 point

[2 Points] .onion is the special-use TLD used in the "deep web".

✓ ◉ a) True

○ b) False

Question 48   1 / 1 point

[2 Points] The major reason to deprecating V2 Onion Service is exposure to attacks.

✓ ◉ a) True

○ b) False

Question 49   1 / 1 point

v2 Onion Service addresses were deprecated because of safety.

✓ ⦿ A) True

○ B) False

▼ Hide question 49 feedback

Why deprecating v2? In one word: Safety. Onion service v2 uses RSA1024 and 80-bit SHA1 addresses. Its simplistic directory system exposes it to a variety of enumeration and location-prediction attacks that give HSDir relays too much power to enumerate or even block v2 services.

Question 50   2 / 2 points

[2 Points] Select all techniques used to bypass the same-origin policy. Select all that apply.

✓ ☑ Browser extensions

✓ ☑ CORS

✓ ☑ JSONP

✓ ☐ XMLHttpRequest

✓ ☐ FRAME tag

✓ ☐ VIDEO tag

✓ ☑ Browser plugins

✓ ☑ The Dynamic Script Tag

Question 51   2 / 2 points

[2 Points] Select what is a JSON array vulnerable to? Select only one correct answer

✓ ⦿ JavaScript Hijacking

○ SQL Injection

○ Bypassing same origin policy

○ Search worm

Question 52   2 / 2 points

[2 points] Which types of hacks can cause <u>damage to the user </u> on the client side? Select all that apply.

✓ ☐ **Denial of Service**

✓ ☐ **Deface pages, altering content**

✓ ☑ **Stealing cookies**

✓ ☑ **Install malicious software**

✓ ☑ **Log user keystrokes**

JQuery Questions

Question 53   2 / 2 points

[2 Points] Consider the following code using jQuery.

```
1   <!doctype html>
2   <html lang="en">
3   <head>
4      <meta charset="utf-8">
5      <title>attributeEquals demo</title>
6      <script src="https://code.jquery.com/jquery-3.6.3.js"></script>
7   </head>
8   <body>
9
10  <div>
11     <label>
12        <input type="radio" name="newsletter" value="Hot Fuzz">
13        <span>name?</span>
14     </label>
15  </div>
16  <div>
17     <label>
18        <input type="radio" name="newsletter" value="Cold Fusion">
19        <span>value?</span>
20     </label>
21  </div>
22  <div>
23     <label>
24        <input type="radio" name="newsletter" value="Evil Plans">
25        <span>value?</span>
26     </label>
27  </div>
28
29  <script>
30  $( "input[value='Hot Fuzz']" ).next().text( "Hot Fuzz" );
31  </script>
32
33  </body>
34  </html>
```

What are true statements about the code?

✓◻ A) Changes the value? at line 25 to Hot Fuzz.

✓✓ B) Changes the name? at line 13 to Hot Fuzz.

✓◻ C) Changes the value? at line 19 to Hot Fuzz.

✓✓ D) Code at line 30 finds all inputs with a value of "Hot Fuzz" and changes the text of the next sibling span.

Question 54   2 / 2 points

[2 points] Which of the following objects are abstracted by jQuery? Select all that apply.

✓ ☑ JSON

✓ ☑ XMLHttpRequest

✓ ☑ DOM

Question 55   2 / 2 points

[2 points] What type of selector is the 'header' selector, as in the following example:

```
$(":header").css({ background: "#ccc", color: "blue" });
```

✓ ⦿ **Basic Filter selector**

◯ **Basic selector**

◯ **Basic Color selector**

Question 56   2 / 2 points

[2 points] What type of selector is the name="value" selector, as in the following example:

```
$("input[value='Hot Fuzz'] ").text( "Hot Fuzz" ) ;
```

◯ **Attribute Text selector**

◯ **Attribute Contains selector**

✓ ⦿ **Attribute Equals selector**

Question 57   2 / 2 points

[2 points] Consider the following example of use of the ":last-child" Selector:

```
$("input[value='Hot Fuzz'] ").text( "Hot Fuzz" ) ;
<!doctype html>
<html lang="en">
<head>
  <meta charset="utf-8">
  <title>last-child demo</title>
  <style>
  span.solast {
    text-decoration: line-through;
  }
  </style>
```

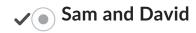```
    <script src="https://code.jquery.com/jquery-3.5.0.js"></script>
</head>
<body>
<div>
    John,
    Karl,
    Brandon,
    Sam
</div>
<div>
    Glen,
    Tane,
    Ralph,
    David
</div>
<script>
$("div span:last-child")
    .css({ color:"red", fontSize:"80%" })
    .hover(function() {
        $(this).addClass("solast");
    }, function() {
        $(this).removeClass("solast");
    });
</script>
</body>
</html>
```

**Which names will be colored red?**

○ **John and Glen**

✓ ● **Sam and David**

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## Question 58                                                        2 / 2 points

**[2 points] Consider the following CSS, jQuery and HTML. Will the image properties be changed by the jQuery code?**

```
.bigImg {
    border: 1px solid black;
}

$("img.userIcon" ).load(function() {
        if ( $( this ).height() > 100 {
                $( this ).addClass("bigImg");
```

```
        }
});

<body>
<img src="/uploads/media/default/0001/01/47951.jpeg"
width="500" height="600">
</body>
```

○ True

✓ ◉ False

High-Performance Websites Questions

Question 59   2 / 2 points

[2 points] Which of the following are rules to improve Web site performance? Select all that apply.

✓ ☐ Run Google PageSpeed Insights

✓ ☐ Use POST for Ajax requests

✓ ☑ Reduce number of DOM elements

✓ ☑ Use cookie-free domains

✓ ☑ Use newer versions of image standards

Question 60   2 / 2 points

[2 points] Select the <u>types of files</u> should be compressed to improve web site performance. Select all that apply.

✓ ☑ XML files

✓ ☑ Minified JavaScript files

✓ ☑ Non-minified JavaScript files

✓ ☑ Text files

- ✓ ☐ **JPG files**
- ✓ ☐ **PNG files**
- ✓ ☑ **JSONP files**
- ✓ ☐ **PDF files**
- ✓ ☑ **JSON files**

Done