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70-480

Programming in HTML5 with JavaScript and CSS3

Sections

1. Volume A
2. Volume B
3. Volume C
4. Volume D

Exam A

QUESTION 1

You are developing a customer web form that includes the following HTML.

```
<input id="txtValue" type="text" />
```

A customer must enter a valid age in the text box prior to submitting the form.

You need to add validation to the control.

Which code segment should you use?

```

C A. function validate() {
    var value = $("#txtValue").text();
    var regex = /^[\\d\\,\\.]*$/;
    if (!regex.test(value) || name == "")
        alert("please enter valid value");
    return;
}

C B. function validate() {
    var name = $("#txtValue").val();
    if (name == null || name == "")
        alert("please enter valid value");
    return;
}

C C. function validate() {
    var name = $("#txtValue").text();
    if (name == null || name == "")
        alert("please enter valid value");
    return;
}

C D. function validate() {
    var value = $("#txtValue").val();
    var regex = /^[\\d\\,\\.]*$/;
    if (!regex.test(value) || value == "")
        alert("please enter valid value");
    return;
}

return emailPattern.test(userinput);
}

```

A. Option A

- B. Option B
- C. Option C
- D. Option D

Correct Answer: D
Section: Volume A

Explanation

Explanation/Reference:

Explanation:

.val

Return value

A string containing the value of the element, or an array of strings if the element can have multiple values

QUESTION 2

You are developing a customer contact form that will be displayed on a page of a company's website. The page collects information about the customer.

If a customer enters a value before submitting the form, it must be a valid email address.

You need to ensure that the data validation requirement is met.



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you use?

- A. `<input name="email" type="url"/>`
- B. `<input name="email" type="text" required="required"/>`
- C. `<input name="email" type="text"/>`
- D. `<input name="email" type="email"/>`

Correct Answer: D
Section: Volume A
Explanation

Explanation/Reference:

Explanation:

Example:

```
<form>
```

E-mail:

```
<input type="email" name="email"/>
```

```
</form>
```

Reference:

http://www.w3schools.com/html/html5_form_input_types.asp

QUESTION 3

You are developing an application that consumes a Windows Communication Foundation (WCF) service.

The application interacts with the service by using the following code. (Line numbers are included for reference only.)

```

01 <script>
02   function getCountry(country) {
03     $.ajax({
04       type: "POST",
05       contentType: "application/json; charset=utf-8",
06       url: "http://contoso.com/Service.svc/GetCountry",
07       data: '{"Country":"' + country + "'",
08       dataType: "json",
09       success: OnSuccess,
10       error: OnError
11
12     });
13   }
14   function OnSuccess(data, status) {
15     ...
16   }
17   function OnError(request, status, error) {
18     ...
19   }
20 </script>

```

You need to authenticate to the WCF service.

What should you do?

- A. At line 11, add the following lines of code.
 ,username: yourusername
 ,password: yourpassword
- B. At line 11, add the following line of code.
 ,credentials: prompt
- C. At line 06, replace the code with the following line of code.
 url: "http://contoso.com/Service.svc/GetCountry?
 Username=username&password=password",
- D. At line 11, add the following line of code. The username and password will be stored in an XML file.
 ,credentials: credentials.xml

Correct Answer: C

Section: Volume A**Explanation****Explanation/Reference:****QUESTION 4**

You are developing a web page that enables customers to upload documents to a web server. The page includes an HTML5 PROGRESS element named progressBar that displays information about the status of the upload.

The page includes the following code. (Line numbers are included for reference only.)

```
01 var xhr = new XMLHttpRequest();
02 var progressBar = $("#progressBar");
03
04 function(e) {
05     if (e.lengthComputable) {
06         progressBar.value = (e.loaded / e.total) * 100;
07         progressBar.textContent = progressBar.value;
08     };
```

An event handler must be attached to the request object to update the PROGRESS element on the page.

You need to ensure that the status of the upload is displayed in the progress bar.

Which line of code should you insert at line 03?

- A. xhr.upload.onloadeddata =
- B. xhr.upload.onplaying =
- C. xhr.upload.onseeking =
- D. xhr.upload.onprogress =

Correct Answer: D

Section: Volume A

Explanation**Explanation/Reference:**

Explanation:

Example:

```
xhr.upload.onprogress = function(evt)
{
```

```
if (evt.lengthComputable)
{
    var percentComplete = parseInt((evt.loaded / evt.total) * 100);
    console.log("Upload: " + percentComplete + "% complete")
}
};
```

Reference: <http://stackoverflow.com/questions/3352555/xhr-upload-progress-is-100-from-the-start>

QUESTION 5

You are developing a customer web form that includes the following HTML.

```
<label id="txtValue"X/label>
```

Information from the web form is submitted to a web service. The web service returns the following JSON object.

```
{
"Confirmation": "1234",
"FirstName": "John"
}
```

You need to display the Confirmation number from the JSON response in the txtValue label field.

Which JavaScript code segment should you use?

- A. \$("#txtValue").val = (JSONObject.Confirmation);
- B. \$("#txtValue").val (JSONObject.Confirmation);
- C. \$("#txtValue").text = (JSONObject.Confirmation);
- D. \$("#txtValue").text (JSONObject.Confirmation);

Correct Answer: D

Section: Volume A

Explanation

Explanation/Reference:

Explanation:

Incorrect Answers:

A, B: A label object has no value attribute.

Reference:

<http://api.jquery.com/text/>

QUESTION 6

You are developing a customer web form that includes the following HTML.

```
<input id = "txtValue" />
```

A customer must enter a value in the text box prior to submitting the form.

You need to add validation to the text box control.

Which HTML should you use?

- A. `<input id="txtValue" type="text" required="required"/>`
- B. `<input id="txtValue" type="text" pattern="[A-Za-z]{3}" />`
- C. `<input id="txtValue" type="required" />`
- D. `<input id="txtValue" type="required" autocomplete="on" />`

Correct Answer: A

Section: Volume A

Explanation

Explanation/Reference:

Explanation:

Definition and Usage

The required attribute is a boolean attribute.

When present, it specifies that an input field must be filled out before submitting the form.

Example

An HTML form with a required input field:

```
<form action="demo_form.asp">
```

```
  Username: <input type="text" name="username" required />
  <input type="submit" />
</form>
```

```
Username: <input type="text" name="username" required />
```

Reference: HTML <input> required Attribute

http://www.w3schools.com/tags/att_input_required.asp

QUESTION 7

You are developing an HTML5 web application that displays the current temperature whenever a button is clicked. The following code provides this functionality.

```
function Loader() {
  this.status = "ready";
  this.temp = 50;
  this.updateStatus = function (newStatus) {
    status = newStatus;
  };
}

var loader = new Loader();

$(function () {
  $("#loadTemp").click(function (eventData) {
    loader.temp = loadTemp();
    loader.updateStatus("done");
  });
});
```

When the temperature is loaded, the status property on the loader instance does not change.

You need to ensure that the status property on the loader instance is updated when the temperature is loaded.

Which code segment should you use to replace the Loader function?

```
 A. function Loader() {  
    this.status = "ready";  
    this.temp = 50;  
    this.updateStatus = function (newStatus) {  
        this.status = newStatus;  
    };  
}
```

```
 B. function Loader() {  
    this.prototype.status = "ready";  
    this.temp = 50;  
    this.updateStatus = function (newStatus) {  
        this.status = newStatus;  
    };  
}
```

```
 C. function Loader() {  
    status = "ready";  
    this.temp = 50;  
    this.updateStatus = function (newStatus) {  
        status = newStatus;  
    };  
}
```

```
 D. function Loader() {  
    window.status = "ready";  
    this.temp = 50;  
    this.updateStatus = function (newStatus) {  
        status = newStatus;  
    };  
}
```

- A. Option A
- B. Option B
- C. Option C

D. Option D

Correct Answer: A
Section: Volume A

Explanation

Explanation/Reference:

Explanation:

Incorrect Answers:

D: window.status property

The status property sets the text in the status bar at the bottom of the browser, or returns the previously set text.

QUESTION 8

You are creating a class named Consultant that must inherit from the Employee class. The Consultant class must modify the inherited PayEmployee method. The Employee class is defined as follows.

```
function Employee() {}  
Employee.prototype.PayEmployee = function (  
) { alert('Hi there!'); }
```

Future instances of Consultant must be created with the overridden method.

You need to write the code to implement the Consultant class.

Which code segments should you use? (Each correct answer presents part of the solution. Choose two.)

A. `Consultant.PayEmployee = function ()`
`{`
`alert('Pay Consultant');`
`}`

B. `Consultant.prototype.PayEmployee = function ()`
`{`
`alert('Pay Consultant');`
`}`

C. `function Consultant () {`
`Employee.call(this);`
`}`
`Consultant.prototype = new Employee();`
`Consultant.prototype.constructor = Consultant;`

D. `function Consultant() { Employee.call(this); }`
`Consultant.prototype.constructor = Consultant.create;`

Correct Answer: BC

Section: Volume A

Explanation

Explanation/Reference:

Explanation:

* Object.prototype.constructor

Returns a reference to the Object function that created the instance's prototype. Note that the value of this property is a reference to the function itself, not a string containing the function's name. The value is only read-only for primitive values such as 1, true and "test".

* The constructor property is created together with the function as a single property of func.prototype. Reference:

Object.prototype.constructor

QUESTION 9

You are modifying an existing web page. The page is being optimized for accessibility. The current page contains the following HTML.

```
<ul>
  <li><a href="">Home</a></li>
  <li><a href="">Sales</a></li>
  <li><a href="">Operations</a></li>
</ul>
```

Standards-compliant screen readers must be able to identify the links contained within the navigation structure automatically.

You need to create the navigation link structure in the page.



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With which container tags should you wrap the existing markup?

- A. <navmap> </navmap>
- B. <div id="nav"> </div>
- C. <nav> </nav>
- D. <map> </map>

Correct Answer: C
Section: Volume A

Explanation

Explanation/Reference:

Explanation:

HTML <nav> Tag

Example

A set of navigation links:

```
<nav>  
  <a href="/html/">HTML</a> |  
  <a href="/css/">CSS</a> |  
  <a href="/js/">JavaScript</a> |  
  <a href="/jquery/">jQuery</a>  
</nav>
```

Reference: HTML <nav> Tag

http://www.w3schools.com/tags/tag_nav.asp

QUESTION 10

You are creating a JavaScript object that represents a customer.

You need to extend the Customer object by adding the GetCommission() method.

You need to ensure that all future instances of the Customer object implement the GetCommission() method.

Which code segment should you use?

- A. `Customer.apply.GetCommission() = function()`
`{`
`alert('payroll');`
`}`
- B. `Customer.prototype.GetCommission() = function Customer.GetCommission() ()`
`{`
`alert('payroll');`
`}`
- C. `Customer.GetCommission() = function () {`
`alert('payroll');`
`}`
- D. `Customer.prototype.GetCommission() = function ()`
`{`
`alert('payroll');`
`}`

- A. Option A
B. Option B
C. Option C
D. Option D

Correct Answer: D

Section: Volume A

Explanation

Explanation/Reference:

Explanation:

* `Object.prototype.constructor`

Returns a reference to the Object function that created the instance's prototype. Note that the value of this property is a reference to the function itself, not a string containing the function's name. The value is only read-only for primitive values such as 1, true and "test". * The constructor property is created together with the function as a single property of `func.prototype`.

Reference: `Object.prototype.constructor`

QUESTION 11

You are developing a web form that includes the following code.

```
<div id="dynamicForm">  
  <input type="checkbox" id="myCheckbox" onclick="ShowInputBox('dynamicForm');" >  
</div>
```

When a user selects the check box, an input text box must be added to the page dynamically.

You need to ensure that the text box is added.

Which function should you use?

- A.

```
function ShowInputBox(divName)
{
    var newInputDiv = document.createElement('div');
    newInputDiv.innerHTML = "<input type='text' id='newInputBox'>";
    document.getElementById(newInputDiv).appendChild(divName);
}
```
- B.

```
function ShowInputBox(divName)
{
    var newInputDiv = document.createElement('div');
    newInputDiv.innerHTML = "<input type='text' id='newInputBox'>";
    document.getElementById(divName).appendChild(newInputDiv);
}
```
- C.

```
function ShowInputBox(divName)
{
    var newInputDiv = document.createElement('div');
    newInputDiv.innerHTML = "<input type='text' id='newInputBox'>";
    document.getElementById(divName).applyElement (newInputDiv);
}
```
- D.

```
function ShowInputBox(divName)
{
    var newInputDiv = document.createElement('div');
    newInputDiv.innerHTML = "<input type='text' id='newInputBox'>";
    document.getElementById(newInputDiv).applyElement (divName);
}
```

- A. Option A
B. Option B
C. Option C
D. Option D

Correct Answer: B
Section: Volume A
Explanation

Explanation/Reference:

Explanation:

We create a new div element with the textbox.

We then use `appendChild()` method appends this node as the last child the input node `divname`.

Reference: HTML DOM `appendChild()` Method

QUESTION 12

You are developing an HTML5 page that has an element with an ID of `logo`. The page includes the following HTML.

```
<div>  
Logo:<br>  
<div id="logo">  
</div>  
</div>
```

You need to move the `logo` element lower on the page by five pixels.

Which lines of code should you use? (Each correct answer presents part of the solution. Choose two.)

- A. `document.getElementById("logo").style.position = "relative";`
- B. `document.getElementById("logo").style.top = "5px";`
- C. `document.getElementById("logo").style.top = "-5px";`
- D. `document.getElementById("logo").style.position = "absolute";`

Correct Answer: AB
Section: Volume A
Explanation

Explanation/Reference:

Explanation:

* `style.position = "relative";`

The element is positioned relative to its normal position, so `"left:20"` adds 20 pixels to the element's LEFT position.

* For relatively positioned elements, the `top` property sets the top edge of an element to a unit above/below its normal position.

Example:

Set the top edge of the image to 5px below the top edge of its normal position:

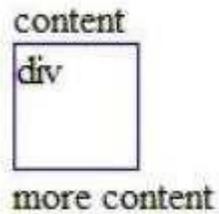
```
img {  
  position: relative;  
  top: 5px; }
```

Reference: CSS position Property; CSS top Property
http://www.w3schools.com/cssref/pr_class_position.asp
http://www.w3schools.com/cssref/pr_pos_top.asp

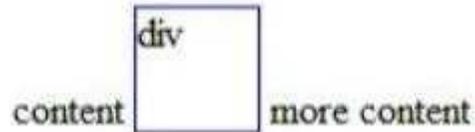
QUESTION 13

You are developing a web page by using HTML5 and C5S3. The page includes a <div> tag with the ID set to validate.

When the page is rendered, the contents of the <div> tag appear on a line separate from the content above and below it. The rendered page resembles the following graphic.



The page must be rendered so that the <div> tag is not forced to be separate from the other content. The following graphic shows the correctly rendered output.



You need to ensure that the page is rendered to meet the requirement.

Which line of code should you use?

- A. `document.getElementById("validate").style.display = "inline";`
- B. `document.getElementById("validate").style.margin = "0";`
- C. `document.getElementById("validate").style.padding = "0";`
- D. `document.getElementSyld("validate").style.display = "block";`

Correct Answer: A

Section: Volume A

Explanation

Explanation/Reference:

Explanation: *

display: value;

value: inline

Default value. Displays an element as an inline element (like)

* Example

Display <p> elements as inline elements:

```
p.inline {  
display: inline; }
```

Reference: CSS display Property

http://www.w3schools.com/cssref/pr_class_display.asp

QUESTION 14

You are creating a JavaScript function that displays the name of a web application.

You declare the following button element.

```
<input type="button" id= "About" value="About" />
```

When a user clicks the button, a JavaScript function named About must be called.

You need to create an event handler that calls the About function when the button is clicked.

Which two code segments can you use? (Each correct answer presents a complete solution. Choose two.)

- A.

```
var button = document.getElementById("About");  
ScriptEngine.call(button, About());
```
- B.

```
var button = document.getElementById("About");  
ScriptEngine.bind(button, About());
```
- C.

```
var button = document.getElementById("About");  
button.addEventListener("click", About);
```
- D.

```
var button = document.getElementById("About");  
button.attachEvent("onclick", About);
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: CD

Section: Volume A

Explanation

Explanation/Reference:

Explanation:

C: addEventListener

The addEventListener() method attaches an event handler to the specified element.

In context of a worker, both self and this refer to the global scope. The worker can either add an event listener for the message event, or it can define the onmessage handler to listen for any messages sent by the parent thread.

D: attachEvent method

Registers an event handler function (event listener) for the specified event on the current object.

Reference: addEventListener method; attachEvent method

<http://help.dottoro.com/ljeuqqoq.php>

<http://help.dottoro.com/ljinxrmt.php> **QUESTION 15**

You need to test the value of the following variable in JavaScript.

```
var length = "75";
```

A block of code must execute if the length equals 75 regardless of the data type.

You need to use the statement that meets this requirement.

Which lines of code should you use? (Each correct answer presents a complete solution. Choose two.)

- A. `if (length === 75)`
- B. `if (length == 75)`
- C. `if (length! = 75)`
- D. `if (length == "75")`

Correct Answer: BD

Section: Volume A

Explanation

Explanation/Reference:

Explanation:

When comparison is made using double-equals operator (`==`), it will check the values of variable and convert them to a common type and returns true if both are equals. So comparing number with string having the same value will return true.

Examples:

examples:

```
1
console.log(23 == "23"); // true
2
console.log(1 == true); // true
```

Incorrect Answers: `not ===`: This is "strict" or "identical" equality.

Reference: JavaScript Triple Equals Operator vs Double Equals Operator (`===` vs `==`)

QUESTION 16

You are developing an application that uses a third-party JavaScript library named `doWork()`.

The library occasionally throws an "object is null or undefined" error with an error code of -2146823281.

The application must:

- Extract and handle the exceptions thrown by `doWork()`
- Continue normal program execution if other exceptions occur

You need to implement the requirements.

Which code segment should you use?

A. `if (doWork() == -2146823281) {`
 `...;`
 `}`

B. `if (doWork() == "object is null or undefined") {`
 `...;`
 `}`

C. `try {`
 `doWork();`
 `} catch(e) {`
 `if (e.number == -2146823281)`
 `...;`
 `}`

D. `try {`
 `doWork();`
 `} catch(e) {`
 `if (e.message == -2146823281)`
 `...;`
 `}`

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: C

Section: Volume A

Explanation

Explanation/Reference:

Explanation:

* The try statement lets you test a block of code for errors. The catch statement lets you handle the error.

The JavaScript statements try and catch come in pairs:

```
try {
    Block of code to try
} catch(err)
{
    Block of code to handle errors
}
```

* `object.number` [= `errorNumber`]

Returns or sets the numeric value associated with a specific error. The Error object's default property is `number`.

* Example:

The following example causes an exception to be thrown and displays the error code that is derived from the error number.

```
try
{
    // Cause an error.
    var x = y;
}
catch(e)
{
    document.write ("Error Code: ");
document.write (e.number & 0xFFFF)
document.write ("<br />");    document.write
("Facility Code: ")
document.write(e.number>>16 & 0x1FFF)
    document.write ("<br />");
document.write ("Error Message: ")
    document.write (e.message)
}
```

The output of this code is as follows.

```
Error Code: 5009
Facility Code: 10
Error Message: 'y' is undefined
```

Reference: JavaScript Errors - Throw and Try to Catch; `number` Property (Error) (JavaScript)

QUESTION 17

You are troubleshooting a web page that includes the following code. (Line numbers are included for reference only.)

```
01 <!DOCTYPE html>
02 <html lang="en" xmlns="http://www.w3.org/1999/xhtml">
03 <head>
04   <meta charset="utf-8" />
05   <title></title>
06   <script>
07     document.addEventListener("DOMContentLoaded", function () {
08       var elButton = document.getElementById("myButton");
09       var elDiv = document.getElementById("myDiv");
10       elButton.addEventListener("click", function () {
11         alert(this.type);
12       }, false);
13     }, false);
14   </script>
15 </head>
16 <body>
17   <div id="myDiv">Test</div>
18   <input type="button" id="myButton" value="Click Me" />
19 </body>
20 </html>
```

What is displayed in the alert from line 11?

- A. Div
- B. Function
- C. Button
- D. Document

Correct Answer: C

Section: Volume A

Explanation

Explanation/Reference:

Explanation:

* The event handler here normalizes event object (passed as a first argument) and invokes handleCellClick in a proper context (i.e. referring to an element that was attached event listener to). The element is the button elButton.

* addEventListener

Syntax: element.addEventListener(event, function, useCapture)

Reference: HTML DOM addEventListener() Method

QUESTION 18

You are developing a web application that consumes services from a third-party application. A web worker processes the third-party application requests in the background. A page in the application instantiates the web worker process.

You need to establish two-way communications between the web worker process and the page.

Which two actions will achieve this goal? (Each correct answer presents a complete solution. Choose two.)

- A. From the web worker, use the onopen event handler of the main page to capture events.
- B. From the main page, use the onmessage event handler of the web worker to capture events.
- C. From the web worker, use the onmessage event handler of the main page to capture events.
- D. From the main page, use the onopen event handler of the web worker to capture events.

Correct Answer: BC

Section: Volume A

Explanation

Explanation/Reference:

Explanation:

* When postMessage() is called from the main page, our worker handles that message by defining an onmessage handler for the message event.

* Server-Sent Events - One Way Messaging

A server-sent event is when a web page automatically gets updates from a server.

Receive Server-Sent Event Notifications

The EventSource object is used to receive server-sent event notifications:

Example

```
var source = new EventSource("demo_sse.php");
source.onmessage = function(event) {
    document.getElementById("result").innerHTML += event.data + "<br>";
};
```

Reference:

http://www.w3schools.com/html/html5_serversentevents.asp

<http://www.html5rocks.com/en/tutorials/workers/basics/>

QUESTION 19

You are developing an HTML5 web application that displays customer mailing address information.

The application loads addresses from a web service by using AJAX. The following code defines a Customer object and loads address data.

```
function Customer(firstName, lastName) {
    this.firstName = firstName;
    this.lastName = lastName;
    this.address = "";
}

Customer.prototype.parseAddress = function (data) {
    this.address = data.address;
}

Customer.prototype.loadAddress = function () {
}
```

You need to implement the loadAddress function.

Which code segment should you use?

- A. `$.get('data.xml', function (data) {
 (function (scope) {
 scope.parseAddress(data);
 })(data);
});`
- B. `$.get('data.xml', function (data, innerScope) {
 innerScope.parseAddress(data);
});`
- C. `var that = this;
$.get('data.xml', function (data) {
 that.parseAddress(data);
});`
- D. `$.get('data.xml', function (data) {
 this.parseAddress(data);
});`

- A. Option A
B. Option B
C. Option C
D. Option D

Correct Answer: C

Section: Volume A

Explanation

Explanation/Reference:

QUESTION 20

You are developing a web page. You create a grid layout by using the following CSS segment.

```
#myGrid {  
  display: -ms-grid;  
  background: gray;  
  -ms-grid-columns: 100px 100px;  
  -ms-grid-rows: 50px 50px 50px;  
}
```

You have the following requirements:

- You must place content in the first column of the second row. ▪
The content must span two columns.

You need to ensure that the style of the grid meets the requirements.

Which CSS segment should you use?

- A.

```
#itemSpan {  
  -ms-grid-row: 2;  
  -ms-grid-column: 1;  
  -ms-grid-column-span: 2  
}
```
- B.

```
#itemSpan {  
  -ms-grid-row: 2;  
  -ms-grid-column: 1;  
  -ms-grid-column-span: initial  
}
```
- C.

```
#itemSpan {  
  -ms-grid-row: 2;  
  -ms-grid-column: 1;  
  -ms-grid-column-width: 2;  
}
```
- D.

```
#itemSpan {  
  -ms-grid-row: 2;  
  -ms-grid-column: 1;  
  -ms-grid-column-span: inherit  
}
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: A Section: Volume A

Explanation

Explanation/Reference:

Explanation:

-ms-grid-column-span

Gets or sets a value that specifies the number of columns of the grid that the object spans.

This property is read-only.

Property values

The number of columns.

Integer value that specifies the number of columns to span.

Reference: -ms-grid-column-span property

QUESTION 21

You are developing a web page by using HTML5.

You have the following requirements:

- An H1 element must be placed at the top left corner of the page.
- The size and location of the H1 element must not change if additional elements are added to the page.

You need to position the H1 element on the page.

Which CSS3 style should you use?

A.

```
h1
{
  position:absolute;
  left:0px;
  top:0px;
}
```

C.

```
h1
{
  position:static;
  left:100%;
  top:100%;
}
```

B.

```
h1
{
  position:absolute;
  left:100%;
  top:100%;
}
```

D.

```
h1
{
  position:static;
  left:0px;
  top:0px;
}
```

A. Option A

B. Option B

- C. Option C
- D. Option D

Correct Answer: A
Section: Volume A
Explanation

Explanation/Reference:

Explanation:

* The position property specifies the type of positioning method used for an element (static, relative, absolute or fixed). absolute: The element is positioned relative to its first positioned (not static) ancestor element

* For absolutely positioned elements, the left property sets the left edge of an element to a unit to the left/right of the left edge of its containing element.

CSS Syntax

left: auto|length|initial|inherit; length: Sets the left edge position in px, cm, etc.

Incorrect Answers:

position static: Default value. Elements render in order, as they appear in the document flow

Reference: CSS position Property; CSS left Property

QUESTION 22

You are styling a box object on a page by using CSS3.

You need to set the transparency of the object to 50%.

Which two CSS3 styles will achieve the goal? (Each correct answer presents a complete solution. Choose two.)

```
 A. .Box {  
    background: rgb(255,0,0);  
    backface-visibility: hidden;  
}
```

```
 B. .Box {  
    background: rgb(255,0,0);  
    background: rgba(255,0,0,.5);  
}
```

```
 C. .Box {  
    background: rgb(255,0,0);  
    opacity: 0.5;  
}
```

```
 D. .Box {  
    background: rgb(255,0,0);  
    background-color: #fff;  
}
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: BC

Section: Volume A

Explanation

Explanation/Reference:

Explanation:

The RGBA declaration allows you to set opacity (via the Alpha channel) as part of the color value.

Example:

```
div { background-color: rgba(255,0,0,0.5); }
```

The background color has been set to blue, and the opacity set to half.

Example 2:

background-color: rgb(0,0,255); opacity: 0.5;

The background color has been set to blue, and the opacity set to half.

Reference: A brief introduction to Opacity and RGBA <http://www.css3.info/introduction-opacity-rgba/>

QUESTION 23

You are developing an HTML5 web application and are styling text.

You need to use the text-transform CSS property.

Which values are valid for the text-transform property?

- A. hidden
- B. blink
- C. capitalize
- D. line-through

Correct Answer: C

Section: Volume A

Explanation

Explanation/Reference:

Explanation:

CSS Syntax

text-transform: none|capitalize|uppercase|lowercase|initial|inherit;

Example

Transform text in different elements:

```
h1 {text-transform:uppercase;}
```

```
h2 {text-transform:capitalize;}
```

```
p {text-transform:lowercase;}
```

Reference: CSS text-transform Property

http://www.w3schools.com/cssref/pr_text_text-transform.asp

QUESTION 24

You are developing a page that includes text and an illustration. The web page resembles the following image.

ris nisi ut aliquip ex ea commodo consequat. Duis aute i
velit esse cillum dolore eu fugiat nulla pariatur. Excepte
sunt in culpa
arum und
distinct. Nam
se civiuda. Et
libidig met,
na aliquam
s nostrud
oluptate velit
rinda ad eos et accusam dignissim qui blandit est praes
t occae. Et harum d dereud facilis est er expedit distinct.
est congue nihil impedit doming id Lorem ipsum dolor:



You have the following requirements:

- The illustration must be in the center of the page.
- The text must flow around the left, right, top, and bottom of the illustration.

You need to ensure that the layout of the web page meets the requirements.

Which line of code should you use?



<https://vceplus.com/>

- A. `-ms-wrap-flow: both;`
- B. `-ms-wrap-flow: clear;`
- C. `-ms-wrap-flow: maximum;`
- D. `-ms-wrap-flow: auto;`

Correct Answer: A

Section: Volume A

Explanation

Explanation/Reference:

Explanation:

`-ms-wrap-flow`

Gets or sets a value that specifies how exclusions impact inline content within block-level elements.

Syntax

`-ms-wrap-flow: auto | both | start | end | maximum | clear`

`both`

Inline flow content can flow on all sides of the exclusion.

Reference: `-ms-wrap-flow` property

[http://msdn.microsoft.com/en-us/library/ie/hh673558\(v=vs.85\).aspx](http://msdn.microsoft.com/en-us/library/ie/hh673558(v=vs.85).aspx)

<http://dev.w3.org/csswg/css3-exclusions/>

QUESTION 25

You are developing a web page that has a group of H1 and H2 elements. The page also includes a CSS class named `underlineMe`.

You have the following requirements:

- The font color of all H1 and H2 elements must be changed to red.
- The CSS class `underlineMe` must be applied to all H1 and H2 elements.

You need to update the web page to meet the requirements.

Which code segment should you use?

- A. `$(":head").addClass('underlineMe');`
`$(":head").css({ color: 'red' });`
- B. `$("h1").css({ color: 'red' });`
`$("h1").addClass('underlineMe');`
- C. `$("h2").css({ color: 'red' });`
`$("h2").addClass('underlineMe');`
- D. `$(":header").css({ color: 'red' });`
`$(":header").addClass('underlineMe');`

A. Option A

- B. Option B
- C. Option C
- D. Option D

Correct Answer: D
Section: Volume A
Explanation

Explanation/Reference:

Explanation:

The :header selector selects all header elements (<h1> to <h6>).

Reference: jQuery :header Selector

http://www.w3schools.com/jquery/selector_header.asp

QUESTION 26

You are developing a web page that will be divided into three vertical sections. The main content of the site will be placed in the center section. The two outer sections will contain advertisements.

You have the following requirements:

- The main content section must be set to two times the width of the advertising sections. ▪

The layout must be specified by using the CSS3 flexible box model.

You need to ensure that the visual layout of the page meets the requirements.

Which CSS3 property should you use?

- A. box-orient
- B. box-flex-group
- C. box-flex
- D. box-direction

Correct Answer: C
Section: Volume A

Explanation

Explanation/Reference:

Explanation:

box-flex

Values: 0 | Any integer

The flexibility ratio for this child. If a child had 1 and its sibling had 2, any additional space in the parent box would be consumed twice as much by the sibling. It defaults to 0 which is inflexible.

Reference: Quick hits with the Flexible Box Model
<http://www.html5rocks.com/en/tutorials/flexbox/quick/>

QUESTION 27

You are developing a customer web form that includes the following HTML input field.

```
<input id="txtValue"/>
```

If a customer enters a value in the input field, then it must be a numeric value.

You need to add validation to the input field.

Which HTML should you use?

- A. `<input id="txtValue" type="text" pattern="/#" />`
- B. `<input id="txtValue" type="number" />`
- C. `<input id="txtValue" type="integer" />`
- D. `<input id="txtValue" type="text" required="required"/>`

Correct Answer: B

Section: Volume A

Explanation

Explanation/Reference:

Explanation: ▪ HTML5

Input Types:

- color
- date
- datetime
- datetime-local
- email
- month
- number
- range
- search
- tel
- time
- url
- week

Reference: HTML Input Types

https://www.w3schools.com/html/html_form_input_types.asp

QUESTION 28

You are developing a customer web form that includes the following HTML.

```
<input id="txtValue"/>
```

You need to change the HTML markup so that customers can enter only a valid three-letter country code.

Which HTML should you use?

- A. `<input id="txtValue" type="code" />`
- B. `<input id="txtValue" type="text" pattern="[A-Za-z]{3}" />`
- C. `<input id="txtValue" type="text" required="required"/>`
- D. `<input id="txtValue" type="country" />`

Correct Answer: B

Section: Volume A

Explanation

Explanation/Reference:

Explanation:

HTML `<input>` pattern Attribute

The pattern attribute specifies a regular expression that the `<input>` element's value is checked against.

Example

An HTML form with an input field that can contain only three letters (no numbers or special characters):

```
<form action="demo_form.asp">
Country code: <input type="text" name="country_code" pattern="[A-Za-z]{3}" title="Three letter country code">
<input type="submit">
</form>
```

Reference: HTML `<input>` pattern Attribute

http://www.w3schools.com/tags/att_input_pattern.asp

QUESTION 29

You are developing a web form that includes the following HTML.

```
<input id="txtValue" type="text" />
```

You need to ensure that a value is entered into txtValue before the form is submitted.

Which code segment should you use?

A.

```
function validate() {
  var name = $("#txtValue").val();
  if (name == null || name == "")
    alert("please enter valid value");
  return;
}
```

B.

```
function validate() {
  var value = $("#txtValue").val();
  var regex = /^[d\,\.\.]*$/;
  if (!regex.test(value))
    alert("please enter valid value");
  return;
}
```

C.

```
function validate() {
  var name = $("#txtValue").get();
  if (name == null || name == "")
    alert("please enter valid value");
  return;
}
```

D.

```
function validate() {
  var value = $("#txtValue").get();
  var regex = /^[A-Za-z]{3}/;
  if (!regex.test(value) || value == "")
    alert("please enter valid value");
  return;
}
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: A
Section: Volume A

Explanation

Explanation/Reference:

Explanation:

Input Text Object Properties include: value: Setsor returns the value of the value attribute of the text field

Check if text is a null value or an empty string.

Reference: HTML DOM Input Text Object

QUESTION 30

You are developing a web page that consumes a Windows Communication Foundation (WCF) service. The page includes the following code segment.

```
var xhr = new XMLHttpRequest() ;
```

The page uses the `xhrHandler()` method to listen for changes to the request status of the WCF service calls. It uses the `xmlToJavaScript()` method to convert the response from the WCF service to a JavaScript object.

The `xhrHandler()` method must be called automatically each time the request status changes.

You need to add the event handler to the request object.

Which line of code should you use?

- A. `xhr.onCallback = xhrHandler;`
- B. `xhr.onreadystatechange = xhrHandler;`
- C. `xhr.readyState = xhrHandler;`
- D. `xhr.status = xhrHandler;`

Correct Answer: B
Section: Volume B
Explanation

Explanation/Reference:

Explanation:

/ onreadystatechange: Sets or retrieves the event handler for asynchronous requests.

Specifies a reference to an event handler for an event that fires at every state change

readyState

Returns the state of the object as follows:

* 0 = uninitialized – open() has not yet been called.

* 1 = open – send() has not yet been called.

* 2 = sent – send() has been called, headers and status are available.

* 3 = receiving – Downloading, responseText holds partial data (although this functionality is not available in IE [3]) * 4 = loaded – Done.

/ Example (assuming that there is a function handler():

```
var oReq = getXMLHttpRequest(); if (oReq != null) {  
oReq.open("GET", "http://localhost/test.xml", true);  
oReq.onreadystatechange = handler;  
oReq.send();
```

Reference: XMLHttpRequest object; XMLHttpRequest (XHR)

[https://msdn.microsoft.com/en-us/library/ie/ms535874\(v=vs.85\).aspx](https://msdn.microsoft.com/en-us/library/ie/ms535874(v=vs.85).aspx)

<http://mrfwebdesign.blogspot.ca/2008/11/xmlhttprequest-xhr.html>

QUESTION 31

You are developing a customer web form that includes following HTML.

```
<input id="txtValue"/>
```

You need to develop the form so that customers can enter only a valid country code consisting of three English alphabet characters.

Which code segment should you use?

A.

```
function validate() {
  var name = $("#txtValue").text();
  if (name == null || name == "")
    alert("please enter valid value");
  return;
}
```

B.

```
function validate() {
  var value = $("#txtValue").text();
  var regex = /^[d\,\.\.]*$/;
  if (!regex.test(value) || name == "")
    alert("please enter valid value");
  return;
}
```

C.

```
function validate() {
  var value = $("#txtValue").val();
  var regex = /^[A-Za-z]{3}/;
  if (!regex.test(value) || value == "")
    alert("please enter valid value");
  return;
}
```

D.

```
function validate() {
  var name = $("#txtValue").val();
  if (name == null || name == "")
    alert("please enter valid value");
  return;
}
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: C
Section: Volume B
Explanation

Explanation/Reference:

Explanation:

* The val() method returns or sets the value attribute of the selected elements.

* HTML <input> pattern Attribute

The pattern attribute specifies a regular expression that the <input> element's value is checked against.

Example

An HTML form with an input field that can contain only three letters (no numbers or special characters):

```
<form action="demo_form.asp">  
Country code: <input type="text" name="country_code" pattern="[A-Za-  
z]{3}" title="Three letter country code">  
<input type="submit">  
</form>
```

Reference: HTML <input> pattern Attribute

http://www.w3schools.com/tags/att_input_pattern.asp

QUESTION 32

You are developing an application that consumes an external web service that returns the latest stock rate.

The application has two methods:

- The getResults() method makes an AJAX web service request
- The ShowRate() method displays the stock rate from the web service response You

need to ensure that the ShowRate() method always displays the latest stock rate.

Which code segment should you use?

A.

```
function getResults(){
$.ajax({
  type: 'POST',
  cache:true,
  url: "StockRates.asmx/GetRate",
  data: { 'StockName': stockName }
  dataType: 'json',
  success: function (result) {
    stockRate = result;
  });
  ShowRate();
}

function ShowRate() {
  alert(stockRate);
}
```

B.

```
var stockRate;
function getResults(){
$.ajax({
  async: false,
  type: 'POST',
  url: "StockRates.asmx/GetRate",
  data: { 'StockName': stockName },
  dataType: 'json',
  success: function (result) {
    stockRate = result;
  });
  ShowRate();
}

function ShowRate() {
  alert(stockRate);
}
```

C.

```
var stockRate;
function getResults(){
$.ajax({
  async: true,
  type: 'POST',
  url: "StockRates.asmx/GetRate",
  data: { 'StockName': stockName },
  dataType: 'json',
  success: function (result) {
    stockRate = result;
  });
  ShowRate();
}

function ShowRate() {
  alert(stockRate);
}
```

D.

```
var stockRate;
function getResults(){
$.ajax({
  async: false,
  cache:false,
  type: 'POST',
  url: "StockRates.asmx/GetRate",
  data: { 'StockName': stockName },
  dataType: 'json',
  success: function (result) {
    stockRate = result;
  });
  ShowRate();
}

function ShowRate() {
  alert(stockRate);
}
```

- B. Option B
- C. Option C
- D. Option D

Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:

Explanation:

" always displays the latest stock rate ". Should use cache: false

Note: cache (default: true, false for dataType 'script' and 'jsonp')

Type: Boolean

If set to false, it will force requested pages not to be cached by the browser.

Reference: jQuery.ajax()

QUESTION 33

You are creating a JavaScript function to display the current version of a web application
You declare a button as follows.

```
<input type="button" id="About" value="About" />
```

You need to create an event handler for the button by using an anonymous function.

Which code segment should you use?

- A. `var button = document.getElementById("About");
button.addEventListener('click', function { alert("Version 2.1.0") });`
- B. `var button = document.getElementById("About");
button.addEventListener('click', function (alert("Version 2.1.0")));`
- C. `var button = document.getElementById("About");
button.addEventListener('click', function () { alert("Version 2.1.0") });`
- D. `var button = document.getElementById("About");
button.addEventListener('click', alert("Version 2.1.0"));`

- A. Option A
B. Option B
C. Option C
D. Option D

Correct Answer: C
Section: Volume B
Explanation

Explanation/Reference:

Explanation:

Example

When passing parameter values, use an "anonymous function" that calls the specified function with the parameters:

```
document.addEventListener("click", function() {  
  myFunction(p1, p2);  
});
```

Reference: [HTML DOM addEventListener\(\) Method](#)

QUESTION 34

You are testing the value of the following variable in JavaScript.

```
var height = "300";
```

A block of code must execute if the following conditions are true:

- The height variable is set to 300
- The height variable is of type string You need

to implement the code to run the test.

Which line of code should you use?

- A. `if (height == 300)`
- B. `if (height == "300")`
- C. `if (height != "300")`
- D. `if (height != 300)`

Correct Answer: B

Section: Volume B

Explanation

Explanation/Reference:

Explanation:

Use `==` to test for equality.

Use `"300"` to test for the string.

QUESTION 35

You are developing a web application that uses web workers to process images extracted from an HTML5 CANVAS object on a web page.

You need to pass messages between the web workers and the web page.

Which three types of objects should you use? (Each correct answer presents a complete solution. Choose three.)

- A. JSON
- B. Window
- C. Parent
- D. String
- E. JavaScript
- F. DOM

Correct Answer: ADE

Section: Volume B

Explanation

Explanation/Reference:

Explanation:

* Example:

```
var myHelloWorker = new Worker('helloworkers.js');
```

You'll then start the worker (and thus a thread under Windows) by sending it a first message:

```
myHelloWorker.postMessage();
```

Indeed, the Web Workers and the main page are communicating via messages. Those messages can be formed with normal strings or JSON objects.

* (E) The Web Workers API makes it possible to execute a JavaScript file asynchronously and autonomously. A web worker is essentially a thread executing a JavaScript file.

* (A, D) In the first implementations of web workers the browsers only allowed strings to be exchanged as messages. However, recent implementations allow for exchange of values or JSON objects.

Reference: HTML5 Web Workers

QUESTION 36

You are modifying a blog site to improve search engine readability.

You need to group relevant page content together to maximize search engine readability.

Which tag should you use?

- A. <nav>
- B. <article>
- C.
- D. <div>

Correct Answer: B

Section: Volume B

Explanation

Explanation/Reference:

Explanation:

The <article> tag specifies independent, self-contained content.

An article should make sense on its own and it should be possible to distribute it independently from the rest of the site.

Potential sources for the <article> element:

- Forum post
- Blog post
- News story
- Comment

Reference: HTML <article> Tag

http://www.w3schools.com/tags/tag_article.asp

http://www.w3schools.com/html/html5_new_elements.asp

QUESTION 37

You are developing an HTML5 web application for a surveyor company that displays topographic images.

The application must:

- Display the topographic images at different zoom levels without loss of detail
- Print the topographic images without loss of detail
- Work from only one source file for each topographic image

You need to ensure that the topographic images display according to the requirements.

Which HTML5 element should you use?

- A. SVG
- B. CANVAS
- C. SAMP
- D. AREA

Correct Answer: A

Section: Volume B

Explanation

Explanation/Reference:

Explanation:

* SVG stands for Scalable Vector Graphics

SVG is used to define graphics for the Web

SVG is a W3C recommendation

* The HTML <svg> element (introduced in HTML5) is a container for SVG graphics.

SVG has several methods for drawing paths, boxes, circles, text, and graphic images.

Reference: HTML5 SVG

QUESTION 38

You are modifying a website. The body of the page will be divided into two sections:

- A content section will contain blog posts and comments.
- An area on the right-hand side will contain advertisements.

The page is defined by the following HTML.

```
<table width="100%" border="1">
  <tr>
    <td class="header" colspan="2">
      Welcome to My Blog!
    </td>
  </tr>
  <tr>
    <td width="70%">
      ...
    </td>
    <td width="30%">
      ...
    </td>
  </tr>
  <tr>
    <td class="footer" colspan="2">
      ...
    </td>
  </tr>
</table>
```

The site must conform to HTML5 standards and must use HTML5 semantic tags.

You need to ensure that the advertisements are on the rightmost section of the page.

Which tag should you use?

- A. <aside>
- B. <div>
- C. <article>
- D. <footer>

Correct Answer: A

Section: Volume B

Explanation

Explanation/Reference:

Explanation:

The <aside> tag defines some content aside from the content it is placed in.
The aside content should be related to the surrounding content.

aside is now acceptable for secondary content when not nested within an article element.

Reference: HTML <aside> Tag

QUESTION 39

You are developing an HTML5 page.

You need to add author and copyright information.

Which tag should you use?

- A. <aside>
- B. <header>
- C. <footer>
- D. <section>

Correct Answer: C

Section: Volume B

Explanation

Explanation/Reference:

Explanation:

The footer element represents a footer for its nearest ancestor sectioning content or sectioning root element. A footer typically contains information about its section such as who wrote it, links to related documents, copyright data, and the like.

Reference: The footer element <http://dev.w3.org/html5/spec-preview/the-footer-element.html>

QUESTION 40

You are developing an HTML5 web application and are styling text.

You need to use the text-transform CSS property.

Which value is valid for the text-transform property?

- A. Lowercase
- B. Blink
- C. Line-through
- D. 20px

Correct Answer: A

Section: Volume B

Explanation

Explanation/Reference:

Explanation: CSS

Syntax

text-transform: none|capitalize|uppercase|lowercase|initial|inherit;

Reference: CSS text-transform Property

QUESTION 41

You are creating a JavaScript object that represents an employee.

You need to extend the Employee object by adding the GetPayroll() method.

You need to ensure that all future instances of the Employee object implement the GetPayroll() method.

Which code segment should you use?

- A. `Employee.apply.GetPayroll() = function()`
`{`
`alert("payroll");`
`}`
- B. `Employee.prototype.GetPayroll = function Employee.GetPayroll()`
`{`
`alert("payroll");`
`}`
- C. `Employee.GetPayroll() = function(){`
`alert("payroll");`
`}`
- D. `Employee.prototype.GetPayroll = function()`
`{`
`alert("payroll");`
`}`

- A. Option A
B. Option B
C. Option C
D. Option D

Correct Answer: D

Section: Volume B

Explanation

Explanation/Reference:

Explanation:

* `Object.prototype.constructor`

Returns a reference to the Object function that created the instance's prototype. Note that the value of this property is a reference to the function itself, not a string containing the function's name. The value is only read-only for primitive values such as 1, true and "test". * The constructor property is created together with the function as a single property of `func.prototype`.

Reference: `Object.prototype.constructor`

QUESTION 42

You are modifying a blog site to improve search engine readability.

You need to group relevant page content together to maximize search engine readability.

Which tag should you use?

- A. <article>
- B. <table>C. <div>
- D.

Correct Answer: A

Section: Volume B

Explanation

Explanation/Reference:

Explanation:

The <article> tag specifies independent, self-contained content.

An article should make sense on its own and it should be possible to distribute it independently from the rest of the site.

Potential sources for the <article> element:

- Forum post
- Blog post
- News story
- Comment

QUESTION 43

You are developing an HTML5 page that has an element with an ID of picture. The page includes the following HTML.

```
<div>
  Picture:<br />
  <div id = "picture">
  </div>
</div>
```

You need to move the picture element lower on the page by five pixels.

Which two lines of code should you use? (Each correct answer presents part of the solution. Choose two.)

- A. document.getElementById("picture").style.position = "relative";

- B. `document.getElementById("picture").style.top = "5px";`
- C. `document.getEiementById("picture").style.top = "-5px";`
- D. `document.getElementById("picture").style.position = "absolute";`

Correct Answer: AB

Section: Volume B

Explanation

Explanation/Reference:

Explanation:

We use relative position to move the position 5 pixels lower on page.

Using a negative value would move the picture higher on the page.

Note:

* The top property sets or returns the top position of a positioned element.

This property specifies the top position of the element including padding, scrollbar, border and margin.

Syntax

Set the top property:

```
Object.style.top="auto|length|%|inherit"
```

Where:

Length defines the top position in length units. Negative values are allowed

QUESTION 44

You are modifying a blog site to improve search engine readability.

You need to group relevant page content together to maximize search engine readability.

Which tag should you use?



<https://vceplus.com/>

- A. <section>
- B. <tbody>
- C. <div>
- D. <table>

Correct Answer: A
Section: Volume B
Explanation

Explanation/Reference:

Explanation:

The <section> tag defines sections in a document. Such as chapters, headers, footers, or any other sections of the document.

QUESTION 45

You are developing a customer web form that includes the following HTML.

```
<input id="txtValue"/>
```

You need to change the HTML markup so that customers can enter only a valid three-letter country code.

Which HTML should you use?

- A. <input id="txtValue" type="country"/>
- B. <input id="txtValue" type="text" required="xxx"/>
- C. <input id="txtValue" type="text" pattern="[A-Za-z]{3}"/>
- D. <input id="txtValue" type="code" pattern="country"/>

Correct Answer: C
Section: Volume B
Explanation

Explanation/Reference:

Explanation:

HTML <input> pattern Attribute

The pattern attribute specifies a regular expression that the <input> element's value is checked against.

Example

An HTML form with an input field that can contain only three letters (no numbers or special characters):

```
<form action="demo_form.asp">
```

```
Country code: <input type="text" name="country_code" pattern="[A-Za-z]{3}" title="Three letter country code"/>
<input type="submit">
</form>
```

Reference: HTML <input> pattern Attribute
http://www.w3schools.com/tags/att_input_pattern.asp

QUESTION 46

You are developing an HTML5 web application and are styling text.

You need to use the text-transform CSS property.

Which value is valid for the text-transform property?

- A. Italic
- B. Line-through
- C. Capitalize
- D. 20px

Correct Answer: C

Section: Volume B

Explanation

Explanation/Reference:

Explanation:

CSS Syntax

text-transform: none|capitalize|uppercase|lowercase|initial|inherit;

Example

Transform text in different elements:

```
h1 {text-transform:uppercase;}
```

```
h2 {text-transform:capitalize;}
```

```
p {text-transform:lowercase;}
```

Reference: CSS text-transform Property
http://www.w3schools.com/cssref/pr_text_text-transform.asp

QUESTION 47

You are modifying a blog site to improve search engine readability.

You need to group relevant page content together to maximize search engine readability.

Which tag should you use?

- A. <tbody>
- B. <article>
- C. <div>
- D.

Correct Answer: B

Section: Volume B

Explanation

Explanation/Reference:

Explanation:

The <article> tag specifies independent, self-contained content.

An article should make sense on its own and it should be possible to distribute it independently from the rest of the site.

Potential sources for the <article> element:

Forum post
Blog post
News story
Comment

QUESTION 48

You are modifying a blog site to improve search engine readability.

You need to group relevant page content together to maximize search engine readability.

Which tag should you use?

- A.
- B. <nav>
- C. <table>
- D. <section>

Correct Answer: D

Section: Volume B

Explanation

Explanation/Reference:

Explanation:

The <section> tag defines sections in a document. Such as chapters, headers, footers, or any other sections of the document.

QUESTION 49

You are developing an HTML5 web application and are styling text. You need to use the text-transform CSS property.

Which value is valid for the text-transform property?

- A. red
- B. hidden
- C. lowercase
- D. italic

Correct Answer: C

Section: Volume B

Explanation

Explanation/Reference:

Explanation: CSS

Syntax

text-transform: none|capitalize|uppercase|lowercase|initial|inherit;

Example

Transform text in different elements:

```
h1 {text-transform:uppercase;}
```

```
h2 {text-transform:capitalize;}
```

```
p {text-transform:lowercase;}
```

Reference: CSS text-transform Property

http://www.w3schools.com/cssref/pr_text_text-transform.asp

QUESTION 50

You are developing an HTML5 web application and are styling text.

You need to use the text-transform CSS property.

Which value is valid for the text-transform property?

- A. Italic
- B. Red
- C. Capitalize
- D. Line-through

Correct Answer: C

Section: Volume B

Explanation

Explanation/Reference:

Explanation: CSS

Syntax

text-transform: none|capitalize|uppercase|lowercase|initial|inherit;

Example

Transform text in different elements:

```
h1 {text-transform:uppercase;}
```

```
h2 {text-transform:capitalize;}
```

```
p {text-transform:lowercase;}
```

Reference: CSS text-transform Property

http://www.w3schools.com/cssref/pr_text_text-transform.asp

QUESTION 51

You develop an HTML5 webpage. You have the following HTML markup: (Line numbers are for reference only.)

```
01 <table>
02   <tr>
03     <th>Fruit</th>
04     <th>Quantity</th>
05     <th>Price</th>
06   </tr>
07   <tr>
08     <td>Apples</td>
09     <td>48</td>
10     <td>$0.29</td>
11   </tr>
12   <tr>
13     <td>Bananas</td>
14     <td>72</td>
15     <td>$0.19</td>
16   </tr>
17   <tr>
18     <td>Watermelon</td>
19     <td>14</td>
20     <td>$3.99</td>
21   </tr>
22 </table>
```

The webpage also contains the following CSS markup:

```
table { border: 1px solid black; font-family: Arial; }
tr:nth-child(odd) { background-color: red; }
tr td:nth-of-type(even) { background-color: blue; }
```

You need to determine how the webpage will appear when the CSS styles are applied.

Select two.

- A. The first row of the table will have a red background.
- B. The second row of the table will have a red background.
- C. The second cell in the first row of the table will have a blue background.
- D. The second cell in the third row of the table will have a blue background.

E. The second cell in the third row of the table will have not have blue background.

Correct Answer: AE

Section: Volume B

Explanation

Explanation/Reference:

Explanation:

Fruit	Quantity	Price
Apples	48	\$0.29
Bananas	72	\$0.19
Watermelon	14	\$3.99

QUESTION 52

You develop a webpage.

The webpage must display a grid that contains one row and five columns. Columns one, three, and five are the same width. Columns two and four are the same width, but much wider than columns one, three, and five. The grid resembles the following image:

--	--	--	--	--

The grid must meet the following requirements:

- Each row must be tall enough to ensure that images are not cut off.
- Each row must contain five columns.
- The width of the columns must not change when the screen is resized or rotated.

You need to define the style for the grid. Which CSS3 style should you use?

- A.

```
<style type="text/css">
#grid {
  display: -ms-grid;
  -ms-grid-columns: 2fr (3fr 2fr) [2];
  -ms-grid-rows: auto;
}
</style>
```
- B.

```
<style type="text/css">
#grid {
  display: -ms-grid;
  -ms-grid-columns: 100px (250px 100px) [2];
  -ms-grid-rows: min-content;
}
</style>
```
- C.

```
<style type="text/css">
#grid {
  display: -ms-grid;
  -ms-grid-columns: 100px 250px 100px 250px 100px;
  -ms-grid-rows: auto;
}
</style>
```
- D.

```
<style type="text/css">
#grid {
  display: -ms-grid;
  -ms-grid-columns: 100px 250px 100px 250px 100px;
  -ms-grid-rows: min-content;
}
</style>
```

- A. Option A
B. Option B
C. Option C
D. Option D

Correct Answer: C
Section: Volume B
Explanation

Explanation/Reference:

Explanation:

* -ms-grid-rows property auto

The height of a row is computed based on the tallest child element in that column.

Incorrect Answers:

A: The width of the columns must not change when the screen is resized or rotated.

B, D: -ms-grid-rows property
min-content

The minimum height of any child elements is used as the height of the row.

Note:

* width

The width of each column specified as one of the following values:

A length consisting of an integer number, followed by an absolute units designator ("cm", "mm", "in", "pt", or "pc") or a relative units designator ("em", "ex", or "px").

A percentage of the object width.

A proportion of the remaining horizontal space (that is, the object width, less the combined widths of other tracks), consisting of an integer number followed by a fractional designator ("fr"). For example, if "200px 1fr 2fr" is specified, the first column is allocated 200 pixels, and the second and third columns are allocated 1/3 and 2/3 of the remaining width, respectively.

QUESTION 53

You implement an application by using HTML5 and JavaScript. You create a webpage that contains the following HTML:

```
<!DOCTYPE html>
<html>
<head>
  <link href="site.css" rel="stylesheet" type="text/css" />
  <script type="text/javascript" src="jquery.js"></script>
</head>
<body>
  <div id="container">
    <ul>
      <li>First List Item
        <ul>
          <li>Child List Item</li>
        </ul>
      </li>
      <li>Second List Item</li>
      <li>Third List Item</li>
      <li>Fourth List Item</li>
    </ul>
    <p>Some interesting information that we need to display.</p>
    <p>More information that is important to this page.</p>
  </div>
</body>
</html>
```

The application must place a border on only the first UL element that is contained in the DIV element.

You need to update the webpage.

What should you do?

A. Add the following SCRIPT element after the DIV element:

```
<script>
  $("div").each(function () {
    $("ul").each(function (index, domEle) {
      $(domEle).css("border", "1px solid black");
    });
  });
</script>
```

B. Add the following SCRIPT element after the DIV element:

```
<script>
  $("div#container > ul").css("border", "1px solid black");
</script>
```

C. Add the following SCRIPT element after the DIV element:

```
<script>
  $("ul:first-of-type").css("border", "1px solid black");
</script>
```

D. Add the following style to the site.css file:

```
.container > ul {
  border: 1px solid black;
}
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: D

Section: Volume B
Explanation

Explanation/Reference:

Explanation:

Example:

CSS File:

```
ul {  
  border: 1px solid black;  
}
```

Inline CSS:

```
<ul class="container" style="border: 1px solid black">
```

QUESTION 54

You are implementing an application by using HTML5 and JavaScript. A web page contains the following HTML table.

```
<table id="dataTable">  
  <tbody>  
    <tr><td>...</td></tr>  
    <tr class="selected"><td>...</td></tr>  
    <tr><td>...</td></tr>  
    <tr class="selected"><td>...</td></tr>  
    <tr><td>...</td></tr>  
    <tr class="selected"><td>...</td></tr>  
  </tbody>  
  <tfoot>  
    <tr class="selected"><td>...</td></tr>  
    <tr class="selected"><td>...</td></tr>  
    <tr class="selected"><td>...</td></tr>  
  </tfoot>  
</table>
```

The application must:

- Identify all rows in the table body that have a class attribute of selected ▪
- Exclude the last selected row in the table

You need to implement the web page according to the requirements.

Which CSS selector should you use?

- A. `tr:not(tr:last-child).selected < #dataTable`
- B. `#dataTable > tr.selected:not(tr:last-child)`
- C. `#dataTable tbody tr.selected:not(tr:last-child)`
- D. `#dataTable tr.selected:not(tr:last-child)`

Correct Answer: C

Section: Volume B

Explanation

Explanation/Reference:

Explanation:

* [attribute]

[target]

Selects all elements with a target attribute

* :not(selector)not(p)

Selects every element that is not a <p> element

Reference: CSS Selector Reference

QUESTION 55

You create an application that sends information to a web service by using the following code: (Line numbers are included for reference only.)

```
01 function CustomError(code) {  
02     this.errorCode = code;  
03 }  
04  
05 var code = send();  
06 if (code != 0) {  
07     throw new CustomError(code);  
08 }
```

When the web service returns a non-zero result code, you must raise an exception that contains the result code.

You need to implement the code that generates the exception.

Which line of code should you insert at line 04?

- A. `CustomError.prototype = Error.prototype;`
- B. `CustomError ["ErrorType"] = Error;`

- C. CustomError.customError = true;
- D. Error-constructor = CustomError;
- E. Error.constructor = CustomError;

Correct Answer: A

Section: Volume B

Explanation

Explanation/Reference:

Explanation:

Object.prototype.constructor

Returns a reference to the Object function that created the instance's prototype. Note that the value of this property is a reference to the function itself, not a string containing the function's name. The value is only read-only for primitive values such as 1, true and "test".

The constructor property is created together with the function as a single property of func.prototype.

Reference: Object.prototype.constructor

QUESTION 56

You are developing a customer web form that includes following HTML.

```
<input id= "textAccountType"/>
```

You need to develop the form so that customers can enter only a valid account type consisting of two English alphabet characters.

Which code segment should you use?

```
C A. function validate() {  
    var value = $("#txtAccountType").text();  
    if (value == null || value == "")  
        alert("please enter valid account type");  
    return;  
}
```

```
C B. function validate() {  
    var value = $("#txtAccountType").val();  
    var regex = /^[A-Za-z]{2}$/;  
    if (!regex.test(value) || value == "")  
        alert("please enter valid account type");  
    return;  
}
```

```
C C. function validate() {  
    var value = $("#txtAccountType").val();  
    if (value == null || value == "")  
        alert("please enter valid account type");  
    return;  
}
```

```
C D. function validate() {  
    var value = $("#txtAccountType").text();  
    var regex = /^[A-Za-z]{2}$/;  
    if (!regex.test(value) || value == "")  
        alert("please enter valid account type");  
    return;  
}
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: B

Section: Volume B

Explanation

Explanation/Reference:

Explanation:

HTML <input> pattern Attribute

The pattern attribute specifies a regular expression that the <input> element's value is checked against.

Example

An HTML form with an input field that can contain only two letters (no numbers or special characters):

```
<form action="demo_form.asp">  
Country code: <input type="text" name="country_code" pattern="[A-Za-  
z]{2}" title="Three letter country code"/>  
<input type="submit"/>  
</form>
```

Reference: HTML <input> pattern Attribute

http://www.w3schools.com/tags/att_input_pattern.asp

QUESTION 57

You are developing an application that uses a JavaScript library. The library contains the following functions.

```

function ValidationException(number, message) {
    this.message = message;
    this.name = "myLibrary Validation Exception";
    this.number = number;
}

function LogicException(number, message) {
    this.message = message;
    this.name = "myLibrary Logic Exception";
    this.number = number;
}

function myFunction(dayOfWeek) {
    if (dayOfWeek > 7) {
        throw new ValidationException(123, "Day of week must be less than 7");
    }
}

```

The application uses the following code. (Line numbers are included for reference only.)

```

01 function doWork(value) {
02     try {
03         myFunction(value)
04     } catch (e) {
05
06     }
07 }

```

The library may throw many types of exceptions. The exceptions are grouped by category.

You need to catch and identify the exceptions by group.

Which code segment should you insert at line 05?

- A.

```
if (typeof (e) == "ValidationException") {
    handleValidationException (e.message);
} else if (typeof (e) == "LogicException") {
    handleLogicException (e.message);
} else {
    throw e;
}
```
- B.

```
if (e instanceof ValidationException) {
    handleValidationException(e.message);
} else if (e instanceof LogicException) {
    handleLogicException (e.message);
} else {
    throw e;
}
```
- C.

```
switch (e) {
    case ValidationException:
        handleValidationException (e.message);
        break;
    case LogicException:
        handleLogicException (e.message);
        break;
    default:
        throw e;
}
```
- D.

```
if (e.message == "ValidationException") {
    handleValidationException (e.message);
} else if (e.message == "LogicException") {
    handleLogicException (e.message);
} else {
    throw e;
}
```

A. Option A

B. Option B C. Option C

D. Option D

Correct Answer: B
Section: Volume B
Explanation

Explanation/Reference:
Explanation:

The instance of operator tests whether an object has in its prototype chain the prototype property of a constructor.

The instance of operator tests presence of constructor.prototype in object prototype chain.

Example::

```
// defining constructors
```

```
function C(){}
```

```
function D(){}
```

```
var o = new C();
```

```
// true, because: Object.getPrototypeOf(o) === C.prototype
```

```
o instanceof C;
```

```
// false, because D.prototype is nowhere in o's prototype chain
```

```
o instanceof D;
```

Reference: instanceof

QUESTION 58

An HTML page contains no embedded JavaScript or CSS code. The body of the page contains only the following line of code.

```
<p id="test">test</p>
```

A CSS style sheet must be applied dynamically. The style must visibly change the appearance of the paragraph on the page.

You need to apply a style the paragraph.

Which line of code should you use?

A. `document.getElementById("test").style.border = "0";`

B. `document.getElementById("test").style.position = "static";`

C. `document.getElementById ("test").style.padding = "15px";`

D. `document.getElementById("test").style.top = "5px";`

Correct Answer: C
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 59

You develop an HTML5 web application. The web application contains a form that allows users to enter only their month of birth.

The value that the users enter must be numbers between 1 and 12, inclusive.

You need to implement the form element for the month of birth.

Which element should you use?

- A. `<input type="time" options="month" />`
- B. `<input type="tel" min="1" max="12" />`
- C. `<input type="range" min="1" max="12" />`
- D. `<input type="month" itemscope="numeric" />`
- E. `<input type="date" data-role="month"/>`

Correct Answer: C

Section: Volume C

Explanation

Explanation/Reference:

Explanation:

Example:

```
</head>
<body>
  <input type="range" name="rangeInput" min="0" max="100" onchange="updateTextInput(this.value);"/>
  <input type="text" id="textInput" value=""/>
</body>
</html>
```

QUESTION 60

You are developing an HTML5 web application for an architectural company that displays architectural blueprints.

The application must:

- Display the blueprints at different zoom levels without loss of detail
- Print the blueprints without loss of detail
- Work from only one source file per blueprint

You need to ensure that blueprints display according to the requirements.

Which HTML5 element should you use?

- A. CANVAS
- B. SAMP
- C. SVG
- D. AREA

Correct Answer: C

Section: Volume C

Explanation

Explanation/Reference:

Explanation:

* SVG stands for Scalable Vector Graphics
SVG is used to define graphics for the Web
SVG is a W3C recommendation

* The HTML <svg> element (introduced in HTML5) is a container for SVG graphics.

SVG has several methods for drawing paths, boxes, circles, text, and graphic images.

Reference: HTML5 SVG

QUESTION 61

You develop an HTML5 application that allows users to upload files from their local computers. The user interface must remain responsive during the upload.

You need to implement the file upload functionality for the application.

Which two actions should you perform? (Each correct answer presents a complete solution. Choose two.)

- A. Use an HTML form with a file type INPUT element that targets a hidden IFRAME element.
- B. Use a file type INPUT element, and then use the Web Storage API to upload the file.
- C. Use a FormData object and upload the file by using XMLHttpRequest.
- D. Register the file protocol by using protocol handler registration API and then upload the file by using XMLHttpRequest.
- E. Use the FileSystem API to load the file, and then use the jQuery post method to upload the file to the server.

Correct Answer: BD

Section: Volume C

Explanation

Explanation/Reference:

Explanation:

B: Example (notice the web storage api upload.aspx):

```
<!DOCTYPE html>
<html>
<head>
  <title>Upload Files using XMLHttpRequest - Minimal</title>
</head>
<body>
  <form id="form1" enctype="multipart/form-data" method="post" action="Upload.aspx">
<div class="row">
  <label for="fileToUpload">Select a File to Upload</label><br />
  <input type="file" name="fileToUpload" id="fileToUpload" onchange="fileSelected();"/>
</div>
  <div id="fileName"></div>
  <div id="fileSize"></div>
  <div id="fileType"></div>
  <div class="row">
    <input type="button" onclick="uploadFile()" value="Upload" />
</div>
  <div id="progressNumber"></div>
</form>
</body>
</html>
```

D:

* Because we're using XMLHttpRequest, the uploading is happening in the background. The page the user is on remains intact. Which is a nice feature to have if your business process can work with it.

* The XMLHttpRequest object has gotten a facelift in the Html5 specifications. Specifically the XMLHttpRequest Level 2 specification (currently the latest version) that has included the following new features:

- Handling of byte streams such as File, Blob and FormData objects for uploading and downloading
- Progress events during uploading and downloading
- Cross-origin requests
- Allow making anonymous request - that is not send HTTP Referer
- The ability to set a Timeout for the Request

QUESTION 62

You are developing a web application that can function when users are not connected to the Internet.

You need to check the Internet connectivity status of a user's browser.

Which method should you use?

```
C A. function checkConnection()
{
  if (navigator.isOnline) {
    ...
  }
}
```

```
C B
function checkConnection()
{
  if (browser.isOnline) {
    ...
  }
  else
  {
    ...
  }
}
```

```
C C. function checkConnection()
{
  if (browser.online) {
    ...
  }
  else
  {
    ...
  }
}
```

```
C D. function checkConnection()
{
  if (navigator.online) {
    ...
  }
  else
  {
    ...
  }
}
```

- B. Option B
- C. Option C
- D. Option D

Correct Answer: D
Section: Volume C

Explanation

Explanation/Reference:

Explanation:

Navigator onLine Property

The onLine property returns a Boolean value that specifies whether the browser is in online or offline mode.

Example

Find out whether the browser is online:

```
var x = "Is the browser online? " + navigator.onLine;
```

The result of x will be:

Is the browser online? true

Reference: Navigator onLine Property

QUESTION 63

You are creating a page that contains detailed employee information for a company portal. The page uses a jQuery library. The page contains a hidden button named btnEdit that is defined by the following code. `<button id="btnEdit" style="display: none;>Edit</button>` The button is not displayed by default.

The button must be displayed only if the user is logged on.

You need to add code to the `document.ready()` function to meet the requirements for the button.

Which line of code should you use?

- A. `$('#btnEdit').appear ();`
- B. `$('#btnEdit').visible = true;`
- C. `$('#btnEdit').show();`
- D. `$('#btnEdit').Visible();`

Correct Answer: C
Section: Volume C

Explanation

Explanation/Reference:

Explanation:

With jQuery, you can hide and show HTML elements with the `hide()` and `show()` methods:

Example

```
$("#hide").click(function(){  
    $("p").hide();  
});
```

```
$("#show").click(function(){  
    $("p").show();  
});
```

Reference: [jQuery Effects - Hide and Show](#)

QUESTION 64

You are developing an application that analyzes population data for major cities in the United States. The application retrieves population statistics for a city by using a web service.

You need to request data from the web service by using jQuery.

Which code segment should you use?

- A. `$.ajax({
 url: "Services/WSAjax.aspx/GetPopulationCity?city='Boston'",
 dataType: "text", type: "POST"
});`
- B. `$.ajax({
 url: "Services/WSAjax.aspx/GetPopulationCity",
 dataType: "text", type: "SEND", data: { city: "Boston" }
});`
- C. `$.ajax({
 url: "Services/WSAjax.aspx/GetPopulationCity?city='Boston'",
 dataType: "text", type: "SEND"
});`
- D. `$.ajax({
 url: "Services/WSAjax.aspx/GetPopulationCity",
 dataType: "text", type: "POST", data: { city: "Boston" }
});`

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: D
Section: Volume C

Explanation

Explanation/Reference:

Explanation:
* type:

We post a SOAP request.

* data:

Data to be sent to the server.

The data option can contain either a query string of the form key1=value1&key2=value2, or an object of the form {key1: 'value1', key2: 'value2'}.

Reference: jQuery.ajax()

QUESTION 65

You are developing a blog web page that is being optimized for accessibility. The page includes the following HTML.

```
<body>

  <h1>Blog Post Title</h1>
  <h2>Subtitle</h2>
  <h3>Authors Byline</h3>

</body>
```

The heading tags represent a blog post title, a blog post subtitle, and the author's name.

You need to ensure that the three headings are treated as a unit but retain their individual formatting.

Which tags should you use to wrap the H1, H2, and H3 elements?

- A. <group> </group>
- B. <header> </header>
- C. <hgroup> </hgroup>
- D. <headings> </headings>

Correct Answer: C

Section: Volume C

Explanation

Explanation/Reference:

Explanation:

The <hgroup> tag is used to group heading elements.

The <hgroup> element is used to group a set of <h1> to <h6> elements, when a heading has multiple levels (subheadings).

Reference: HTML <hgroup> Tag

QUESTION 66

You develop a web application by using jQuery. You develop the following jQuery code: (Line numbers are included for reference only.)

```
01 <script>
02   $(document).ready(function () {
03     $('#submit').click(function () {
04       $.ajax({
05
06         data: $('#myForm').serialize(),
07         success: function (result) {
08           $('#result').text(result.message);
09         }
10       });
11     });
12   });
13 </script>
```

The web application exposes a RESTful web API that has an endpoint of /product/create.

You need to create a new product by using AJAX.

Which code segment should you insert at line 05?

- A. `type: "POST",
dataType: "xml",
contentType: "application/x-www-form-urlencoded; charset=UTF-8",
url: "/product/create",`

- B. `type: "GET",
dataType: "xml",
contentType: "application/x-www-form-urlencoded; charset=UTF-8",
url: "/product/create",`

- C. `type: "POST",
dataType: "json",
contentType: "application/json",
url: "/product/create/post",`

- D. `type: "POST",
dataType: "json",
url: "/product/create",`

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: D

Section: Volume C

Explanation

Explanation/Reference:

Explanation:

* url: /product/createThis is the endproduct.

* datatype:

The type of data that you're expecting back from the server.

* contentType (default: 'application/x-www-form-urlencoded; charset=UTF-8')

Reference: jQuery.ajax()

QUESTION 67

You develop a webpage that allows a user to download a JPEG image and convert it to a PNG file.

You need to implement the code to download the contents of the JPEG image with no additional decoding.

Which JavaScript function should you use?

- A. readAsBinaryString()
- B. readAsArrayBuffer()
- C. readAsDataURL()
- D. readAsText()

Correct Answer: B

Section: Volume C

Explanation

Explanation/Reference:

Explanation:

The readAsArrayBuffer method is used to read a File, Blob, MSStream into memory as an ArrayBuffer object.

Reference: FileReader.readAsArrayBuffer

QUESTION 68

You are modifying a blog site to improve search engine readability.

You need to group relevant page content together to maximize search engine readability.

Which tag should you use?

- A. <article>
- B.
- C. <tbody>
- D. <cd>

Correct Answer: A

Section: Volume C

Explanation

Explanation/Reference:

Explanation:

How the Changes in HTML 5 Will Affect SEO (Search Engine Optimization)?

As a SEO expert, you are most likely interested mainly in those changes in the HTML 5 specification, which will affect your work. Here is one of them:

A new <article> tag. The new <article> tag is probably the best addition from a SEO point of view. The <article> tag allows to mark separate entries in an online publication, such as a blog or a magazine. It is expected that when articles are marked with the <article> tag, this will make the HTML code cleaner because it will reduce the need to use <div> tags. Also, probably search engines will put more weight on the text inside the <article> tag as compared to the contents on the other parts of the page.

QUESTION 69

You develop an HTML application that contains a table that displays a list of products. The table is defined with the following HTML markup:

```
<table>
  <thead>
    <tr>
      <th>Product</th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <td>Adjustable Race</td>
    </tr>
    <tr>
      <td>Blade</td>
    </tr>
    <tr>
      <td>Chainring</td>
    </tr>
    <tr>
      <td>Down Tube</td>
    </tr>
  </tbody>
</table>
```

You must style the table to look like the following image:

Product
Adjustable Race
Blade
Chainring
Down Tube

You need to implement the CSS selectors to select the rows that must have a blue background.

Which CSS selector should you use?

- A. `thead:only-child, tbody:after, table:before`
- B. `tr [line |-0, 1, 3]`
- C. `tr:first-of-type, tr:last-of-type`
- D. `tr:first-line, tr:last-child`

Correct Answer: C
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 70

You develop a webpage by using HTML5. You create the following markup:

```
<input type "url" name= "website" required="required" />
```

You need to ensure that the value that the user enters contains a secure URL.

What should you do?

- A. Add the following attribute to the input tag: `value="https://v`
- B. Add the following attribute to the input tag: `pattern="https://.+"`
- C. Add the following attribute to the input tag: `value="ssl"`
- D. Add the following attribute to the input tag: `itemtype="https"`

Correct Answer: B

Section: Volume C
Explanation

Explanation/Reference:

Explanation:

Note:

- * The pattern attribute is supported in Internet Explorer 10, Firefox, Opera, and Chrome.
- * The pattern attribute specifies a regular expression that the <input> element's value is checked against.
- * The pattern attribute works with the following input types: text, search, url, tel, email, and password

QUESTION 71

You develop a webpage by using HTML5. You create the following markup and code: (Line numbers are included for reference only.)

```
01 <head>
02   <script>
03     function removeInvalid(input) {
04
05     }
06   </script>
07 </head>
08 <body>
09   Given Name: <input type="text" id="GivenName" onblur="removeInvalid(this);" />
10   Surname: <input type="text" id="Surname" onblur="removeInvalid(this);" />
11 </body>
```

You need to ensure that the values that users enter are only numbers, letters, and underscores, regardless of the order.

Which code segment should you insert at line 04?

- A.

```
if (!/^[A-Za-z0-9_]+$/.test(input.value))
    input.value = "Invalid";
```
- B.

```
if (!/^[^A-Za-z0-9_]/.test(input.value))
    input.value = "Invalid";
```
- C.

```
var regEx = new RegExp("^\\w");
if (!input.value.match(regEx))
    input.value = "Invalid";
```
- D.

```
var regEx = "[\\w\\d]";
if (!input.value.match(regEx))
    input.value = "Invalid";
```

- A. Option A
B. Option B
C. Option C
D. Option D

Correct Answer: A
Section: Volume C

Explanation

Explanation/Reference:

Explanation:

Example:

Sometimes situations arise when user should fill a single or more than one fields with alphabet characters (A-Z or a-z) in a HTML form. You can write a JavaScript form validation script to check whether the required field(s) in the HTML form contains only letters. –

Javascript function to check for all letters in a field
view plainprint?

```
function allLetter(inputtxt)
```

```

{
  var letters = /^[A-Za-z]+$/;
  if(inputtxt.value.match(letters))
  {
    return true;
  }
else
  {
    alert("message");
    return false;
  }
}

```

To get a string contains only letters (both uppercase or lowercase) we use a regular expression (/^[A-Za-z]+\$/) which allows only letters. Next the match() method of string object is used to match the said regular expression against the input value. Reference: JavaScript : HTML Form validation - checking for all letters

QUESTION 72

You are creating an HTML5 application that allows users to play video on a page by using the VIDEO element.

You need to enable the user to start, stop, and pause the video.

Which line of code should you add to the page?

- A. <video id= "myVideo" height="320" width="400" src="myVideo.vtt" contextmenu="pauseplay"> </video>
- B. <video id="myVideon height="320" width="400" src="myVideo.vtt" controls> </video>
- C. <video _d="myVideon height="320" width="400" src="myVideo.vtt" autoplay> </video>
- D. <video id="myVideo" height="320" width="400" src="myVideo.vtt" contextinenu="Startstopn> </video>

Correct Answer: B

Section: Volume C

Explanation

Explanation/Reference:

Explanation:

The HTML <video> Element

To show a video in HTML, use the <video> element:

The controls attribute adds video controls, like play, pause, and volume.

Example

```
<video width="320" height="240" controls>
```

```
<source src="movie.mp4" type="video/mp4">
<source src="movie.ogg" type="video/ogg"> Your
browser does not support the video tag.
</video>
```

Reference: HTML5 Video

QUESTION 73

You are creating a web page that contains a canvas with text.

The page contains the following JavaScript code. (Line numbers are included for reference only.)

```
01 var canvas = document.getElementById('myCanvas');
02 var context = canvas.getContext('2d');
03
```

The text on the canvas must rotate 90 degrees when a user clicks a button on the page.

You need to ensure that the text rotates when the user clicks the button.

Which line of code should you add at line 03?

- A. context.transform(90);
- B. context.content.getRotation(90);
- C. context.rotate(90);
- D. context.content.rotate (90);

Correct Answer: C

Section: Volume C

Explanation

Explanation/Reference:

Explanation:

The rotate() method rotates the current drawing.

Example

Rotate the rectangle 20 degrees:

JavaScript:

```
var c=document.getElementById("myCanvas");
```

```
var ctx=c.getContext("2d");
ctx.rotate(20*Math.PI/180);
ctx.fillRect(50,20,100,50);
```

Reference: [HTML canvas rotate\(\) Method](#)

QUESTION 74

You develop an HTML5 webpage that contains the following HTML markup:

```
<label for="loanTypes">Loan Types</label>
<select name="loanTypes" id="loanTypes" multiple="multiple">
  <option>Secured</option>
  <option selected="selected">Unsecured</option>
  <option>Demand</option>
  <option selected="selected">Subsidized</option>
</select>
```

You have the following requirements:

- Retrieve the content for any OPTION elements when the value of the selected attribute equals selected. ▪
- Add the content to a comma separated string.

You need to retrieve the required data.

Which two code segments should you add to the webpage? (Each correct answer presents a complete solution. Choose two.)

- A. `$("#select option:checked").each(function () {
 selectedValues += $(loanTypes).text() + ',';
});`
- B. `$("#select option:selected").each(function () {
 selectedValues += $(loanTypes).text() + ',';
});`
- C. `$("#select option:selected").each(function () {
 selectedValues += $(this).text() + ',';
});`
- D. `$("#loanTypes option:selected").each(function () {
 selectedValues += $(this).text() + ',';
});`
- E. `$("#loanTypes option:checked").each(function () {
 selectedValues += $(loanTypes).text() + ',';
});`

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

Correct Answer: BD

Section: Volume C

Explanation

Explanation/Reference:

Explanation:

Note:

* select option:selected

:selected Selector

Description: Selects all elements that are selected.

QUESTION 75

You develop an HTML5 application. You give users a numeric access code that can be used only one time.

Users must enter the numeric access code in the login form of the application. The numeric characters must be hidden by a masking character.

You need to implement the form element for users to enter the code.

Which HTML element should you use?



<https://vceplus.com/>

- A. `<input type="password" required autocomplete="off">`
- B. `<input type="input" autocomplete="off" required />`
- C. `<input type="password" style="visibility:hidden;" required />`
- D. `<input type="button" value="password" required />`
- E. `<input type="password" style="visibility:hidden;" required/>`

Correct Answer: A

Section: Volume C

Explanation**Explanation/Reference:**

Explanation:

Input Type: password

`<input type="password">` defines a password field.

The characters in a password field are masked (shown as asterisks or circles).

The autocomplete attribute specifies whether or not an input field should have autocomplete enabled.

The autocomplete attribute works with the following <input> types: text, search, url, tel, email, password, datepickers, range, and color.

Reference: HTML Input Types ; HTML <input> autocomplete Attribute

QUESTION 76

You are developing an HTML5 web application that displays stock information.

The application loads information from a web service by using AJAX.

The following code defines a Stock object and loads stock data.

```
function Stock(symbol) {
    this.symbol = symbol;
    this.low = 0;
    this.high = 0;
}

Stock.prototype.parseStock = function (data) {
    this.low = data.low;
    this.high = data.high;
}

Stock.prototype.loadStock = function () {
}
```

You need to implement the loadStock function.

Which code segment should you use?

- A.

```
var stock = this;
$.get('data.xml', function (data) {
    stock.parseStock(data);
});
```
- B.

```
$.get('data.xml', function (data, innerScope) {
    innerScope.parseStock(data);
});
```
- C.

```
$.get('data.xml', function (data) {
    this.parseStock(data);
});
```
- D.

```
$.get('data.xml', function (data) {
    (function (scope) {
        scope.parseStock(data);
    })(data);
});
```

- A. Option A
B. Option B
C. Option C
D. Option D

Correct Answer: A

Section: Volume C

Explanation

Explanation/Reference:

You are developing a web page that includes the following HTML.

```
<span id = "myTextSpan" class = "redText"> Hello There! </span>
```

The font color of text inside the span must be red.

You need to develop the web page to meet the requirement.

Which two CSS segments will achieve the goal? (Each correct answer presents a complete solution. Choose two.)

A.

```
.redText
{
  color: red;
}
```

B.

```
.myTextSpan
{
  color: red;
}
```

C.

```
span#myTextSpan
{
  color: red;
}
```

D.

```
#redText
{
  color: red;
}
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: AC

Section: Volume C

Explanation

Explanation/Reference:

Explanation:

You can refer to class, by `.redText`, or the span, by `span#myTextSpan`.

QUESTION 78

You are troubleshooting an application.

Users report that the UI is slow to respond.

You need to improve UI responsiveness by moving application tasks to web workers.

Which two tasks can you move to achieve this goal? (Each correct answer presents a complete solution. Choose two.)

- A. A function that loops through the Document Object Model to update the style of page elements
- B. A long-running calculation that requires looping through an array
- C. A function that performs graphic-intensive animation
- D. A function that stores large amounts of data to local storage

Correct Answer: BC

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

Note:

* Despite the improvements in JavaScript engines, it is not uncommon for users to encounter frozen user interfaces as the browser works through resource intensive tasks. This leads to a horrible user experience. The purpose of Web Workers is to give developers a way of instructing the browser to process large tasks in the background; therefore preventing the UI from freezing up.

* The Web Workers specification defines an API for spawning background scripts in your web application. Web Workers allow you to do things like fire up longrunning scripts to handle computationally intensive tasks, but without blocking the UI or other scripts to handle user interactions

QUESTION 79

You develop an interactive scalable vector graphic (SVG) application.

You write the following code (Line numbers are included for reference only.):

```
01 <script>
02
03 </script>
04 <svg height="150" width="150" id="myGraphic">
05   <circle cx="25" r="20" cy="20" fill="orange" id="myCircle"/>
06 </svg>
07 <button id="zoom" onclick="zoomIn();">Zoom In</button>
```

You need to increase the size of the circle by 50 percent.

Which code segment should you insert at line 02?

- A.

```
function zoomIn() {
  var myGraphic = document.getElementById("myGraphic");
  myGraphic.createSVGTransform(1.5);
}
```
- B.

```
function zoomIn() {
  var myGraphic = document.getElementById("myGraphic");
  myGraphic.setAttribute("currentScale", 1.5);
}
```
- C.

```
function zoomIn() {
  var myCircle = document.getElementById("myCircle");
  myCircle.setAttribute("currentScale", 1.5);
}
```
- D.

```
function zoomIn() {
  var myCircle = document.getElementById("myCircle");
  myCircle.r = myCircle.r * 1.5;
}
```

- A. Option A
B. Option B
C. Option C
D. Option D

Correct Answer: D

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

Increase the radius (the r property) of the circle (not the graphic) by a factor 1.5.

Incorrect:

CurrentScale is used for zooming.

Reference: The HTML <svg> Element

QUESTION 80

You develop an HTML5 webpage. You have the following HTML markup:

```
<label for="personname">Given and Surname:</label>
<input type="text" name="personname" /><br />

<label for="businessname">Business Name:</label>
<input type="text" name="businessname" /><br />

<label for="emailaddress">Email Address:</label>
<input type="text" name="emailaddress" />
```

You need to change the background color for all of the elements whose name attribute ends with the word name.

Which code segment should you add to the webpage?

- A. `$('input [name!="name"]') .css ({ 'background-color' : ' #E0ECF8' }) ;`
- B. `$('input [name=~"name"]') .css ({ 'background-color' : ' #E0ECF8' }) ;`
- C. `$('input [name="*name"]') .css ({ 'background-color' : ' #E0ECF8' }) ;`
- D. `$('input [name="$name"]') .css ({ 'background-color' : ' #E0ECF8' }) ;`

Correct Answer: C

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

The string pattern `"*name"` matches all strings that ends with name.

QUESTION 81

You develop an HTML application that is located at www.adventure-works.com.

The application must load JSON data from www.fabrikam.com.

You need to choose an approach for loading the data.

What should you do?

- A. Design a REST URI scheme with multiple domains.
- B. Configure Cross-Origin Resource Sharing (CORS) on the servers.
- C. Load the data by using WebSockets.
- D. Use the jQuery getJSON method.

Correct Answer: B

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

* Cross-origin resource sharing (CORS) is a mechanism that allows Javascript on a web page to make XMLHttpRequests to another domain, not the domain the Javascript originated from. Such "cross-domain" requests would otherwise be forbidden by web browsers, per the same origin security policy. CORS defines a way in which the browser and the server can interact to determine whether or not to allow the cross-origin request. It is more powerful than only allowing same-origin requests, but it is more secure than simply allowing all such cross-origin requests.

* You must use Cross Origin Resource Sharing

It's not as complicated as it sounds...simply set your request headers appropriately...in Python it would look like:

```
self.response.headers.add_header('Access-Control-Allow-Origin', '*'); self.response.headers.add_header('Access-Control-Allow-Methods', 'GET, POST, OPTIONS'); self.response.headers.add_header('Access-Control-Allow-Headers', 'X-Requested-With'); self.response.headers.add_header('Access-Control-Max-Age', '86400');
```

QUESTION 82

You are building a web page for a newspaper publisher.

You have the following requirements:

- The web page should split the content into columns that are at least 100 pixels wide.
- The number of columns displayed must be set by the browser.

You need to implement the correct CSS properties.

Which line of code should you use?

- A. `<div id="outer" style="width: 100px; column-fill: balance;">...</div>`
- B. `<div id="outer" style="width: 100px; column-gap: 10px;">...</div>`
- C. `<div id="outer" style="column-width: 100px; "> . . </div>`

D. `<div id="outer" style="width: 100px; columns: 100px 3">...</div>`

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:

Explanation: column-width

The width attribute specifies the width of a `<col>` element.

Normally, a `<col>` element takes up the space it needs to display the content. The width attribute is used to set a predefined width of a `<col>` element.

Syntax:

```
<col width="pixels|%|relative_length">
```

QUESTION 83

You develop an HTML5 webpage. You have the following HTML markup:

```
<section id="news">
  <h1>World News</h1>
  <article id="news1">...</article>
  <article id="news2">...</article>
  <article id="news3">...</article>
</section>
<section id="sports">
  <h1>Sports</h1>
  <article id="sports1">...</article>
  <article id="sports2">...</article>
  <article id="sports3">...</article>
</section>
```

You need to add a background color to the first article in each section.

Which code segment should you add to the webpage?

- A. `$ ("section article:first-child").css("background-color", "#f2f2f2");`
- B. `$ ("section:first-child").css ("background-color", "#f2f2f2");`
- C. `$ ("article:first-of-type") .css("background-color", "#f2f2f2");`

D. `$("#section:first-of-type").css("background-color", "#f2f2f2");`

Correct Answer: C

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

The `:first-of-type` selector matches every element that is the first child, of a particular type, of its parent.

Reference: CSS3 `:first-of-type` Selector

QUESTION 84

You are creating a custom object as described by the following code.

```
function square(side) {  
  this.side = side;  
  this.area = calcArea;  
}
```

You need to implement the `calcArea` method.

Which code should you use?

- A.

```
function calcArea () {  
    return me.side * me.side;  
}
```
- B.

```
function calcArea (obj) {  
    return obj.side * obj.side;  
}
```
- C.

```
function calcArea () {  
    return side * side;  
}
```
- D.

```
function calcArea () {  
    return this.side * this.side;  
}
```

- A. Option A
B. Option B
C. Option C
D. Option D

Correct Answer: D

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

Need to refer to .this in the calculation.

QUESTION 85

You are developing an HTML5 web form to collect feedback information from site visitors.

The web form must display an INPUT element that meets the following requirements:

- Allow numeric values between 1 and 10.
- Default to the value of 5.
- Display as a slider control on the page.

You need to add the INPUT element to the form.

Which HTML element should you add?

- A. Rating (Between 1 and 10): `<input type="number" name="rating" min="1" max="10">`
- B. Rating (Between 1 and 10): `<input type="number" name="rating" min="1" max="10" default="5">`
- C. Rating (Between 1 and 10): `<input type="range" name="rating" min="1" max="10" default="5">`
- D. Rating (Between 1 and 10): `<input type="range" name="rating" min="1" max="10" value="5">`

Correct Answer: C

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

`input type="range"`

The `<input type="range">` is used for input fields that should contain a value within a range.

Depending on browser support, the input field can be displayed as a slider control.

Example

```
<form>
  <input type="range" name="points" min="0" max="10"/>
</form>
```

QUESTION 86

You develop an HTML5 application. The application uses an image that is returned from an HTTP POST request.

You develop the following code: (Line numbers are included for reference only.)

```
01 var xhr = new XMLHttpRequest();
02 xhr.open('POST', '/Images/heroAccent.png', true);
03 var img = document.createElement('img');
04
05 xhr.send();
```

You need to display the loaded image in the application.

Which code segment should you insert at line 04?

```
C A. xhr.responseText = 'blob';
    xhr.onload = function (e) {
        if (this.status == 200) {
            img.src = window.URL.createObjectURL(this.responseText);
            document.body.appendChild(img);
        }
    };
```

```
C B. xhr.responseText = 'blob';
    xhr.onload = function(e) {
        if (this.status == 200) {
            img.src = window.URL.createObjectURL(this.response);
            document.body.appendChild(img);
        }
    };
```

```
C C. xhr.responseText = 'document';
    xhr.onload = function (e) {
        if (this.status == 200) {
            img.src = window.URL.createObjectURL(this.responseText);
            document.body.appendChild(img);
        }
    };
```

```
C D. xhr.responseText = 'document';
    xhr.onload = function (e) {
        if (this.status == 200) {
            img.src = window.URL.createObjectURL(this.response);
            document.body.appendChild(img);
        }
    };
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: B
Section: Volume D

Explanation

Explanation/Reference:

Explanation:

As an image will be returned the response type must be blob, not document.
Similarly, this.response must be used not this.responseText.

Reference: createObjectURL method

QUESTION 87

You develop an HTML5 webpage that contains the following HTML markup:

```
<input id="loanTermTextBox" type="text" />
```

Users must enter a valid integer value into the text box.

You need to validate the data type that is received from the input element.

Which two code segments should you include on the webpage? (Each correct answer presents a complete solution. Choose two.)

```
 A. function validateForm() {  
    var loanTermInput = document.getElementById("loanTermTextBox");  
    var loanTerm = parseInt(loanTermInput.value, 10);  
    if (isNaN(loanTerm) || loanTerm.toString() !== loanTermInput.value) {  
        alert("Loan Term must be an integer");  
        return false;  
    }  
    return true;  
};
```

```
 B. var validateForm = function () {  
    var loanTermInput = document.getElementById("loanTermTextBox");  
    var loanTerm = parseInt(loanTermInput.value, 10);  
    if (isNaN(loanTerm) || loanTerm.toString() !== loanTermInput.value) {  
        alert("Loan Term must be an integer");  
        return false;  
    }  
    return true;  
};
```

```
 C. var validateForm = function () {  
    var loanTermInput = document.getElementsByName("loanTermTextBox");  
    var loanTerm = parseFloat(loanTermInput.value);  
    if (!isNaN(loanTerm) || loanTerm.toString() !== loanTermInput.value) {  
        alert("Loan Term must be an integer");  
        return false;  
    }  
    return true;  
};
```

```
 D. var validateForm = function () {  
    var loanTermInput = document.getElementById("loanTermTextBox");
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

Correct Answer: AB

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

* parseInt

The parseInt() function parses a string and returns an integer.

Syntax: parseInt(*string*, *radix*) *string* Required. The string to be parsed *radix* Optional. A number (from 2 to 36) that represents the numeral system to be used.

* The isNaN() function determines whether a value is an illegal number (Not-a-Number).

This function returns true if the value is NaN, and false if not.

Reference: JavaScript parseInt() Function; JavaScript isNaN() Function

QUESTION 88

You develop an HTML5 application for a company. Employees must enter a personal identification number (PIN) in an INPUT element named SecurityCode to access their employee records.

The SecurityCode element must meet the following requirements:

- Allow up to 6 digits.
- Do not display numbers as they are entered.
- Display the text Enter PIN Code before the user enters any data.

You need to implement the SecurityCode element.

Which HTML markup should you add to the application?

- A.

```
<input name="SecurityCode"
  type="text"
  maxlength="6"
  title="Enter PIN Code"
  pattern="*****"
/>
```
- B.

```
<input
  name="SecurityCode"
  type="text"
  maxlength="6"
  title="Enter PIN Code"
  pattern="*****"
/>
```
- C.

```
<input
  name="SecurityCode"
  type="password"
  size="6"
  placeholder="Enter PIN Code"
  pattern="*****"
/>
```
- D.

```
<input name="SecurityCode"
  type="password"
  maxlength="6"
  placeholder="Enter PIN Code"
/>
```
- E.

```
<input name="SecurityCode"
  type="password"
  maxlength="6"
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

Correct Answer: D

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

* Input Type: password

<input type="password"> defines a password field.

The characters in a password field are masked (shown as asterisks or circles).

* The placeholder attribute specifies a short hint that describes the expected value of an input field (e.g. a sample value or a short description of the expected format).

The short hint is displayed in the input field before the user enters a value.

The placeholder attribute works with the following input types: text, search, url, tel, email, and password.

Reference: HTML Input Types ; HTML <input> placeholder Attribute

QUESTION 89

You develop an application to host user-generated HTML and JavaScript content.

A common error handler in your application must process all unhandled errors.

You need to implement global error handling for the application.

Which code segment should you use?

A. `window.onerror = function () {`
 `...`
 `}`

B. `Error.constructor = function () {`
 `...`
 `}`

C. `Error = function () {`
 `...`
 `}`

D. `document.onerror = function () {`
 `...`
 `}`

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:

Explanation:

GlobalEventHandlers.onerror

An event handler for runtime script errors.

Syntax window.onerror =
funcRef;

Reference: GlobalEventHandlers.onerror

QUESTION 90

You are creating a custom function. You pass an object named testObj to the function as a parameter. You do not use inheritance through the functions.

The function must establish whether testObj inherits from another object named parentObj.

You need to ensure that the function performs as required.

Which method or operator should you add to the function?

- A. parentObj instanceof(testObj)
- B. testObj.isPrototypeOf(parentObj)
- C. testObj instanceof(parentObj)
- D. parentObj.isPrototypeOf(testObj)

Correct Answer: B

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

The isPrototypeOf() method tests for an object in another object's prototype chain.

Reference: Object.prototype.isPrototypeOf()

QUESTION 91

You develop an HTML5 webpage. You have the following HTML markup:

```
Total Products: <span id="products"></span><br />  
Total Boxes: <span id="boxes"></span><br />  
<input type="button" id="addOneItem" value="Add one item to the order" />  
<input type="button" id="addBoxOfItems" value="Add a box to the order" />
```

You need to call the click event for the addOneItem button a determined number of times when the user clicks the addBoxOfItems button.

Which code segment should you add to the webpage?

- A.

```
$('#addBoxOfItems').on(function (event) {
  for (var i = 0; i < itemsPerBox; i++) {
    $('#addOneItem').trigger('click');
  }
});
```
- B.

```
$('#addBoxOfItems').click(function (event) {
  for (var i = 0; i < itemsPerBox; i++) {
    $('#addOneItem').click('click');
  }
});
```
- C.

```
$('#addBoxOfItems').on(function (event) {
  for (var i = 0; i < itemsPerBox; i++) {
    $('#addOneItem').click();
  }
});
```
- D.

```
$('#addBoxOfItems').click(function (event) {
  for (var i = 0; i < itemsPerBox; i++) {
    $('#addOneItem').trigger('click');
  }
});
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:

Explanation:

jQuery provides a way to trigger the event handlers bound to an element without any user interaction via the .trigger() method.

jQuery's event handling system is a layer on top of native browser events. When an event handler is added using .on("click", function() {...}), it can be triggered using jQuery's .trigger("click") because jQuery stores a reference to that handler when it is originally added. Additionally, it will trigger the JavaScript inside the onclick attribute.

Reference: Triggering Event Handlers

QUESTION 92

You develop an HTML application that is located at www.adventure-works.com. The application must load JSON data from www.fabrikam.com.

You need to choose an approach for loading the data.

What should you do?

- A. Add a crossdomain.xml file to the second server.
- B. Configure Cross-Origin Resource Sharing (CORS) on the servers.
- C. Load the data in a JavaScript timeout callback.
- D. Reference the remote data as an XML resource.

Correct Answer: B

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

* Cross-origin resource sharing (CORS) is a mechanism that allows Javascript on a web page to make XMLHttpRequests to another domain, not the domain the Javascript originated from. Such "cross-domain" requests would otherwise be forbidden by web browsers, per the same origin security policy. CORS defines a way in which the browser and the server can interact to determine whether or not to allow the cross-origin request. It is more powerful than only allowing same-origin requests, but it is more secure than simply allowing all such cross-origin requests.

* You must use Cross Origin Resource Sharing

It's not as complicated as it sounds...simply set your request headers appropriately...in Python it would look like:

```
self.response.headers.add_header('Access-Control-Allow-Origin', '*');
self.response.headers.add_header('Access-Control-Allow-Methods', 'GET, POST, OPTIONS'); self.response.headers.add_header('Access-Control-Allow-Headers', 'X-Requested-With'); self.response.headers.add_header('Access-Control-Max-Age', '86400');
```

QUESTION 93

You are creating a blog site by using HTML5 and JavaScript. An inline frame enables users to post comments. It is possible for users to inject malicious scripts into their comments.

You need to minimize the ability for malicious scripts to execute on the site.

Which line of code should you use?

- A. `<iframe sandbox src="frame1.html" />`
- B. `<iframe seamless="allowscripts" src="frame1.html" />`
- C. `<iframe seamless src="frame1.html" />`
- D. `<iframe sandbox="allowscripts" src="frame1.html" />`

Correct Answer: A

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

The sandbox attribute enables an extra set of restrictions for the content in the iframe.

Syntax

```
<iframe sandbox="value">
```

Attribute Values no value:

Applies all restrictions etc.

No attribute value: allowscripts (not D)

Reference: [HTML <iframe> sandbox Attribute](#)

QUESTION 94

You develop an HTML5 application that interacts with a REST service. The REST service accepts JSON data. A JavaScript object named form Data contains data that is sent to the REST service.

You need to convert the JavaScript object named formData into JSON.

Which code segment should you use?

- A. `jQuery.ajax.valueOf(formData);`
- B. `window.evai(formData);`
- C. `JSON.stringify (formData);`
- D. `formData.toString();`

Correct Answer: C

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

JSON.stringify converts a JavaScript value to a JavaScript Object Notation (JSON) string.

Reference: JSON.stringify Function (JavaScript)

QUESTION 95

You are developing an HTML page that includes the following code.

```
<h1 id="header">A Static Page</h1>
```

You need to modify the content of the H1 element dynamically by using JavaScript.

Which code segment should you use?

A.

```
var myHeader = document.getElementsByTagName("header");  
myHeader = "A Dynamic Page";
```

B.

```
var myHeader = document.getElementById("header");  
myHeader = "A Dynamic Page";
```

C.

```
var myHeader = document.getElementsByTagName("header");  
myHeader.innerHTML = "A Dynamic Page";
```

D.

```
var myHeader = document.getElementById("header");  
myHeader.innerHTML = "A Dynamic Page";
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:

Explanation:

innerHTML

The innerHTML property sets or returns the HTML content (inner HTML) of an element.

Example

Change the HTML content of a <h1> element with id="header":

```
document.getElementById("header").innerHTML = "A dynamic page";
```

Reference: HTML DOM innerHTML Property

QUESTION 96

You are developing a web page that will contain an animated logo. The web page currently has a logo image on a canvas object. You reference the context of the canvas object by using a variable named context.

You need to spin the logo image on the canvas.

Which method should you use?

- A. context.rotate()
- B. context.spin()
- C. context.translatePosition()
- D. context.setTransform()

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:

Explanation:

The rotate() method rotates the current drawing.

Example

Rotate the rectangle 20 degrees:

JavaScript:

```
var c=document.getElementById("myCanvas");  
var ctx=c.getContext("2d");  
ctx.rotate(20*Math.PI/180);  
ctx.fillRect(50,20,100,50);
```

Incorrect Answers:

B: there is no canvas.spin method.

Reference: [HTML canvas rotate\(\) Method](#)

QUESTION 97

You create the following JavaScript code:

```

var myApplication = myApplication || {};
myApplication.Vehicle = function (displayControl, color, seatCount, tranType, wheelCount) {
    this.Color = color;
    this.NumberOfSeats = seatCount;
    this.TransmissionType = tranType;
    this.NumberOfWheels = wheelCount;
    this.showVehicle = document.getElementById(displayControl);
};
myApplication.Vehicle.prototype = {
    Describe: function () {
        var valuesToDisplay = '';
        for (var property in this) {
            if (typeof (this[property]) === 'string')
            {
                valuesToDisplay += 'Vehicle ' + property + ' is ' + this[property] + '<br />';
            }
            else if(typeof (this[property]) === 'number')
            {
                if (this[property] < 4)
                {
                    valuesToDisplay += 'Stay safe!' + '<br />';
                }
                else if(this[property] >= 10)
                {
                    valuesToDisplay += 'Big machine!' + '<br />';
                }
            }
        }
        this.showVehicle.innerHTML = valuesToDisplay;
    }
};

```

You have the following requirements:

- You must invoke a function that displays the vehicle information within the following HTML element: <div id="display"></div>
- The output of the function must appear on the webpage as follows: Vehicle Color is silver Stay safe!

Vehicle TransmissionType is manual
Big machine!

You need to invoke the JavaScript function to display the required output in the HTML element.

Which two code segments should you use? (Each correct answer presents a complete solution. Choose two.)

- A.

```
var mySportsCar = new myApplication.Vehicle('display', 'manual', 4, 'silver', 4);  
mySportsCar.Describe();
```
- B.

```
var myDumpTruck = new myApplication.Vehicle('display', 'silver', 10, 'manual', 2);  
myDumpTruck.Describe();
```
- C.

```
var myBigRig = new myApplication.Vehicle('display', 'silver', 2, 'manual', 16);  
myBigRig.Describe();
```
- D.

```
var myMotorcycle = new myApplication.Vehicle('display', 'blue', 2, 'manual', 2);  
myMotorcycle.Describe();
```
- E.

```
var myMotorhome = new myApplication.Vehicle('display', 'silver', 3, 'manual', 10);  
myMotorhome.Describe();
```

- A. Option A
- B. Option B
- C. Option C
- D. Option DE. Option E

Correct Answer: CE
Section: Volume D
Explanation

Explanation/Reference:

Explanation:

The second argument should be 'silver'.

The third argument should be a number less than 4.

QUESTION 98

You develop an HTML5 webpage. You have the following JavaScript code:

```
01 $(document).ready(function () {  
02  
03     e.preventDefault();  
04     ...  
05 });  
06 });
```

You need to handle the click event when a user clicks the showDialog button.

Which code segment should you insert at line 02?

- A. \$(document).trigger("click", "#showDialog", function (e) {
- B. \$(document).on("#showDialog", "click", function (e) {
- C. \$(document).toggle("click", "#showDialog", function (e) {
- D. \$(document).on("click", "#showDialog", function (e) {

Correct Answer: D

Section: Volume D

Explanation**Explanation/Reference:**

Explanation:

Syntax: .on(events [, selector] [, data], handler)

* Example:

```
$(function() {  
    $(document).on('click', '.get-widgets', function (e) {
```

Reference: jQuery .on()

QUESTION 99

You are developing an application that processes order information. Thousands of orders are processed daily. The application includes the following code segment.

(Line numbers are included for reference only.)

```
01 var counter = 0;
02 while (process()) {
03   counter++;
04
05   updateStatus();
06 }
```

The application must:

- Display the number of orders processed and the number of orders remaining
- Update the display for every 25th record processed

You need to develop the application to meet these requirements.

Which line of code should you insert at line 04?

- A. if (!(counter % 25))
- B. if (counter == 25)
- C. if (counter >> 25 == 0)
- D. if (counter << 25 == 0)

Correct Answer: A

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

%

(Modulus) Computes the integer remainder of dividing 2 numbers.

Incorrect:

>> (Sign-propagating right shift) Shifts the first operand in binary representation the number of bits to the right specified in the second operand, discarding bits shifted off.

<< (Left shift) Shifts its first operand in binary representation the number of bits to the left specified in the second operand, shifting in zeros from the right.

Reference: JavaScript Operators

QUESTION 100

You develop an HTML5 webpage. You have the following HTML markup:

```
<input type="text" id="username" />
```

You need to prevent users from entering specific characters into the username field.

What should you do?

- A. Using the keyup event, add an anonymous function that returns true when a specific character keycode value is determined.
- B. Using the change event, add an anonymous function that returns true when a specific character keycode value is determined.
- C. Using the keydown event, add an anonymous function that returns false when a specific character keycode value is determined.
- D. Using the change event, add an anonymous function that returns false when a specific character keycode value is determined.

Correct Answer: B

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

The change event is fired for <input>, <select>, and <textarea> elements when a change to the element's value is committed by the user.

Use the change event and an anonymous function to detect illegal specific characters in the input.

QUESTION 101

You troubleshoot a webpage that contains the following HTML markup: (Line numbers are included for reference only.)

```
01 <div onclick="someEvent()">
02   <input type="radio" name="sizeRadio" id="sizeRadioSml" value="1" />
   <label for="sizeRadioSml">Small</label>
03   <input type="radio" name="sizeRadio" id="sizeRadioMed" value="2" />
   <label for="sizeRadioMed">Medium</label>
04   <input type="radio" name="sizeRadio" id="sizeRadioLrg" value="3" />
   <label for="sizeRadioLrg">Large</label>
05 </div>
```

The webpage also contains the following JavaScript function named someEvent() that is declared in the HEAD section of the HTML:

```
Function someEvent() {
Alert('someEvent fired!');
}
```

The JavaScript function named someEvent() must run only when the user clicks the DIV element, not the INPUT elements.

You need to modify the webpage to invoke the JavaScript function named `someEvent()`.

What should you do? (Each correct answer presents a complete solution. Choose two.)

- A. Modify all INPUT elements by using the following HTML attribute:

```
onclick="stopPropagation(event) "
```

Declare the JavaScript function named **stopPropagation()** in the HEAD section of the HTML as follows:

```
function stopPropagation(event) {  
    event = event || window.event;  
    if (event.stopPropagation) {  
        event.stopPropagation();  
    } else {  
        event.cancelBubble = true;  
    }  
}
```

- B. Place all INPUT elements within a SPAN element.

- C. Replace the DIV element declaration at line 01 with the following HTML markup:

```
<div onclick="someEvent(this,event)">
```

Modify the JavaScript function named **someEvent()** as follows:

```
function someEvent( el, event ) {  
    var target = event.srcElement || event.target;  
    if( el === target ) {  
        alert('someEvent fired!');  
    }  
}
```

- D. Replace the DIV element declaration at line 01 with the following HTML markup:

```
<div>
```

Modify all INPUT elements by using the following HTML attribute:

```
onclick="someEvent() "
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: AB

Section: Volume D

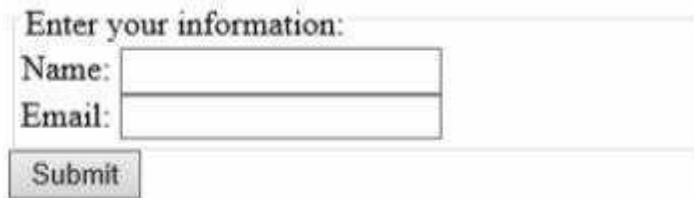
Explanation

Explanation/Reference:

QUESTION 102

You develop a webpage by using HTML5.

The user interface of the webpage must show a gray-lined box that contains the label Enter your information:. Inside the box are two labels and two input boxes. The first input box must be labeled Name:. The second input box must be labeled Email:. Below the box is a Submit button. The user interface must look like the following;



You need to create the user interface.

Which markup should you use?

- C A.

```
<table border="1">
  <tr>
    <td>Enter your information:<br />
      Name: <input type="text" /><br />
      Email: <input type="email" /><br />
    </td>
  </tr>
</table>
<button value="submit">Submit</button>
```
- C B.

```
<fieldset>
  <legend>Enter your information:</legend>
  Name: <input type="text" /><br />
  Email: <input type="email" /><br />
</fieldset>
<button value="submit">Submit</button>
```
- C C.

```
<details>
  <label>Enter your information:</label>
  Name: <input type="text" /><br />
  Email: <input type="email" /><br />
</details>
<button value="submit">Submit</button>
```
- C D.

```
<section>
  <label>Enter your information:</label>
  Name: <input type="text" /><br />
  Email: <input type="email" /><br />
</section>
<button value="submit">Submit</button>
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: B

Section: Volume D
Explanation

Explanation/Reference:

Explanation:

* The <fieldset> tag is used to group related elements in a form.
The <fieldset> tag draws a box around the related elements.
The <legend> tag defines a caption for the <fieldset> element.

Example:

Group related elements in a form:

```
<form>
  <fieldset>
    <legend>Personalia:</legend>
    Name: <input type="text"><br/>
    Email: <input type="text"><br/>
    Date of birth: <input type="text"/>
  </fieldset>
</form>
```

Reference: HTML <fieldset> Tag; HTML <legend> Tag

QUESTION 103

You are developing a customer contact form that will be displayed on a page of a company's website. The page collects information about the customer.

If a customer enters a value before submitting the form, it must be a valid email address.

You need to ensure that the data validation requirement is met.

What should you use?

- A. <input name="email" type="input" required="required"/>
- B. <input name="email" type="url" required="email"/>
- C. <input name="email" class="email"/>
- D. <input name="email" type="email"/>

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:

Explanation:

The `<input type="email">` is used for input fields that should contain an e-mail address.

Depending on browser support, the e-mail address can be automatically validated when submitted.

Some smartphones recognize the email type, and adds ".com" to the keyboard to match email input.

Reference: HTML Input Types

QUESTION 104

You are developing an application to track project management for your company. The status of the project is stored in a variable named `percentComplete`.

The method must execute only when `percentComplete` is equal to the numeric value 100.

You need to develop the application to meet the requirement.

Which code segment should you use?

- A. `if (percentComplete = 100 || percentComplete != 100) {
 ...
}`
- B. `if (percentComplete = 100 && percentComplete != 100) {
 ...
}`
- C. `if (percentComplete % 100) {
 ...
}`
- D. `if (percentComplete === 100) {
 ...
}`
- E. `if (percentComplete = 100) {
 ...
}`

- A. Option A
B. Option B
C. Option C
D. Option D

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:

Explanation:

`===`: This is "strict" or "identical" equality.

Reference: JavaScript Triple Equals Operator vs Double Equals Operator (`===` vs `==`)

QUESTION 105

You have a webpage that includes the following markup and code:

```
<!DOCTYPE html>
<html>
  <head>
    <script>
      function start() {
        var counter = 10;
        var fun = function () {
          counter = 20;
        }
        return counter;
      }
    </script>
  </head>
  <body>
    <button id="submit" onclick="alert(start());">Start</button>
  </body>
</html>
```

You need to troubleshoot the code by clicking the Submit button.

Which value will be displayed?

- A. 10
- B. 20
- C. Undefined
- D. Runtime error

Correct Answer: A

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

* The outermost assignment, counter = 10; will decide the output that is displayed.

* Local variables have local scope: They can only be accessed within the function.

Example

```
// code here can not use carName
```

```
function myFunction() { var
carName = "Volvo"; // code
here can use carName
}
```

* A variable declared outside a function, becomes GLOBAL.

A global variable has global scope: All scripts and functions on a web page can access it.

Example

```
var carName = " Volvo"; //
code here can use carName
function myFunction() {
    // code here can usecarName
}
```

Reference: JavaScript Scope

QUESTION 106

You develop an HTML5 webpage with custom CSS. You have the following HTML markup:

```
<div class="new" Item">...</div>
```

You have the following requirements:

- In addition to your CSS, you must use a corporate branded stylesheet named corporate.css.
- The corporate.css file contains the style rule that must be used for .newsItem.
- You must use the corporate.css file to ensure that the webpage changes when the brand changes.
- You must add additional style rules to the webpage. ▪ You cannot modify the corporate.css file.

You need to apply the appropriate CSS rules to meet the requirements.

What should you do?

- A. Add a CSS class named .newsItemUpdates to the webpage, add only the new styles to this class, and update the class attribute of the HTML markup: <div class=nnewsItem newsItemUpdates">.., </div>
- B. Update the corporate.css file to include! important for each rule for the .newsItem. class, and add the new CSS rules to the webpage by using the CSS class .newsItem.
- C. Add a CSS class named .newsitemUpdates to the webpage, add the new styles to this class, and update the HTML markup to replace the .newsItem class with this new class:
<div class*"newsItemOpdates">...</div>
- D. Add the new CSS rules to the webpage by using the CSS class .newsItem, and add! important to each rule.

Correct Answer: D

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

CSS attempts to create a balance of power between author and user style sheets. By default, rules in an author's style sheet override those in a user's style sheet.

However, for balance, an "!important" declaration (the delimiter token "!" and keyword "important" follow the declaration) takes precedence over a normal declaration. Both author and user style sheets may contain "!important" declarations, and user "!important" rules override author "!important" rules. This CSS feature improves accessibility of documents by giving users with special requirements (large fonts, color combinations, etc.) control over presentation.

Incorrect Answers:

B: It is stated that you are not allowed to update the corporate.css file.

Reference: Assigning property values, Cascading, and Inheritance, !important rules

QUESTION 107

You are developing an e-commerce website. Users place products into a shopping cart.

You need to ensure that the shopping cart data is available between browser sessions.

Which object should you use to store the shopping cart data?

- A. clientStorage
- B. localStorage
- C. applicationStorage
- D. sessionStorage

Correct Answer: B

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

With local storage, web applications can store data locally within the user's browser.

HTML local storage, better than cookies.

Before HTML5, application data had to be stored in cookies, included in every server request. Local storage is more secure, and large amounts of data can be stored locally, without affecting website performance.

Reference: HTML5 Local Storage

QUESTION 108

You are creating a JavaScript object that represents a customer.

You need to extend the Customer object by adding the GetCommission method.

You need to ensure that all future instances of the Customer object implement the GetCommission method.

Which code segment should you use?

A.

```
Customer.apply.GetCommission = function()
{
    alert('payroll');
}
```

B.

```
Customer.GetCommission = function () {
    alert('payroll');
}
```

C.

```
Customer.prototype.GetCommission = function Customer.GetCommission()
{
    alert('payroll');
}
```

D.

```
Customer.prototype.GetCommission = function ()
{
    alert('payroll');
}
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: D

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

* Object.prototype.constructor

Returns a reference to the Object function that created the instance's prototype. Note that the value of this property is a reference to the function itself, not a string containing the function's name. The value is only read-only for primitive values such as 1, true and "test".

* The constructor property is created together with the function as a single property of func.prototype. Reference:

Object.prototype.constructor

QUESTION 109

You develop an HTML5 webpage. You have the following HTML markup:

```
<label for="personname">Given and Surname:</label>
<input type="text" name="personname" /><br />

<label for="businessname">Business Name:</label>
<input type="text" name="businessname" /><br />

<label for="emailaddress">Email Address:</label>
<input type="text" name="emailaddress" />
```

You need to change the background color for all of the elements whose name attribute ends with the word name.

Which code segment should you add to the webpage?

- A. `$('#name').css ({ 'background-color' : '#E0ECF8' });`
- B. `$('input [name |= "name";] ') .css (('background-color' : '#E0ECF8'));`
- C. `$('input [name $= "name"] ') .css ({ 'background-color' : '#E0ECF8' });`



<https://vceplus.com/>

- D. `$('*name') .css ({ 'background-color' : ' #E0ECF8' });`

Correct Answer: C

Section: Volume D

Explanation

Explanation/Reference:

QUESTION 110

You are developing a web application by using HTML5.

You have the following requirements.

- The color of a menu item must change when a user hovers over the item.
- The color of the menu item must change back to its original color after five seconds.

You need to ensure that the animation is applied to all menu items.

Which CSS3 code should you use?

A.

```
menuitem:hover {
  color: yellow
  opacity: 100
  transition-timing-function:ease-in;
  . . .
}
```

B.

```
menuitem:hover {
  background-color: yellow;
  transition-duration:5s;
  . . .
}
```

C.

```
menuitem:hover {
  color: yellow
  transition-property:color;
  transition-duration:5s;
  . . .
}
```

D.

```
menuitem:hover {
  color: yellow
  transition-duration:5s;
  . . .
}
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:

Explanation:
transition-property

The transition-property property specifies the name of the CSS property the transition effect is for (the transition effect will start when the specified CSS property changes).

Tip: A transition effect could typically occur when a user hover over an element.

Note: Always specify the transition-duration property, otherwise the duration is 0, and the transition will have no effect.

CSS3 transition-property Property

QUESTION 111

Your company uses a third-party component that generates HTML for a website. The third-party component creates DIV elements that display a yellow background.

The third-party component uses inline styles in the DIV elements that are inconsistent with your corporate standards. You must override the DIV elements in the style sheet with the corporate styles.

You need to ensure that the website meets corporate standards.

Which style should you use?

- A.

```
#alldiv
{
  background: yellow;
  font: 12px/22px Arial;
}
```
- B.

```
div p:only-child
{
  background: yellow;
  font: 12px/22px Arial;
}
```
- C.

```
div
{
  background: yellow !important;
  font: 12px/22px Arial !important;
}
```
- D.

```
div
{
  background: yellow;
  font: 12px/22px Arial;
}
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:

Explanation:

CSS attempts to create a balance of power between author and user style sheets. By default, rules in an author's style sheet override those in a user's style sheet.

However, for balance, an "!important" declaration (the delimiter token "!" and keyword "important" follow the declaration) takes precedence over a normal declaration. Both author and user style sheets may contain "!important" declarations, and user "!important" rules override author "!important" rules. This CSS feature improves accessibility of documents by giving users with special requirements (large fonts, color combinations, etc.) control over presentation.

Reference: Assigning property values, Cascading, and Inheritance, !important rules

QUESTION 112

You develop an HTML5 webpage that contains the following HTML markup:

```
<label for='favoriteColor'>Favorite Color(2-10 characters):</label>
<input type='text' id='favoriteColor' />
<input type='button' value='Submit'
  onclick="testLength(document.getElementById('favoriteColor'), 2, 10)" />
```

Users must receive a message after they click the Submit button if the text entered into the favoriteColor text box is fewer than 2 characters or greater than 10 characters.

You need to implement the testLength() function.

Which code segment should you use?

C A.

```
function testLength(element, min, max) {
  var uInput = element.value;
  var min = element.value.length;
  var max = element.value.slice(0, element.value.length);
  if (uInput.length >= min && uInput.length <= max) {
    return true;
  } else {
    alert("Please enter between " + min + " and " + max + " characters");
    element.focus();
    return false;
  }
}
```

C B.

```
function testLength(min, max) {
  var uInput = this.value;
  if (uInput.length >= min && uInput.length <= max) {
    return true;
  } else {
    alert("Please enter between " + min + " and " + max + " characters");
    element.focus();
    return false;
  }
}
```

C C.

```
function testLength(this) {
  var uInput = this.value;
  var min = this.value.length;
  var max = this.value.slice(0, this.value.length);
  if (uInput.length >= min && uInput.length <= max) {
    return true;
  } else {
    alert("Please enter between " + min + " and " + max + " characters");
    element.focus();
    return false;
  }
}
```

C D.

```
function testLength(element, min, max) {
  var uInput = element.value;
  if (uInput.length >= min && uInput.length <= max) {
    return true;
  }
}
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:

Explanation:

Use three arguments: element, min, max.

Compare element.value with min and max.

QUESTION 113

You are developing a website that helps users locate theaters in their area from a browser. You created a function named findTheaters ().

The function must:

- Get the current latitude and longitude of the user's device ▪

Pass the user's location to findTheaters()

The user needs to access the geolocation information from the browser before searching for theaters.

Which code segment should you use?

- A.

```
function GetTheaters {
    theaters = findTheaters(navigator.geolocation.getCurrentPosition());
    ...
}
```
- B.

```
navigator.geolocation.getBrowserPosition(hasPosition);

function hasPosition(position) {
    theaters = findTheaters(position.coords.latitude, position.coords.longitude);
    ...
}
```
- C.

```
navigator.geolocation.getCurrentPosition(hasPosition, noPosition);

function hasPosition(position) {
    theaters=findTheaters(position.coords.latitude, position.coords.longitude);
    ...
}

function noPosition() {
    ...
}
```
- D.

```
function GetTheaters {
    theaters = findTheaters(navigator.geolocation.getLatitude(), navigator.geolocation.getLongitude());
    ...
}
```

- A. Option A
B. Option B
C. Option C
D. Option D

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:

Explanation:

* The `getCurrentPosition` method retrieves the current geographic location of the device. The location is expressed as a set of geographic coordinates together with information about heading and speed. The location information is returned in a `Position` object.

syntax of this method:

```
getCurrentPosition(showLocation, ErrorHandler, options);
```

where

`showLocation` : This specifies the callback method that retrieves the location information. This method is called asynchronously with an object corresponding to the `Position` object which stores the returned location information.

`ErrorHandler` : This optional parameter specifies the callback method that is invoked when an error occurs in processing the asynchronous call. This method is called with the `PositionError` object that stores the returned error information.

* e example below is a simple Geolocation example returning the latitude and longitude of the user's position:

Example

```
<script>
var x = document.getElementById("demo");
function getLocation() {  if
(navigator.geolocation) {
    navigator.geolocation.getCurrentPosition(showPosition);
  } else {
    x.innerHTML = "Geolocation is not supported by this browser.";
  }
}
function showPosition(position) {
  x.innerHTML = "Latitude: " + position.coords.latitude +
"<br>Longitude: " + position.coords.longitude;
}
</script>
```

Example explained:

Check if Geolocation is supported

If supported, run the `getCurrentPosition()` method. If not, display a message to the user

If the `getCurrentPosition()` method is successful, it returns a coordinates object to the function specified in the parameter (`showPosition`

) The `showPosition()` function gets the displays the Latitude and Longitude The example above is a very basic Geolocation script, with no error handling.

Reference: HTML5 Geolocation; Geolocation getCurrentPosition() API

QUESTION 114

You are developing an HTML5 web application. The application loads data from a web service by using AJAX. The application displays the data by calling the displayData function. The data is loaded by using the following code.

```
var ajax = $.ajax({  
    url: dataUri,  
});
```

You need to ensure that the data is displayed when it is successfully retrieved from the web service.

Which code segment should you use?

- A. `displayData(ajax.data);`
- B. `ajax.done = function (data) {
 displayData(dataOperation);
};`
- C. `ajax.always = function (data) {
 displayData(dataOperation);
};`
- D. `displayData(ajax.val());`

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: B

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

The deferred.done() method accepts one or more arguments, all of which can be either a single function or an array of functions. When the Deferred is resolved, the doneCallbacks are called. Callbacks are executed in the order they were added. Since deferred.done() returns the deferred object, other methods of the deferred object can be chained to this one, including additional .done() methods.

\$.ajax

Reference: JQuery, deferred.done()

QUESTION 115

You are developing a web page that performs CPU-intensive calculations. A web worker processes these calculations on a separate background thread. The process is instantiated from the web page.

You need to stop the web worker process after the calculations are completed.

Which two actions can you perform to achieve this goal? (Each correct answer presents a complete solution. Choose two.)

- A. From the web page, call the close() method.
- B. From the web worker process, call the terminate() method.
- C. From the web page, call the terminate() method.
- D. From the web worker process, call the close() method.

Correct Answer: CD

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

Terminating a worker

If you need to immediately terminate a running worker, you can do so by calling the worker's terminate() method:

```
myWorker.terminate();
```

The worker thread is killed immediately without an opportunity to complete its operations or clean up after itself.

Workers may close themselves by calling their own close method:

```
close();
```

Reference: Using Web Workers

QUESTION 116

You are developing an HTML5 page named main.html. The JavaScript code for the main page is located in a file named myApp.js.

You need to create a web worker and instantiate it from main.html.

Where should you place the web worker code?

- A. In the myApp.js file
- B. In the main.html file

- C. In a separate .js (JavaScript) file
- D. In a separate executable file

Correct Answer: C

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

Spawning a dedicated worker

Creating a new worker is simple. All you need to do is call the Worker() constructor, specifying the URI of a script to execute in the worker thread (main.js):

```
var myWorker = new Worker("worker.js");
```

Reference: Using Web Workers

QUESTION 117

You are developing a JavaScript library.

You have the following requirements:

- Custom exceptions must include an error message and custom error number.
- These exceptions must be thrown when data validation errors occur.
- Developers must call the library to easily catch the exception and identify the problem.

You develop the following code. (Line numbers are included for reference only.)

```
01 function ValidationException(number, message) {
02     this.message = message;
03     this.name = "myLibrary Exception";
04     this.number = number;
05 }
06
07 function myFunction(dayOfWeek) {
08     if (dayOfWeek > 7) {
09
10     }
11 }
```

You need to complete the code to meet the requirements.

Which line of code should you insert at line 09?

- A. `throw new ValidationException(123, "Day of week must be less than 7");`
- B. `return new ValidationException(123, "Day of week must be less than 7");`
- C. `throw ValidationException(123, "Day of week must be less than 7");`
- D. `catch ValidationException(123, "Day of week: must be less than 7");`

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:

Explanation:

Example:

```
if (value < -100 || value > 100)
{
    throw new ValidationException(String.Format("Value is {0} than
{1}.", (value > 100 ? "greater" : "less"), value));
}
```

QUESTION 118

You are developing an application that retrieves a stock rate from an external web service. A web page displays a simple rotating animation to indicate whether the stock rate is increased or decreased.

The default image, as shown in the following graphic, indicates unchanged or neutral.



The arrow must point down if the stock rate is decreased, as shown in the following graphic.



You need to ensure that the arrow points down when the stock rate decreases.

Which CSS style should you apply?

- A.

```
<style type="text/css">
  div
  {
    width:20px;
    height:20px;
    transform:move(90deg);
  }
</style>
```
- B.

```
<style type="text/css">
  div
  {
    width:20px;
    height:20px;
    transform:rotate(-90deg);
  }
</style>
```
- C.

```
<style type="text/css">
  div
  {
    width:20px;
    height:20px;
    transform:move(-90deg);
  }
</style>
```
- D.

```
<style type="text/css">
  div
  {
    width:20px;
    height:20px;
    transform:rotate(90deg);
  }
</style>
```

- A. Option A
B. Option B
C. Option C

D. Option D

Correct Answer: D

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

transform:rotate

rotate(angle)

Defines a 2D rotation, the angle is specified in the parameter

Syntax: object.style.transform="rotate(7deg)"

Reference: CSS3 transform Property

QUESTION 119

You are troubleshooting a web page that includes the following code segment.

```
var x = 0;
function fun() {
  var x = 1;
  if (x) {
    x = 2;
  }
}
fun();
alert(x);
```

You need to evaluate the value of the variable x.

What will be displayed in the user interface?

- A. 0
- B. 1
- C. 2
- D. An error

Correct Answer: A

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

* Alert(x) is within the scope of the outermost assignment, x=0.

* Local variables have local scope: They can only be accessed within the function.

Example

```
// code here can not use carName
function myFunction() { var
carName = "Volvo"; // code
here can use carName
}
```

* A variable declared outside a function, becomes GLOBAL.

A global variable has global scope: All scripts and functions on a web page can access it.

Example

```
var carName = "Volvo"; // code
here can use carName function
myFunction() { // code here
can usecarName
}
```

* The alert() method displays an alert box with a specified message and an OK button.

An alert box is often used if you want to make sure information comes through to the user.

Reference: JavaScript Scope

QUESTION 120

You develop an HTML5 chat application.

You need to provide real-time updates to the messages that users post in the chat application.

What should you do?

- A. Use get o to obtain data updates.
- B. Use a RESTful web service.
- C. Use WebSockets.
- D. Use ajaxo to obtain data updates.

Correct Answer: C

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

Web Sockets is a next-generation bidirectional communication technology for web applications which operates over a single socket and is exposed via a JavaScript interface in HTML 5 compliant browsers.

Once you get a Web Socket connection with the web server, you can send data from browser to server by calling a send() method, and receive data from server to browser by an on message event handler.

Reference: HTML5 - WebSockets Tutorial

QUESTION 121

You are creating a rotating image of a company logo.

The logo must spin on a horizontal axis and on a vertical axis.

You need to use the least amount of development effort to meet the requirement.

What should you do?

- A. Create an Image Spinner object, load the image into the spinner, and set the horizontal and vertical rotation properties.
- B. Create a Canvas Globe transform and set the image as the globe object. Set the horizontal and vertical rotation properties.
- C. Create a single Canvas 3D transform and load the image into it. Set the rotation properties.
- D. Create a Canvas 2D transform and set the image to rotate horizontally and vertically.

Correct Answer: C

Section: Volume D

Explanation**Explanation/Reference:**

Explanation:

CSS3 allows you to format your elements using 3D transforms.

There are two 3D transform methods:

rotateX() - With the rotateX() method, the element rotates around its X-axis at a given degree.

rotateY() - With the rotateY() method, the element rotates around its Y-axis at a given degree.

Reference: CSS3 3D Transforms

QUESTION 122

You are developing an HTML5 web application that provides a discussion forum for users. When a user registers to access the application, the user enters an email address.

Users can enter data that can result in cross-site scripting (XSS) attacks.

You need to ensure that email input is as secure as possible.

Which two techniques should you use? (Each correct answer presents a complete solution. Choose two.)

- A. Remove all nonalphanumeric characters before submitting data.
- B. Use the email tag in forms where the email address is entered.
- C. Display all email addresses inside of an HTML5 ADDRESS element.
- D. Use jQuery validation with a regular expression to ensure that email addresses are valid.
- E. Ensure that all form data is encrypted when it is submitted.

Correct Answer: BD

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

B: The `<input type="email">` is used for input fields that should contain an e-mail address.

Depending on browser support, the e-mail address can be automatically validated when submitted.

Some smartphones recognize the email type, and adds ".com" to the keyboard to match email input.

D: JQuery can be used to validate email addresses.

Reference: [HTML Input Types](#); [Email Validation Using jQuery Codes](#)

QUESTION 123

You have the following code. (Line numbers are included for reference only.)

```
01  funtion testNumber() {
02  testTooSmall(1);
03  }
04  function testTooSmall(n) {
05  if (n < 2)
06  throw "Oh no! 'n' is too small!"
07  return true;
08  }
09  try {
10  testNumber();
11  }
12  catch (e) {
13  alert(e.stack);
14  }
```

You execute the code and you receive an alert that displays the following message: "Undefined".

You need to ensure that the alert displays as shown:



What should you do?

- A. Replace line 13 with the following code: `alert(e.message);`
- B. Replace line 06 with the following code: `throw new eval("Oh no! 'n' is too small!")`
- C. Replace line 13 with the following code: `alert(e);`
- D. Replace line 06 with the following code: `throw new Error("Oh no! 'n' is too small!")`

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:

Explanation:

<http://www.javascriptkit.com/javatutors/trycatch2.shtml>

QUESTION 124

You have two arrays of strings, customers and employees, and you want to combine them to create a contacts array.

Which method would be most suitable for this task?

- A. Concat
- B. Join
- C. Push
- D. Splice

Correct Answer: A
Section: Volume D
Explanation

Explanation/Reference:

Explanation:

References: https://www.w3schools.com/jsref/jsref_concat_array.asp

QUESTION 125

You need to parse an XML formatted string.

Which object should you use?

- A. Map
- B. DataView
- C. DOMParser
- D. JSON

Correct Answer: C
Section: Volume D
Explanation

Explanation/Reference:

QUESTION 126

Which CSS3 code segment styles the text color of EM elements to be red and semi-transparent?

- A. `em { color: #ff00007f; }`
- B. `em { color: rgba (255,0,0,0.5); }`
- C. `em { color: rgba (255,0,0,0.127); }`
- D. `em { color: rgba (100%,0%,0%, 50%); }`

Correct Answer: B

Section: Volume D

Explanation

Explanation/Reference:

References:

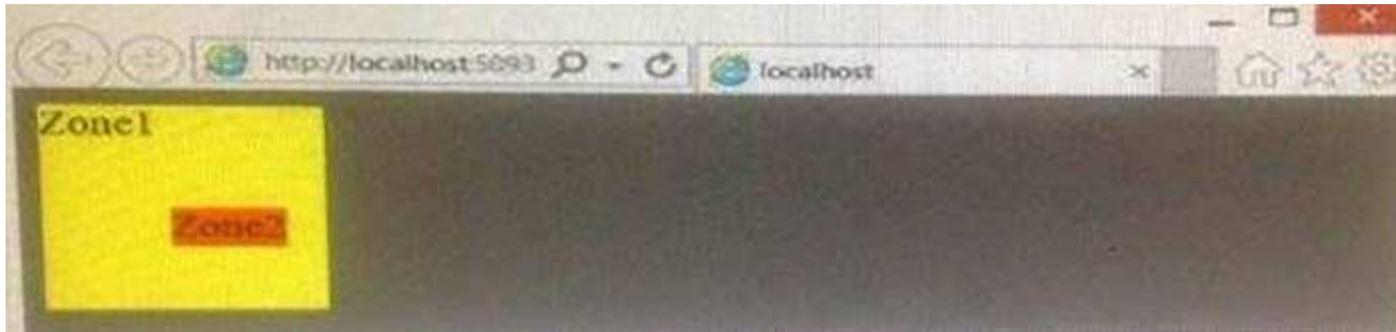
http://www.w3schools.com/cssref/css_colors_legal.asp

QUESTION 127

You have the following code.

```
<div style= "background: yellow; height: 100px; width:100px"> Zone1  
<span style= "background: red; position: Target 1; margin-top: 50px;" > Zone2 </span>  
</div>
```

You need to ensure that the screen appears as shown in the following exhibit:



Which position should you use for Target 1?

- A. static

- B. fixed
- C. initial
- D. inherit

Correct Answer: B
Section: Volume D
Explanation

Explanation/Reference:

References:

http://www.w3schools.com/cssref/pr_class_position.asp

QUESTION 128

Which CSS3 code fragment uses a pseudo-element?

- A. p: : first-letter {font-weight: bold;}
- B. div>p {font-weight: bold;}
- C. p. first-letter {font-weight: bold;}
- D. div+p {font-weight: bold;}

Correct Answer: A
Section: Volume D
Explanation

Explanation/Reference:

References:

<http://www.html5code.nl/css3-tutorials/css3-tutorial-css3-selectors/>

QUESTION 129

You are styling the following DIV tag on a page by using CSS3.

```
<div class= "Box"/>
```

You need to set the transparency of the object to 50%.

Which two CSS3 styles will achieve the goal? (Each correct answer presents a complete solution. Choose two.)

- A. `.Box {
 background: rgb(255,0,0);
 opacity : 0.5;
}`
- B. `.Box {
 background: rgb(255,0,0);
 background-color : #fff ;
}`
- C. `.Box {
 background : rgb(255,0,0);
 background-visibility : hidden;
}`
- D. `.Box {
 background rgba (255,0,0, .5);
}`

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: AD

Section: Volume D

Explanation

Explanation/Reference:

QUESTION 130

You have the following HTML markup.

```
<input name= "object1x">  
  <input name= "object1y">  
  <input name= "object2x">
```

For all of the fields that have names ending with the letter x, you need to set the value to value1.

Which code line should you use?

- A. `$("input [name$= 'x']").html ("value1");`
- B. `$("#input [name$= 'x']").val ("value1");`
- C. `$("input [name$= 'x']").val ("value1");`
- D. `$("#input [name$= 'x']").html ("value1");`

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 131

Which CSS3 code fragment will style only the external links in an HTML document?

- A. `a: visited { font-weight: bold; }`
- B. `a [href$= "http://"] { font-weight : bold; }`
- C. `a {font-weight: bold; }`
- D. `a [href^= "http://"] { font-weight : bold; }`

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 132

You develop an HTML application that contains a table that displays a list of products. The table is defined with the following HTML markup:

```
<table>
  <thead>
    <tr>
      <th>Product</th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <td>Adjustable Race</td>
    </tr>
    <tr>
      <td>Blade</td>
    </tr>
    <tr>
      <td>Chainring</td>
    </tr>
    <tr>
      <td>Down Tube</td>
    </tr>
  </tbody>
</table>
```

You must style the table to look like the following image:

Product
Adjustable Race
Blade
Chainring
Down Tube

You need to implement the CSS selectors to select the rows that must have a blue background.

Which CSS selector should you use?

- A. `tr : first-line, tr :last-child`
- B. `tr [line |=0, 1, 3]`
- C. `tr: nth-child (0) : in-range, tr: nth-child (3) : in-range`
- D. `tr: nth-child(3n+1) {background-color : blue;}`

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 133

An HTML page contains no embedded JavaScript or CSS code. The body of the page contains only the following line of code.

```
<p id="test">test</p>
```

A CSS style sheet must be applied dynamically. The style must visibly change the appearance of the paragraph on the page.

You need to apply a style to the paragraph.

Which line of code should you use?

- A. `document.getElementById("test").style.top = "5px";`
- B. `document.getElementById("test").style.border = "0";`
- C. `document.getElementById("test").style.color = "red";`
- D. `document.getElementById ("test").style.position = "absolute";`

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 134

You are developing an application in HTML5.

You have the following code.

```
function NewOrder (orderId, orderDate) {  
    this.orderId = orderId;  
    this.orderDate = orderDate;  
}
```

You need to add an additional property to the function definition.

Which line of code should you use?

- A. NewOrder ["newProperty"] = "newProperty"
- B. NewOrder.prototype.newProperty = "newProperty"
- C. this.NewOrder.newProperty = "newProperty"
- D. NewOrder.newProperty = "newProperty"

Correct Answer: C

Section: Volume D

Explanation

Explanation/Reference:

References:

http://www.w3schools.com/js/js_object_prototypes.asp

QUESTION 135

You are developing an application that consumes an external web service. The web service returns the latest stock rate. The application has two methods:

- The `getResults()` method makes an AJAX web service request.
- The `ShowRate()` method displays the stock rate from the web service response.

The application has two JavaScript variables named `newStockRate` and `stockRate` to store the latest and previous stock rates, respectively.

Users must be able to compare the old stock rate with the new stock rate.

You need to ensure that `newStockRate` and `stockRate` retain their values for comparison.

Which code segment should you use?

A.

A. var newStockRate;

```
function getResults() {  
    var stockRate;  
  
    $.ajax ( {  
        async: true,  
        cache: true,  
        type: 'POST',  
        url: 'StockRates.aspx/GetRate',  
        data: { 'StockName' : stockName },  
        datatype: 'json',  
        success: function (result) {  
            newStockrate = result;  
        }, error: function (xhr, ajaxOptions, thrownError) {alert(thrownError) }  
    } );  
    ShowRate(newStockrate) :  
    }  
  
    function ShowRate(pStockRate) {  
        alert(pStockrate + " " + stockRate);  
    }  
}
```

B.

```
B. function getResults () {
    var stockRate;

    var newStockRate;

    $.ajax ( {
        async: true,
        cache: true,
        type: 'POST',
        url: 'StockRates.asmx/GetRate',
        data: { 'StockName' : stockName },
        datatype: 'json',
        success: function (result) {
            stockrate = result;
        }, error: function (xhr, ajaxOptions, thrownError) {alert(thrownError) }
    } );
    ShowRate(pStockRate) :
    }
    function ShowRate(pStockRate) {
        alert(pStockrate + " " + stockRate);
    }
}
```

C.

```

C. var newStockRate;
   function getResults () {
   var StockRate;

   $.ajax ( {
       async: true,
       cache: true,
       type: 'POST',
       url: 'StockRates.asmx/GetRate',
       data: { 'StockName' : stockName },
       datatype: 'json',
       success: function (result) {
           stockrate = result;
       }, error: function (xhr, ajaxOptions, thrownError) {alert(thrownError) }
       });
   ShowRate(newStockRate) :
   }
   function ShowRate(pStockRate) {
       alert(pStockrate + " " + stockRate);
   }

```

D.

```

D. var StockRate;
   function getResults () {
   var newStockRate;

   $.ajax ( {
       async: true,
       cache: true,
       type: 'POST',
       url: 'StockRates.asmx/GetRate',
       data: {'StockName' : stockName },
       datatype: 'json',
       success: function (result) {
newStockRate= result;
       }. error: function (xhr, ajaxOptions, thrownError) {alert(thrownError) }
       } );
   ShowRate(newStockRate) :
   stockRate = newStockRate;

   }
   function ShowRate(pStockRate) {
       alert(pStockrate + " " + stockRate);}

```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 136

You are developing a website that helps users locate restaurants in their area from a browser. You created a function named `findRestaurants()`.

The function must:

- Get the current latitude and longitude of the user's device
- Pass the user's location to `findRestaurants()`

You must ensure that the application accesses the geolocation information from the device before searching for restaurants.

Which code segment should you use?

A. navigator.geolocation.getCurrentPosition (GetRestaurants);

```
function GetRestaurants {  
    restaurants = findRestaurants (navigator.geolocation.getCurrentPosition());  
    ...  
}
```

B. navigator.geolocation.getCurrentPosition (hasPosition, noPosition);

```
function hasPosition (position) {  
    restaurants = findRestaurants (position.coords.latitude, position.coords.longitude);  
    ...  
}  
function noPosition() {  
    ...  
}
```

C. navigator.geolocation.getCurrentPosition (GetRestaurants);

```
function GetRestaurants {  
    restaurants = findRestaurants (navigator.geolocation.getLatitude (),  
navigator.geolocation.getLongitude() );  
    ...  
}
```

D. navigator.geolocation.getBrowerPosition (hasPosition);

```
function hasPosistion (position) {  
    restaurants = findRestaurants (position.coords.latitude, position.coords.longitude);  
    ...  
}
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: B

Section: Volume D

Explanation

Explanation/Reference:

References: <https://developer.mozilla.org/en-US/docs/Web/API/Geolocation/getCurrentPosition>

QUESTION 137

You need to write a self-executing anonymous function in JavaScript. Which code snippet should you include in the function?

A. `(function () {
...
});`

B. `(function anon() {
...
}) 0;`

C. `function anon() {
...
};`

D. `(function () {
...
}) 0;`

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:

References: <http://esbueno.noahstokes.com/post/77292606977/self-executing-anonymous-functions-or-how-to-write>

You are building a multiplayer online game that will be deployed to an application server named Server1. Clients will have a low-latency, persistent connection to Server1.

You need to identify a solution for the game. The solution must meet the following requirements:

- Allows clients to accept low-latency push events from Server1
- Allows clients to receive on message events from Server1

Allows clients to receive on message events from Server1

What should you use to develop the solution?

- A. Ajax
- B. HTTP server push
- C. WebSockets
- D. REST

Correct Answer: C

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

<https://www.html5rocks.com/en/tutorials/websockets/basics/>

QUESTION 139

You have the following code:

```
var objStr = "[1, 2, 3, 4]";
```

You need to convert objStr into an array.

Which line of code should you use?

- A. var jsObject = Array.bind(objStr);
- B. var jsObject = Array.valueOf(objStr);
- C. var jsObject = JSON.parse(objStr);
- D. var jsObject = \$.makeArray(objStr);

Correct Answer: C

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

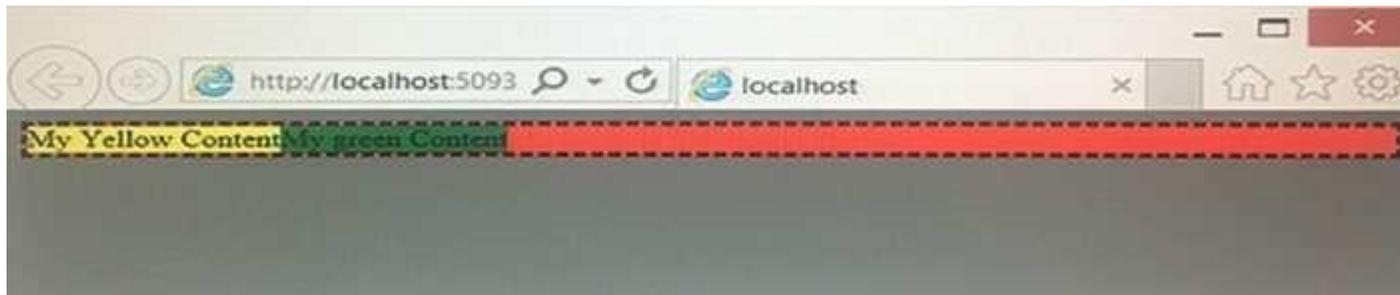
https://www.w3schools.com/js/js_json_parse.asp

QUESTION 140

You have the following code:

```
<body>
<div id="red" style="background-color:red;border:dashed;">
  <div id="yellow" style="background-color:yellow;">My Yellow Content</div>
  <div id="green" style="background-color:green;">My green Content</div>
</div>
</body>
```

You need to ensure that the content appears as shown in the following exhibit:



Which display attribute should you use for the red div?

- A. grid
- B. inline
- C. block
- D. flex

Correct Answer: B

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

https://www.w3schools.com/cssref/pr_class_display.asp

QUESTION 141

Which CSS3 code fragment styles an H2 element only if it is a direct child of a DIV element?

- A. h2 > div {background-color: #900;}
- B. div, h2 {background-color: #900;}
- C. div {background-color: #900;}h2 {background-color: #900;}
- D. div > h2 {background-color: #900;}



<https://vceplus.com/>

Correct Answer: D

Section: Volume D

Explanation

Explanation/Reference:

Explanation: <https://www.w3.org/TR/CSS21/selector.html%23id-selectors>

QUESTION 142

You have a web page that contains the following markup.

```
<link rel="stylesheet" href="css1.css" />
```

You need to ensure that css1.css is used only when the current browser width is less than 800px.

Which markup should you add to the web page?

- A. @media="(max-width: 800px)"
- B. @max-width="800px"
- C. media="(max-width: 800px)"
- D. max-width="800px"

Correct Answer: A

Section: Volume D

Explanation

Explanation/Reference:

QUESTION 143

You are developing a web application in HTML.

You have the following HTML code.

```
<div id="footer"></div>
```

You need to ensure that the `div footer` contains the text "All rights reserved".

Which line of code should you use?

- A. `document("footer") = "All rights reserved";`
- B. `document("footer").innerHTML = "All rights reserved";`
- C. `$(".footer").value = "All rights reserved";`
- D. `$("#footer").html("All rights reserved");`
- E. `document.getElementById(footer) = "All rights reserved";`

Correct Answer: B

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

References:

https://www.codecademy.com/en/forum_questions/557ea03cd3292f72d10006bf

QUESTION 144

You are creating a custom object as described by the following code. Line numbers are included for reference only.

```
01 function square(side) {  
02     this.side = side;  
03     this.perimeter = perimeter;  
04 }  
05
```

You need to implement the perimeter method.

Which code segment should you insert at line 05?

- A. `function perimeter () {return 4 * side;}`
- B. `function perimeter () {return 4 * this.side;}`
- C. `function perimeter () {return 4 * me.side;}`
- D. `function perimeter (obj) {return 4 * obj.side;}`

Correct Answer: B

Section: Volume D

Explanation

Explanation/Reference:

Explanation: <http://creative-coding.decontextualize.com/objects-with-methods/>

QUESTION 145

You are creating a web page that contains a canvas with text.

The page contains the following JavaScript code. Line numbers are included for reference only.

```
01  var canvas = document.getElementById('myCanvas');  
02
```

The text on the canvas must rotate 90 degrees when a user clicks a button on the page.

You need to ensure that the text rotates when the user clicks the button.

Which line of code should you add at line 02?

- A. `canvas.style.transform = "rotation(90deg)";`
- B. `canvas.transform(90);`
- C. `canvas.content.rotate(90);`
- D. `canvas.style.transform = "rotate(90deg)";`

Correct Answer: D

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

https://www.w3schools.com/jsref/prop_style_transform.asp

QUESTION 146

You are creating a JavaScript function that displays the name of a web application.

You declare the following button element.

```
<input type="button" id="Contact" value="Contact" />
```

When a user clicks the button, a JavaScript function named Contact must be called.

You need to create an event handler that calls the Contact function when the button is clicked.

Which two code segments can you use? (Each correct answer presents a complete solution. Choose two.)

A.

```
var button = document.getElementById("Contact");  
ScriptEngine.call(button,Contact());
```

B.

```
var button = document.getElementById("Contact");  
ScriptEngine.bind(button,Contact());
```

C.

```
var button = document.getElementById("Contact");  
button.addEventListener("click",Contact);
```

D.

```
var button = document.getElementById("Contact");  
button.attachEvent("onclick",Contact);
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: C

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

https://www.w3schools.com/jsref/met_element_addeventlistener.asp

QUESTION 147

You develop an HTML5 webpage. You have the following HTML markup:

```
Message: <input type="text" id="message" /><br />
<input type="button" id="postMessage" value="post" onclick="postMessage();" />
```

You also have the following JavaScript code:

```
var socket = new WebSocket("ws://myserver");
```

You need to post messages by using the HTML5 WebSocket API.

Which code segment should you use?

- A. socket.onmessage(\$("#message").val());
- B. socket.send(\$("#message").val());
- C. var msg = (\$("#message").val());\$.post(socket, function (msg) { ... });
- D. var msg = (\$("#message").val());\$.post(socket.onmessage, function (msg) { ... });

Correct Answer: B

Section: Volume D

Explanation

Explanation/Reference:

References: https://www.tutorialspoint.com/html5/html5_websocket.htm

QUESTION 148

You develop an application in HTML5. The application has a field named field1 that uses the month input type.

You need to identify what will occur if the application runs from a browser that does not support the month input type.

What should you identify?

- A. The field1 field will be rendered as a text box.
- B. The field1 field will appear as a label named month.
- C. The web page will display an error message.
- D. The field1 field will not be displayed.

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:

Explanation:

References: <https://stackoverflow.com/questions/18020950/how-to-make-input-type-date-supported-on-all-browsers-any-alternatives> **QUESTION 149**

You develop a webpage by using HTML5. You create the following markup and code: (Line numbers are included for reference only.)

```
01 <head>
02   <script>
03     function removeInvalid(input) {
04
05     }
06   </script>
07 </head>
08 <body>
09   Given Name: <input type="text" id="GivenName" onblur="removeInvalid(this);" />
10   Surname: <input type="text" id="Surname" onblur="removeInvalid(this);" />
11 </body>
```

You need to ensure that the values that users enter are only numbers, letters, and underscores, regardless of the order.

Which code segment should you insert at line 04?

A.

```
var regex = new RegExp("^\\w+$");
if (!input.value.match(regex))
    input.value = "Invalid";
```

B.

```
var regex = "[\\S]";
if (!input.value.match(regex))
    input.value = "Invalid";
```

C.

```
var regEx = "[\w\d]";  
if (!input.value.match(regEx))  
    input.value = "Invalid";
```

D.

```
var regEx = new RegExp("^\w");  
if (!input.value.match(regEx))  
    input.value = "Invalid";
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: A

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

References: https://developer.mozilla.org/en/docs/Web/JavaScript/Reference/Global_Objects/RegExp

QUESTION 150

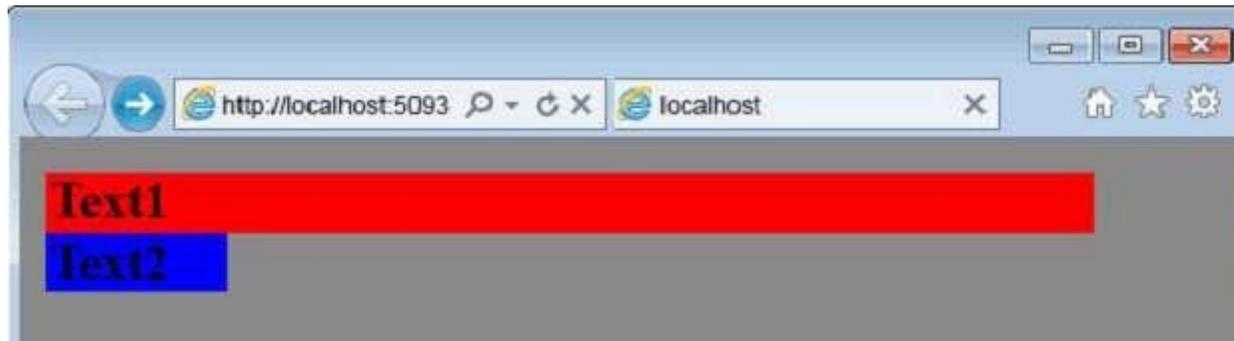
You have the following HTML code.

```
<html>
<body style="background-color:grey">
  <span style="background-color:red; width:50%">
    Text1
  </span>
  <div style="background-color:blue; width:50%">
    Text2
  </div>
</body>
</html>
```

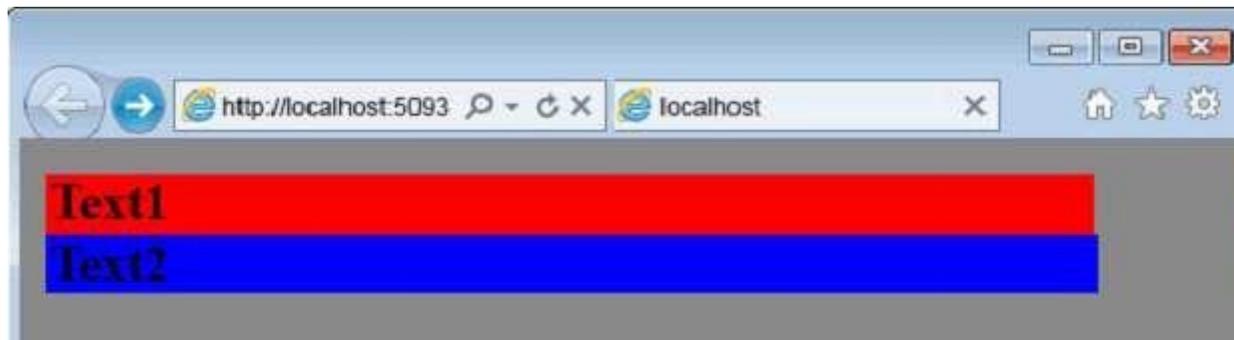
You need to identify how Text1 and Text2 will be displayed.

What should you identify?

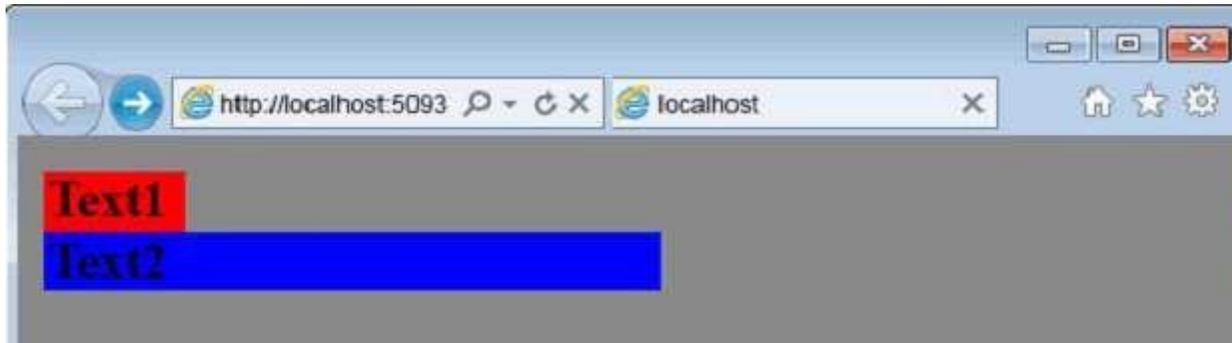
A.



B.



C.



D.



- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:

Explanation:

References: https://www.quackit.com/html_5/tags/html_span_tag.cfm

https://www.quackit.com/html_5/tags/html_body_tag.cfm

https://www.quackit.com/html_5/tags/html_div_tag.cfm

QUESTION 151

You display a long text content in a div.

You need to prevent the vertical scrollbar of the browser from being displayed.

Which CSS element should you use?

- A. @page
- B. @keyframes
- C. overflow-x
- D. overflow-y

Correct Answer: D

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

References: https://www.w3schools.com/cssref/css3_pr_overflow-y.asp

QUESTION 152

You have the following markup.

```
<div style="display:flex;height:300px;background-color:red">
  <div style="height:100px;background-color:yellow">
    Yellow div text
  </div>
</div>
```

You need to ensure that the yellow div is centered in the red div.

What should you do?

- A. Add the following code to the yellow div.align-content:center
- B. Add the following code to the red div.align-content:center
- C. Add the following code to the red div.margin:auto
- D. Add the following code to the yellow div.margin:auto

Correct Answer: B

Section: Volume D

Explanation

Explanation/Reference:

QUESTION 153

A web application has a web page that contains an HTML5 CANVAS element. A web worker extracts messages from the CANVAS element.

You need to ensure that the web worker can read the message sent by the web page.

Which three object types can you use? Each correct answer presents a complete solution.

- A. JSON
- B. parent
- C. JavaScript
- D. window
- E. string
- F. DOM

Correct Answer: ACE **Section:**
Volume D Explanation

Explanation/Reference:

Explanation:

References: <https://www.html5rocks.com/en/tutorials/workers/basics/>

QUESTION 154

You have the following code.

```
var product = 'car';
function displayGlobalProduct()
{
    'use strict';
    var product = 'boat';
    alert(eval('product'));
}
displayGlobalProduct();
```

You discover that the displayGlobalProduct function displays a value of boat.

You need to change the function to display a value of car.

Which line of code can you use to replace the alert?

- A. `alert(eval(displayGlobalProduct, 'product'));`
- B. `alert(window.eval(product));`
- C. `alert(window.eval('product'));`
- D. `alert(eval(call('product')));`
- E. `alert(eval.call(null, product));`

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:

Explanation:

References: <http://www.endmemo.com/js/eval.php>

QUESTION 155

You would like to create a web application by using HTML5, JavaScript, and CSS3. Which of the following Visual Studio 2012 editions can you use? (Choose all that apply.)

- A. Visual Studio Professional 2012
- B. Visual Studio Premium 2012
- C. Visual Studio Ultimate 2012
- D. Visual Studio Express 2012 for Web
- E. Visual Studio Express 2012 for Windows 8

Correct Answer: ABCD
Section: Volume D
Explanation

Explanation/Reference:

References: http://www.daoudisamir.com/references/vs_ebooks/html5_css3.pdf

QUESTION 156

You would like to create a Windows 8 application by using HTML5, JavaScript, and CSS3. Which of the following Visual Studio 2012 editions can you use? (Choose all that apply.)

- A. Visual Studio Professional 2012
- B. Visual Studio Premium 2012
- C. Visual Studio Ultimate 2012
- D. Visual Studio Express 2012 for Web
- E. Visual Studio Express 2012 for Windows 8

Correct Answer: ABCE

Section: Volume D

Explanation

Explanation/Reference:

References: http://www.daoudisamir.com/references/vs_ebooks/html5_css3.pdf

QUESTION 157

You would like to create web applications and Windows 8 Windows Store applications by using HTML5, JavaScript, and CSS3, but while you're learning, you don't want to buy Visual Studio 2012.

Which of the following Visual Studio 2012 editions can you use for free to accomplish your goal?

- A. Visual Studio Professional 2012
- B. Visual Studio Premium 2012
- C. Visual Studio Ultimate 2012
- D. Visual Studio Express 2012 for Web and Visual Studio Express 2012 for Windows 8

Correct Answer: D

Section: Volume D

Explanation

Explanation/Reference:

References: http://www.daoudisamir.com/references/vs_ebooks/html5_css3.pdf

QUESTION 158

On which panel can you see a hierarchically structured view of the DOM?

- A. Live DOM
- B. Projects
- C. Assets
- D. Device

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:

References: http://www.daoudisamir.com/references/vs_ebooks/html5_css3.pdf

QUESTION 159

Which technology is HTML5 preceded by and derived from?

- A. HTML 4.01
- B. SGML
- C. XHTML 1.0
- D. XML

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:

References: http://www.daoudisamir.com/references/vs_ebooks/html5_css3.pdf

QUESTION 160

You are creating a new Windows 8 application, and you want to set up TDD for your JavaScript code.

Which testing framework will you use

- A. QUnit
- B. QUnit-Metro
- C. Microsoft Test
- D. NUnit

Correct Answer: B
Section: Volume D
Explanation

Explanation/Reference:

References: http://www.daoudisamir.com/references/vs_ebooks/html5_css3.pdf

QUESTION 161

What are the steps for TDD?

- A. Write the passing test, write the code, run the test again to validate that it still passes.
- B. Write the failing test, write the code, run the test again to validate that it passes.
- C. Write the code, write the test to validate that it passes, run the test again to validate that it still passes.
- D. Write the passing test, write the code, break the code, run the test again to validate that it fails.

Correct Answer: B

Section: Volume D

Explanation

Explanation/Reference:

References: http://www.daoudisamir.com/references/vs_ebooks/html5_css3.pdf

QUESTION 162

Where should your JavaScript code be placed?

- A. In the <head> element of your HTML document.
- B. Just before the </body> tag.
- C. You should always place your JavaScript code in separate files, external to your HTML document.
- D. Inside the <body> element, at the top.

Correct Answer: C

Section: Volume D

Explanation

Explanation/Reference:

References: http://www.daoudisamir.com/references/vs_ebooks/html5_css3.pdf

QUESTION 163

NOTE: This question is a part of series of questions that presents the same scenario. Each question in the series contains unique solution that might meet the started goals. Some questions sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section. you will not be able to return to it. As a result, these questions will not appear in the review screen.

You have the following HTML5 and CSS3 markup within a webpage.

```
<nav id="mainmenu" class="page-nav">
  <div id="navlist" class="container">
    <a href="index.html">Home</a>
    <a href="register.html">Register</a>
  </div>
</nav>
```

You need to set the background color of the Home link to yellow. The solution can affect the color of the other elements.

Solution: You use the following style:

```
<style>
  .navlist{
    background-color: yellow;
  }
</style>
```

Does this meet the goal?

- A. Yes
- B. No

Correct Answer: B
Section: Volume D
Explanation

Explanation/Reference:

Reference: https://www.w3schools.com/css/css_background.asp

QUESTION 164

NOTE: This question is a part of series of questions that presents the same scenario. Each question in the series contains unique solution that might meet the started goals. Some questions sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section. you will not be able to return to it. As a result, these questions will not appear in the review screen.

You have the following HTML5 and CSS3 markup within a webpage.

```
<nav id="mainmenu" class="page-nav">
    <div id="navlist" class="container">
        <a href="index.html">Home</a>
        <a href="register.html">Register</a>
    </div>
</nav>
```

You need to set the background color of the Home link to yellow. The solution can affect the color of the other elements.

Solution: You use the following style:

```
<style>
    #navlist::first-line{
        background-color: yellow;
    }
</style>
```

Does this meet the goal?

- A. Yes
- B. No

Correct Answer: B
Section: Volume D
Explanation

Explanation/Reference:

QUESTION 165

You have a web API that responds to a `GET` request and returns an image as an array of bytes.

You need to create a page that contains a button to requests the image. The response must be displayed as an image on the page.

Which two code segments can you use to achieve the goal? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

A.

```
<!DOCTYPE html>
<html>
<body>
  <button type="button" onclick="getImage()">Get Image</button>
  <br/>
  <img id="image"/>
  <script>
    function getImage() {
      var xhttp = new XMLHttpRequest();
      xhttp.open("GET", "/api/pic", true);
      xhttp.responseType = "blob";
      xhttp.onload = function (e) {
        var blob = event.response;
        var urlCreator = window.URL || window.webkitURL;
        var imageUrl = urlCreator.createObjectURL(blob);
        document.querySelector("#image").src = imageUrl;
      }
      xhttp.send();
    }
  </script>
</body>
</html>
```

B.

```
<!DOCTYPE html>
<html>
<head>
  <script src="http://ajax.aspnetcdn.com/ajax/jQuery/jquery-3.2.1.js"></script>
</head>
<body>
  <button type="button" onclick="getImage()">Get Image</button>
  <br/>
  <img id="image" />
  <script>
    function getImage() {
      $.get({
        url: "/api/pic",
        dataType: "plainObject",
        success: function (result) {
          var urlCreator = window.URL || window.webkitURL;
          var image Url = urlCreator.createObjectURL(result);
          document.querySelector("#image").src = imageUrl;
        }
      });
    }
  </script>
</body>
</html>
```

C.

```
<!DOCTYPE html>
<html>
<head>
  <button type="button" onclick="getImage()">Get Image</button>
  <br/>
  <img id="image"/>
  <script>
    function getImage() {
      var xhttp = new XMLHttpRequest();
      xhttp.open("GET", "/api/pic", true);
      xhttp.responseType = "arraybuffer";
      xhttp.onload = function (e) {
        var blod = new Blod([xhttp.response], {type: "application/octet-stream" });
        var urlCreator = window.URL || window.webkitURL;
        var image Url = urlCreator.createObjectURL(blob);
        document.querySelector("#image").src = imageUrl;
      }
      xhttp.send();
    }
  </script>
</body>
</html>
```

D.

```
<!DOCTYPE html>
<html>
<body>
  <button type="button" onclick="getImage()">Get Image</button>
  <br/>
  <img id="image"/>
  <script>
    function getImage() {
      var xhttp = new XMLHttpRequest();
      xhttp.open("GET", "/api/pic", true);
      xhttp.responseType = "text";
      xhttp.onloadend = function (event) {
        var blob = event.response;
        var urlCreator = window.URL || window.webkitURL;
        var imageUrl = urlCreator.createObjectURL(blob);
        document.querySelector("#image").src = imageUrl;
      }
      xhttp.onloadstart(loadend);
    }
  </script>
</body>
</html>
```

Correct Answer: BC

Section: Volume D

Explanation

E.

Explanation/Reference:

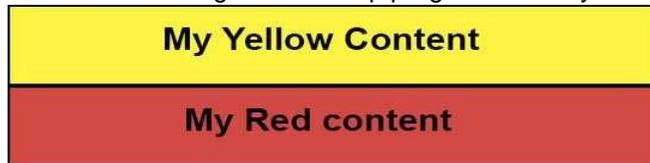
Reference: <https://developer.mozilla.org/en-US/docs/Web/API/XMLHttpRequest/responseType>

QUESTION 166

You have the following markup.

```
<div id="yellow" style="background-color:yellow">My Yellow Content</div>
<div id="blue" style="background-color:blue">My Blue Content</div>
<div id="red" style="background-color:red">My Red Content</div>
```

You need to change the markup programmatically to display as follows:



Which line of code should you use?

- A. `document.getElementById("blue").style.display = "none"`
- B. `$("#blue").css("visibility", "collapse");`
- C. `document.getElementById("blue").style.visibility = "hidden"`
- D. `$("#blue").css("display", "hidden");`
- E. `document.getElementById ("blue").style.visibility = "hidden"`

Correct Answer: A

Section: Volume D

Explanation

Explanation/Reference:

Reference: https://www.w3schools.com/CSSref/pr_class_display.asp

QUESTION 167

You have the following CSS markup that renders a red rectangle on a webpage.

```
#element1 {  
    background: red;  
    margin: 50px;  
    padding: 50px;  
    width: 200px;  
    height: 150px;  
    box-sizing: border-box;  
}
```

How large will the red rectangle appear when it renders on the page?

- A. width 200px, height 150 px
- B. width 400px, height 350 px
- C. width 100px, height 50 px
- D. width 300px, height 250 px

Correct Answer: A

Section: Volume D

Explanation

Explanation/Reference:

References: https://www.w3schools.com/CSSref/css3_pr_box-sizing.asp

QUESTION 168

You are creating a page that uses JavaScript code.

You need to ensure that if a function named `function1` throws a `RangeError` error, a function named `function2` executes. For any other type of error, a function name `function3` must execute.

Which JavaScript code should you use?

```
try {
    function1();
}
catch(e) {
    if (e instanceof rangeError) {
        function2();
    } else {
        function3();
    }
}

try {
    function1();
}
catch (e) {
    function2();
}
finally {
    if (e instanceof RangeError) {
        function3();
    }
}
```

A.

B.

```
try {
    function1();
}
catch (e) {
    function3();
}
finally {
    if (e instanceof RangeError) {
        function2();
    }
}

try {
    function1();
}
catch (e) {
    if (e instanceof RangeError) {
        function3();
    } else {
        function2();
    }
}
}
```

C.

D.

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 169

You have the following markup.

```
<style>
  .flex1 {
    background-color: yellow;
    border:dotted;
  }

  flex2 {
    background-color: red;
    border:dotted;
  }
</style>
<div style="display:flex;background-color:grey;">
  <div class="flex1">
    Flex1
  </div>
  <div class="flex2">
    Flex2
  </div>
</div>
```

You need to ensure that `flex1` is displayed on the right of the page. `flex2` must be displayed directly to the left of `flex1`.

Which style should you add to the outer div?

- A. `flex-direction:column-reverse`
- B. `flex-direction:row-reverse`
- C. `flex-direction: row`
- D. `flex-direction: column`

Correct Answer: B

Section: Volume D

Explanation

Explanation/Reference:

Reference: https://www.w3schools.com/cssref/css3_pr_flex-direction.asp

QUESTION 170

You have the following markup.

```
<div id="yellow" style="background-color:yellow">My Yellow Content</div>
```

You need to rotate the div programmatically by 45 degrees.

Which line of code should you use?

- A. `document.getElementById("yellow").style.rotate(45);`
- B. `document.getElementById("yellow").style.transform = "rotate(45deg)";`
- C. `document.getElementById("yellow").style.rotate3d("45deg");`
- D. `document.getElementById("yellow").style.rotateX(45);`

Correct Answer: B

Section: Volume D

Explanation

Explanation/Reference:

References: https://www.w3schools.com/jsref/prop_style_transform.asp

QUESTION 171

You have a webpage that uses HTML5.

You plan to add the following text to the bottom of the page as a footer.

Our Address!
123 Here St.
Seattle, WA Email:
info@fabrikam.com
Copyright Fabrikam, Inc.

You need to use HTML5 to maximize Search Engine Optimization (SEO) for the page.

How should you structure the content at the bottom of the page?

```
<div class="footer">
  <address>
    <p>Our Address!</p>
    <p>123 Here St.</p>
    <p>Seattle, WA</p>
    <p>Email: info@fabrikam.com</p>
  </address>
  <p>Copyright Fabrikam, Inc.</p>
</div>
```

```
<div class="footer">
  <div class="address">
    <p>Our Address!</p>
    <p>123 Here St.</p>
    <p>Seattle, WA</p>
  </div>
  <p>Email: info@fabrikam.com</p>
  <p>Copyright Fabrikam, Inc.</p>
</div>
```

A.

B.

```
<"footer">
  <div class="address">
    <p>Our Address!</p>
    <p>123 Here St.</p>
    <p>Seattle, WA</p>
    <p>Email: info@fabrikam.com</p>
    <p>Copyright Fabrikam, Inc.</p>
  </div>
</footer>
<footer>
  <address>
    <p>Our Address!</p>
    <p>123 Here St.</p>
    <p>Seattle, WA</p>
    <p>Email: info@fabrikam.com</p>
  </address>
  <p>Copyright Fabrikam, Inc.</p>
</footer>
```

c.

D.

```
<input type="radio" name="profession1" value="IT Professional">IT Professional<br>  
<input type="radio" name="profession2" value="IT Developer">IT Developer<br>  
<input type="radio" name="profession3" value="IT Manager">IT Manager<br>
```

```
<input type="checkbox" name="profession" value="IT Professional">IT Professional<br>  
<input type="checkbox" name="profession" value="IT Developer">IT Developer<br>  
<input type="checkbox" name="profession" value="IT Manager">IT Manager<br>
```

```
<input type="radio" name="profession" value="IT Professional">IT Professional<br>  
<input type="radio" name="profession" value="IT Developer">IT Developer<br>  
<input type="radio" name="profession" value="IT Manager">IT Manager<br>
```

Correct Answer: D

Section: Volume D

Explanation

Explanation/Reference:

QUESTION 172

You are creating a webpage by using HTML5.

You need to allow users to choose between the following three options:

- IT Professional
- IT Developer ▪
- IT Manager

The users must be limited to one option.

Which markup should you use?

A.

B. C. <https://vceplus.com/> D.

```
<input type="radio" name="profession" value="IT Professional, IT Developer, IT Manager", IT Manager"><br>
```

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:

References: https://www.w3schools.com/html/html_forms.asp

QUESTION 173

You have the following code:

```
var objStr = "[1, 2, 3, 4]";
```

You need to convert objStr into an array.

Which line of code should you use?

- A. `var jsObject = JSON.stringify(objStr);`
- B. `var jsObject = Array.valueOf(objStr);`
- C. `var jsObject = $.makeArray(objStr);`
- D. `var jsObject = $.parseJSON(objStr);`

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 174

You are developing a web form that includes the following HTML.

```
<input id="txtValue" type="text" />
```

You need to ensure that a value is entered into txtValue before the form is submitted.

Which code segment should you use?

```
function validate() {
    var name = $("#txtValue").val();
    if (name ==null | | name == " ")
        alert ("please enter valid value");
    return;
}

function validate() {
    var name = $("#txtValue").val();
    if (name ==null && name == " ")
        alert ("please enter valid value");
    return;
}

function validate() {
    var name = $("#txtValue");
    if (name ==null | name == " ")
        alert ("please enter valid value");
    return;
}

function validate() {
    var name = $("#txtValue").val();
    if (name ==null & name == " ")
        alert ("please enter valid value");
    return;
}
```

A.

B. C.

D.

Correct Answer: A

Section: Volume D

Explanation

Explanation/Reference:

Explanation:

Check if text is a null value or an empty string.

Reference: HTML DOM Input Text Object

QUESTION 175

You are developing an application in HTML5.

The application contains the following HTML markup.

```
<div>
  <h1>Resources</h1>
  <a href= "http://contoso.com/people.aspx">People</a>
  <a href="http://contoso.com/orgProducts.aspx">Products</a>
  <a href="http://wiki.contoso.org">Resources</a>
  ...
</div>
```

You need to ensure that all of the links referencing domain names ending in.org are displayed in red text.

What should you do?

- A. a CSS pseudo-class
- B. a CSS attribute selector
- C. a jQuery event callback
- D. a JSON parse function
- E. a jQuery form selector

Correct Answer: C

Section: Volume D

Explanation

Explanation/Reference:

QUESTION 176

You write the following JavaScript code. (Line numbers are included for reference only.)

```
01 <script>
02 ...
03 bestStudent=new Student ("David Hamilton");
04 document.write (bestStudent.fullname + "is registered.");
05 </script>
```

You need to write a function that will initialize and encapsulate the member variable fullname.

Which are two possible code fragments that you can insert at line 02 to achieve the goal? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A.

```
function Student(someName) {  
    fullname=someName;  
}
```
- B.

```
function Student (someName) {      var  
    fullname=someName;  
}
```
- C.

```
function Student (fullname) {  
    This.fullname=fullname;  
}
```
- D.

```
function Student (someName) {  
    this.fullname=someName;  
}
```

Correct Answer: BC

Section: Volume D

Explanation

Explanation/Reference:

Reference: <https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Statements/var>

QUESTION 177

You develop an HTML5 web application. The web application contains a form that allows users to enter only their month of birth.

The value that the users enter must be numbers between 1 and 12, inclusive.

You need to implement the form element for the month of birth.

Which element should you use?

- A. `<input type="date" data-role="month" />`
- B. `<input type="number" min="1" max="12" />`

C. `<input type="radio" value="1-12" />`

D. `<input type="month" itemscope="numeric" />`

Correct Answer: B

Section: Volume D

Explanation

Explanation/Reference:

QUESTION 178

You have the following code.

```
myLongFunction = new function () {  
    ...  
}  
myLongFunction ()
```

You need to recommend a solution to ensure that myLongFunction is executed as a separate thread. Which type of object should you use?

- A. worker
- B. reflect
- C. prototype
- D. eval

Correct Answer: A

Section: Volume D

Explanation

Explanation/Reference:

Reference: https://www.w3schools.com/HTML/html5_webworkers.asp

QUESTION 179

You implement an application by using HTML5 and JavaScript. You create a webpage that contains the following HTML:

```
<!DOCTYPE html>
<html>
<head>
  <link href="site.css" rel="stylesheet" type="text/css" />
  <script type="text/javascript" src="jquery.js"></script>
</head>
<body>
  <div id="container">
    <ul>
      <li>First List Item
        <ul>
          <li>Child List Item</li>
        </ul>
      </li>
      <li>Second List Item</li>
      <li>Third List Item</li>
      <li>Fourth List Item</li>
    </ul>
    <p>Some interesting information that we need to display.</p>
    <p>More information that is important to this page.</p>
  </div>
</body>
</html>
```

The application must place a border on only the first `UL` element that is contained in the `DIV` element.

You need to update the webpage.

What should you do?

A. Add the following `SCRIPT` element after the `DIV` element:

```
<script>
  $(".container > ul").css("border", "1px solid black");
</script>
```

B. Add the following attribute to the first UL element:

```
border="1px solid black"
```

C. Add the following SCRIPT element after the DIV element:

```
<script>
  $("#div#container > ul").css("border", "1px solid black");
</script>
```

D. Add the following attribute to the first UL element:

```
id="border"
```

Correct Answer: B

Section: Volume D

Explanation

Explanation/Reference:

QUESTION 180

You have the following HTML markup within a page that lists the sessions of a conference. (Line numbers are included for reference only.)

```
01 <div class="sessionlist">
02 <h2>Here are our highlighted sessions</h2>
03 <div class="page-section session">
04 <h3 class="sessiontitle">
05 Controlling Manufacturing Costs
06 </h3>
07 <p class="sessionabstract">
08 In this session, we will see how to control manufacturing costs during
09 your product build.
10 </p>
11 <div class="page-section session">
12 <h3 class="sessiontitle">
13 Applying the Finish
14 </h3>
15 <p class="sessionabstract">
16 In this session, we will look at best practices on how to ensure a quality
17 product.
18 </p>
19 </div>
```

You need to use HTML5 to maximize Search Engine Optimization (SEO) for the page.

Which two changes should you make to the markup? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Replace the div element at lines 03 and 11 with `<div aria-level="2" class="article">`.
- B. Replace the div element at line 01 with `<div class="section sessionlist">`.
- C. Replace the div element at lines 03, 10, 11, and 18 with article elements.
- D. Replace the div element at line 01 with `<div aria-level="1" class="page-section sessionlist">`.

- E. Replace the div element at line 03 with <div class="article">.
- F. Replace the div element at lines 01 and 19 with a section element.

Correct Answer: BF

Section: Volume D

Explanation

Explanation/Reference:

Reference: <https://stackoverflow.com/questions/6939864/what-is-the-difference-between-section-and-div>

QUESTION 181

You have a webpage that includes the following markup:

```
<!DOCTYPE html>
<html>
  <head>
    <script src="jquery.js"></script>
    <script>
    </script>
  </head>
  <body>
    <div id="Div1"></div>
    <span id="Span1"></span>
  </body>
</html>
```

When the page is loaded, the SPAN element must be moved as follows:

```
<div id="Div1"><span id="Span1"></span></div>
```

You need to move the SPAN element and preserve any event handlers attached to the SPAN.

Which code segment should you use?

- A. `document.getElementById("Div1").appendChild(document.getElementById("Span1"))`

- B. `var moveElement = document.getElementById("Div1");`
`moveElement.parentNode.appendChild(moveElement);`
- C. `document.getElementById("Span1").appendChild(document.getElementById("Div1"))`
- D. `var moveElement = document.getElementById("Span1");`
`moveElement.parentNode.appendChild(moveElement);`

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:

References:

https://www.w3schools.com/jsref/met_node_appendchild.asp

QUESTION 182

You have the following HTML Markup.

```
<figure>  
    
</figure>
```

You need to ensure that the markup conforms to W3C accessibility standards.

What should you add to the markup?

- A. a `figcaption` element within the figure element
- B. an `alt` attribute to the `img` element
- C. a `name` attribute to the `img` element
- D. a `header` element within the figure element

Correct Answer: B
Section: Volume D
Explanation

Explanation/Reference:

Explanation:

Images should include alternative text (alt text) in the markup.

References: <https://www.w3.org/standards/webdesign/accessibility>
<https://www.w3.org/TR/UNDERSTANDING-WCAG20/text-equiv.html>



<https://vceplus.com/>