

CS 343 Practice Exam 1

Name: _____

This work complies with the JMU Honor Code. I have neither given nor received unauthorized assistance. I will not discuss the exam contents with anyone who has not taken the exam.

Initials: _____

Note: For multiple choice questions, fill in the circle completely (no check marks or half-filled bubbles).

☐ Incorrect

☒ Correct

☐ Incorrect

☐ Incorrect

Q1. HTML Basics (15 pts)

1. For each of the following tags, briefly describe its meaning/use, and specify whether the display is **Block** or **Inline**:

Tag	Meaning/Use	Block	Inline
<code><p></code>		☐	☐
<code><section></code>		☐	☐
<code><h1></code>		☐	☐
<code><a></code>		☐	☐
<code></code>		☐	☐
<code></code>		☐	☐
<code></code>		☐	☐
<code></code>		☐	☐
<code><hr></code>		☐	☐

1. **Short answer.** For each of the following, answer in 1-2 brief sentences:

- What is the purpose of the `alt` attribute for `<img>` elements? Why is it important?
- What is the difference between `<img>` and `<figure>`? Explain what each element is used for.
- Write the HTML for a hyperlink that links to `https://www.jmu.edu` and has the text "JMU Homepage".
- Write the HTML for a `main` element that has an id of `primary-content` and belongs to both the `indent` and `fancy` classes.

Q2. Tables & Forms (10 pts)

1. Given the following table with a header row and two data rows:

Name	Age	City
Alice	30	New York
Bob	25	Los Angeles

Write the entire HTML for the table above. Include all appropriate elements and attributes for accessibility.

2. Given the following form:

Name:

Age:

City:

Write the entire HTML for the form above. Ensure that each form input is properly associated with its label, all inputs are required, and that they have appropriate types.

Q3. Semantic Elements (5 pts)

Identify where semantic elements should be used to improve accessibility and search engine optimization. Examples of semantic elements include `<article>`, `<aside>`, `<details>`, `<figcaption>`, `<figure>`, `<footer>`, `<header>`, `<main>`, `<nav>`, `<section>`, `<summary>`, and `<time>`. (Not all examples are needed in the code below.) You do not need to rewrite the entire code snippet. Instead, write the appropriate semantic element name next to each `<div>` that should be replaced.

```
<div id="header">
  ...
  <div id="top-navigation">
    ...
  </div>
</div>

<div id="main">

  <div id="left-navigation">
    ...
  </div>
  <h1>Page Title</h1>

  <div class="content">

    <h2>Stories</h2>

    <div class="story">
      ...
    </div>

    <div class="story">
      ...
      <div class="story-photo">

        <img ... class="blog-photo">

        <p class="photo-caption">...</p>

      </div>
    </div>

    <div class="related-stuff-on-right">
      ...
    </div>
  </div>

  <div class="content">
    ...
  </div>
</div>

<div id="footer">
  ...
</div>
```

Q4. CSS Basics (20 pts)

1. Fill in the blanks to match the style of the result. The borders are 2 pixels wide, gray, and dotted.

Note: The blanks occur in different parts of the css syntax (i.e., selectors, properties, and values).

```

_____ {
  _____: inline-block;
}

```

Source:

```

<body>
  <div class="other">OTHER</div>
  <div id="content">CONTENT</div>
  <div class="other">OTHER</div>
</body>

```

```

_____ {
  background-color: gray;

  _____: white;

  _____: bold;

  _____: 1cm;

  _____: 2cm;
}

```

Result:



```

_____ {
  border: _____;

  _____: 1cm;
}

```

2. Given the following CSS rules, indicate which color will be applied to each element. Use **black** for the default color if no rule applies.

```

#beta {
  color: darkorange;
}
article #alpha {
  color: orchid;
}
p {
  color: crimson;
}
article.beta {
  color: royalblue;
}
.alpha {
  color: teal;
}
section>span {
  color: seagreen;
}

```

```

<article>
  <p id="alpha"><span>A</span></p>
</article>

<p class="alpha" id="beta">B</p>

<section>
  <span class="beta">C</span>
</section>

<p class="beta">D</p>

<article class="beta">
  <p>E</p>
</article>

<article class="alpha">F</article>

```

A. _____

B. _____

C. _____

D. _____

E. _____

F. _____

Q5. JavaScript and DOM Events (10 Points)

For each question, completely fill in the bubble for the (single) correct answer.

1. Which type of brackets is used to create an empty object?

- ☐ {}
- ☐ []
- ☐ ()
- ☐ <>

2. Which operator is used for strict equality comparison (checks both value and type)?

- ☐ =
- ☐ ==
- ☐ ===
- ☐ ====

3. Which keyword declares a variable that cannot be reassigned?

- ☐ var
- ☐ let
- ☐ const
- ☐ static

4. What is the result of 2 + "2" in JavaScript?

- ☐ 4
- ☐ "22"
- ☐ NaN
- ☐ undefined

5. Which of the following is a Boolean value?

- ☐ "true"
- ☐ true
- ☐ 1
- ☐ "false"

6. Which method selects an element by ID?

- ☐ querySelector()
- ☐ getElementById()
- ☐ getElementsById()
- ☐ selectId()

7. Which method attaches an event to an element?

- ☐ addEventListener()
- ☐ onclick()
- ☐ addClick()
- ☐ listen()

8. Which is a read/write property for only the text inside an arbitrary element (not HTML)?

- ☐ innerHTML
- ☐ textContent
- ☐ innerTextValue
- ☐ value

9. Which is a read/write property for the value of a form input field?

- ☐ text
- ☐ content
- ☐ value
- ☐ innerHTML

10. Which method gets all elements for a CSS selector?

- ☐ getElements()
- ☐ querySelector()
- ☐ querySelectorAll()
- ☐ getAllElements()

Q6. Statements (12 pts)

Write a **single** JavaScript statement for each question.

1. Add the value `343` to the end of the (preexisting) array `scores`.
2. Create an object called `ninjas` with the properties `name` set to `"Naruto"` and `energy` set to `1000`.
3. Log the value `name` property of the `ninjas` to the console. Access the property dynamically; don't just print the string literal.
4. Define an arrow function that takes one parameter `number` and returns the number multiplied by 2. Assign the function to a variable named `doubleNumber`.

Q7. Debugging (5 pts)

The following code has two errors. Modify the code to correct the errors.

The code should turn the button text into "Clicked!" when the button is clicked.

You do not need to rewrite the entire code snippet. Instead, ~~strike through~~ and text

[^]insert

```
<button id="myBtn">Click me</button>

<script>

  const btn = document.querySelectorAll("#myBtn");

  btn.addEventListener("click", () => {

    btn.text = "Clicked!";

  });
</script>
```

Q8. Arrays and Loops (9 points)

Write a function named `countShort(names)` that takes an array of strings and returns how many strings are shorter than 4 characters. Your solution must include a for loop; do not use higher order array functions.

Examples:

- `countShort(["Ana", "Salim", "Ram", "David"])` → 2
- `countShort([])` → 0

Q9. DOM Manipulation (14 points)

In the space provided, write JavaScript to complete the following:

1. Add a click event listener for the Add button.
2. When the Add button is clicked:
 - a. Append the guestInput name to the guestList in a new `<li>`.
 - b. Toggle the paragraph's `hideme` class.

```
<div class="app">
  <h2>Guest List</h2>
  <input id="guestInput" type="text" placeholder="Enter a name">
  <button id="addBtn">Add</button>
  <p class="hideme">Task completed!</p>
  <ul id="guestList"></ul>
</div>
<script>
```

```
</script>
```