Name _____

Practice Midterm for IT 411
Fall 2025

For multiple choice (1 point each), circle the best answer.

1. A function is defined and assigned to the variable **`calculate`**. The expression for calling the function (i.e., running the statements defined in the function) is
   a) **`calculate`**
   b) **`calculate.click`**
   c) **`calculate.exec()`**
   d) **`calculate()`**

2. Assume that a function has been assigned to run when the **`load`** event occurs for the **`window`** object. The function will be called (i.e., its statements executed) when
   a) the JS files start to load.
   b) the html elements can be referenced.
   c) the page starts to load.
   d) when the users presses the start button.

3. The keyword **`const`** in JavaScript
   a) indicates that the variable that follows it is a global variable.
   b) indicates that the variable that follows it can be accessed anywhere in the same JS file.
   c) requires that the variable that follows it may be later reassigned a new value.
   d) limits the scope of the variable that follows it.

4. A callback function
   a) is a function that runs when an event (such as a button click) occurs.
   b) a variable that is assigned a string.
   c) must be defined with two parameters.
   d) is always executed when the web page starts to load.

5. An assignment statement
   a) evaluates an expression on the right-hand side of the equals sign and then adds to the value referenced on the left-hand side.
   b) attaches a variable to a value from an expression.
   c) is processed from left to right.
   d) evaluates an expression on the right-hand side of the equals sign and then assigns it to the place in computer memory referenced on the left-hand side, replacing any previous value.

6. Assume that a click-handing function is defined with the event parameter **`evt`**. Which of the following expressions refers to the element that the user clicked on?
   a) **`evt`**
   b) **`evt.target`**
   c) **`evt.click`**
   d) **`document.click(evt)`**

7. The following questions refer to the HTML code below (9 points, 3 each):

```
<h1 class="header">User Entry</h1>

<p id="first">Entries</p>

<p><input type="button" id="init" value="Start" /></p>

<h2 class="header">Outcome</h2>

<p id="items">Summary Results</p>
```

What would happen to the page if the following code were run (after the html elements are loaded)?

a) `document.getElementById('first').innerHTML += ' -- TBD'`

b) `document.querySelector('.header').style.color = 'blue'`

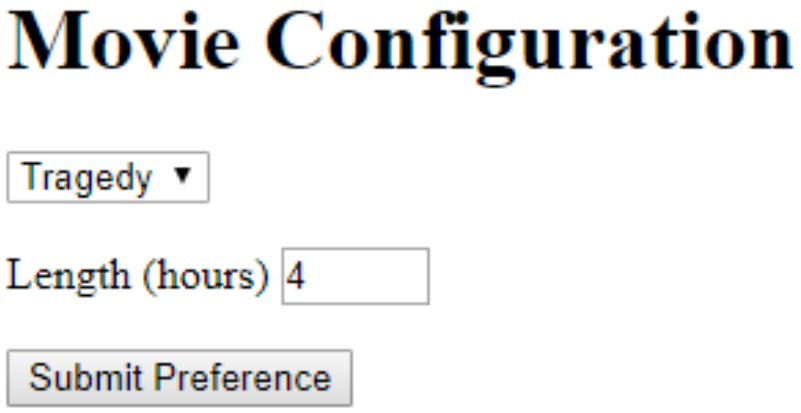
c)
```
obj_list = [
    { shape: 'circle', color: 'green', size: 4 },
    { shape: 'square', color: 'red', size: 2 },
    { shape: 'box', color: 'red', size: 2 }
];
const sump = document.getElementById('items');
for (let obj of obj_list) {
    if (obj.size < 3) {
        sump.innerHTML += ' --- ' + obj.shape;
    }
}
```

8. Assume that the hml file loads the following JS code:

```
console.log('orange');
window.addEventListener('load', function() {
    console.log('blue');

    const color_list = ['green', 'pink'];
    const start_button = document.getElementById('init');

    start_button.addEventListener('click', function() {

        for (let c of color_list) {
            console.log(c);
        }
    });
    console.log('cyan');
});
console.log('red');
```

This code logs 6 strings of color to the console. Indicate the order of output that would **appear in the console** when the page loads and is then followed by pressing the button (with id 'init'). For this question, you do not need to say what happens to the display on the page. (5 points)

9. Refer to the first pages of your code listings. The image below shows how the page would appear before you press the button. Show or indicate how the page would appear after the button is pushed by annotating the page and filling in the content that would appear. For indicating style and color, you may simply note the style or color. Note that the tag with the id of "message" does not initially appear on the page. Also, the Reset button does not initially appear. Note: you do not need to understand *how* the **`repeat_content`** function works; you just need to understand *what* it does by reading the comments. (6 points)



10. Provide JavaScript code to the last problem (see comment at bottom of the JS file) so that the following happens when the user clicks on the Reset button: (4 points)

    - The inner content to the message area (id of ‘screening’) is erased (set to the empty string).
    - The reset button is hidden.

HTML code for question 9 and 10

```
<!doctype html>
<html>
<head>
<title>Predict</title>

<script type="text/javascript" src="predict.js"></script>

</head>

<body>

<h1>Movie Configuration</h1>

<p>
  <label for="genreChoice"></label>
  <select id="genreChoice">
    <option value="0">Comedy</option>
    <option value="1" selected="true" >Tragedy</option>
    <option value="2">Mystery</option>
  </select>
</p>

<p>
  <label for="length">Length (hours)</label>
  <input type="text" id="length" size="3" value="4"/>
</p>

<p id="message"></p>

<p>
  <input type="button" value="Submit Preference" id="subPref" />
</p>

<p id="screening"></p>

<p><input type="button" value="Reset" id="resetBtn"></p>

</body>
</html>
```

predict.js file for question 9 and 10

```
// predict.js file

// repeat_content takes two argument:
//       content -- a string
//       repetitions -- number specifying the number of repeats
//
//  It returns a new string, where content is repeated in the string,
//        each time followed by the <br> tag
//
//   Examples:
//     repeat_content('hello' 3)  --> 'hello<br>hello<br>hello<br>'
//     repeat_content('bye', 2) --> 'bye<br>bye<br>'
//     repeat_content('hey', 0) --> ''
//

// definition of the repeat_content function removed to save space

window.addEventListener('load', function() {

   const aura_table = ["green", "blue", "black"];

   const message_area = document.getElementById('message');
   const screening_area = document.getElementById('screening');
   const submit_button = document.getElementById('subPref');
   const reset_button = document.getElementById('resetBtn');
   reset_button.hidden = true;

   submit_button.addEventListener('click', function() {

      const hours = document.getElementById('length').value;
      const choice = Number(document.getElementById('genreChoice').value);
      let content = '';

      if (choice === 0) {
         content = " :) ";
      }
      else if (choice === 1) {
         content = " :( ";
      }
      else {
         content = " ?? ";
      }

      let screening_content = 'Your show:<br>';
      screening_content += repeat_content(content, hours);

      screening_area.innerHTML = screening_content;
      screening_area.style.color = aura_table[choice];
      message_area.innerHTML = "Your movie has arrived!";

      reset_button.hidden = false;
   });

   // your code for the last problem would go here
});
```