

**Instructions:**

- ☀ For multiple choice questions, circle the letter of the one best choice unless the question explicitly states that it might have multiple correct answers.
- ☀ Put other answers in the spaces indicated.
- ☀ There is no penalty for guessing, so answer all questions.
- ☀ Unless otherwise indicated, all questions count equally.
- ☀ Note: my word processor sometimes skips question numbers. (Really!)

1. Which statement is correct?
  - A. All JavaScript code for a web page is executed by the web server.
  - B. All web pages must include JavaScript code in order to work.
  - C. Users have no control over whether JavaScript code for a web page actually runs or not.
  - D. Virtually all web browsers can run JavaScript programs.
  - E. JavaScript and Java are the same thing.
2. What does the statement, `console.log("hello");` do?
  - A. It displays the word *hello* at the top of a web page.
  - B. It creates a pop-up window that says *hello*.
  - C. It displays the word *hello* on a JavaScript console, such as the Firebug console.
  - D. It says that *hello* is a number.
  - E. It says that *hello* is an object.
3. Tell what `console.log(...);` would display for each of the following values of ...
  - A. `typeof 123` \_\_\_\_\_
  - B. `typeof 'hello'` \_\_\_\_\_
  - C. `typeof { }` \_\_\_\_\_
  - D. `typeof NaN` \_\_\_\_\_
  - E. `typeof [ ]` \_\_\_\_\_
4. What is the character + (plus) used for in JavaScript? *Give as many answers as you can.*
  
5. What is the character - (minus) used for in JavaScript? *Give as many answers as you can.*
  
6. What is the character . (period) used for in JavaScript? *Give as many answers as you can.*

7. If you see `foo.bar` in JavaScript (and nothing is wrong), what do you know about `foo`? *Circle all correct answers:*
  - A. It is a function
  - B. It is an array
  - C. It is an object
  - D. It is a property of the `window` object
  - E. It is a string
8. If you see `foo.bar` in JavaScript (and nothing is wrong), what do you know about `bar`? *Circle all correct answers:*
  - A. It is a function
  - B. It might be a function
  - C. It is not a function
  - D. It is a property of `foo`
  - E. It is a property of the `window` object
9. What is the value of `"hello" + 5`?
  - A. `hello+5`, a function
  - B. `hello5`, a string
  - C. `hello+5`, a string
  - D. `5`, a number
  - E. `undefined`, you cannot add a string and a number
10. What is the value of `1.22E2 + 1`?
  - A. `1.22E21`
  - B. `1.22E3`
  - C. `123`
  - D. `1221`
  - E. `1231`
11. What is `typeof foo` before `foo` has ever been assigned a value?
  - A. `function`
  - B. `array`
  - C. `object`
  - D. `number`
  - E. `undefined`
12. In an ***if*** statement, what goes inside the parentheses that follow the keyword, ***if***?
  - A. The statements to be executed repeatedly
  - B. An expression that produces a value that is either ***true*** or ***false***
  - C. Curly braces
  - D. Two semicolons
  - E. An object
13. The ***else*** part of an ***if*** statement can be omitted.
  - A. True
  - B. False

14. JavaScript has two different kinds of **for** loop.
- A. True
  - B. False
15. All JavaScript arrays are objects
- A. True
  - B. False
16. All JavaScript objects are arrays
- A. True
  - B. False
17. What property of a JavaScript array tells how many elements are in it?
- A. height
  - B. width
  - C. length
  - D. breadth
  - E. num\_elements
18. Write a function named *sumArray* that receives on an array of numbers as an argument and returns the sum of all the numbers. This function does *not* have to determine whether the argument is actually an array and it does *not* have to test the elements of the array to see whether they are numbers or not. *Answer Here:*
19. Write a statement that passes an array with 5 numbers to the *sumArray* function defined in the previous question, and displays the value returned by the function by using *console.log()*. *Answer here:*
20. What is the significant difference between the following two statements:
- ```
window.cs903 = function() { console.log('cs903' ); };  
window.onload = function() { console.log('onload' ); };
```
- A. Nothing significant. They just display different messages when they are called.
  - B. The first one displays two messages, but the second one displays three messages.
  - C. The first one can be used only in this course, but the second one can be used anywhere.
  - D. The first one will not work in Internet Explorer, but the second one will.
  - E. The second one, but not the first one, will be called automatically when the DOM tree has been built.

21. What is the type of `window.cs903` in the previous question?
- A. integer
  - B. string
  - C. function
  - D. number
  - E. object
22. Assume `obj` is an object; tell what the *type* of `prop` will be each time the body of the following loop is executed:
- ```
for (var prop in obj) { ... }
```
- A. `prop` will always be a string.
  - B. `prop` will always be a number.
  - C. `prop`'s type will depend on the type of the property to which it refers.
  - D. `prop` will always be an object.
  - E. `prop` will always be an array.
23. What are `a`, `b`, and `c` in the following statement?
- ```
var x = { a:1, b:2, c:'hello' };
```
- A. They are objects inside the variable `x`.
  - B. They are properties of the object `x`.
  - C. They are elements of the array `x`.
  - D. They are event handlers.
  - E. They are numbers.
24. What is the relationship between an XHTML web page and the DOM?
- A. There is a DOM tree for every element of a web page.
  - B. There is a DOM tree for every attribute of a web page.
  - C. There is a DOM tree for every CSS rule used by a web page.
  - D. The DOM tree for a web page contains a JavaScript object for each XHTML element in the body of the web page.
  - E. Each Document in the Object Mode is the stylesheet of a web page.
25. Assume a JavaScript variable named `foo` is a paragraph element in the DOM. What JavaScript property of `foo` contains information about the CSS properties of the paragraph?
- A. `foo.code`
  - B. `foo.color`
  - C. `foo.style`
  - D. `foo.css`
  - E. `foo.properties`
26. What is displayed when the following assignment statement is executed:
- ```
var foo = function(x) { console.log(typeof x); };
```
- A. Nothing. This just defines the function; it does not execute it.
  - B. number
  - C. string
  - D. It depends on what `x` is
  - E. The sum of the elements in array `x`.

27. Given the statement in the previous question has just been executed, what does this statement display?

```
foo([9, 8, 7, 6, 5, 4, 3, 2, 1]);
```

- A. Nothing. This just defines the function; it does not execute it.
  - B. Blastoff!
  - C. 45
  - D. array
  - E. 9
28. What will be the value of `xanadu[0]` and `xanadu[1]` after the following two statements are executed? *Answer in the space below.*

```
var xanadu = [ ];  
xanadu[1] = 123;
```