

NOTE: It is my policy to give a failing grade in the course to any student who either gives or receives aid on any exam or quiz.

INSTRUCTIONS: Answer all questions in your examination booklet, in sequence, please. Unless otherwise indicated, all questions count equally.

1. What difference does it make whether you declare a variable using **var** or not?
2. What is the name of the object at the root of the JavaScript DOM tree?
3. What is the name of the JavaScript *global object*?
4. Write a JavaScript regular expression that could be used to test if a string is a valid email address, and then explain what each element of the expression matches.
5. What is the difference between an *event handler* and an *event listener*?
6. What are each of the methods *Core.hasClass()*, *Core.addClass()*, and *Core.removeClass()* used for?
7. What is the purpose of the *Core.start()* method? Describe the argument that must be passed to it, something referred to as *runnable* in the textbook.
8. What is the purpose of the *Core.preventDefault()* method? Give an example (words, not code) of where it would be used.
9. Assume the following statements are executed in the sequence listed, and tell what each one does:
 - A. `var alpha = { };`
 - B. `var beta = [];`
 - C. `alpha.gamma = 'hello';`
 - D. `beta[3] = 'good-bye';`
10. What would be the value of `beta[0]` after the statements in the previous question are executed?
11. Write a statement that will create an array of all the paragraph elements in a web page and save the result in a variable named *paragraphElements*.
12. Write code that will change the `style.display` property to "hidden" for each of the elements in the array you constructed in the previous question.
13. Define the terms, *client-side scripting* and *server-side scripting*. Explain how they interact in an AJAX application. Your answer should be detailed enough to explain the sequence of operations involved in XMLHttpRequest processing
14. Write PHP code that inserts a paragraph into the following web page that says, *Hello, World!*

```
<body>
  <h1>A Message</h1>
  your code goes here
</body>
```
15. Tell what language is each of these statements might be written in (*JavaScript, PHP, either, or neither*). Then, for each statement, explain your answer.
 - A. `$alpha = 123;`
 - B. `pattern = /^abc$/;`
 - C. `obj->field = "some information";`
 - D. `aVar = "The answer is " + answer;`
 - E. `echo "The answer is $answer";`
 - F. `thirty-four = 34;`
16. Using words, not code, tell how a PHP program can use an email address to get a user's name from a database. Use the terms *database, host, user, connection, table, column, and query* meaningfully in your answer.