

Below are practice problems for the 12 wk exam. This is not a comprehensive survey – you are responsible for everything covered in lecture, lab, or the reading.

Remember that this is open book/notes but doesn't mean that you don't need to prepare – if you have to look many things up you may not have time to finish.

The exam will focus on material since the 6 week exam (primarily JavaScript and Dynamic HTML), but you may need understanding of earlier concepts (HTML, CSS) to adequately apply these concepts. CGI will not be on this exam.

Other possible topics for the exam:

- Accessibility
- How HTTP requests/responses work
- Cookies
- Array Sorting
- Java vs. JavaScript

IT350 Web & Internet Programming
12-Week Exam PRACTICE
3 Nov 2005

Name _____ Alpha _____

Section: 2001 2002 6001

Note:

1. For this exam you may use your textbook and any notes you have brought. However, you may not share any of these materials with anyone else, and you must do all work yourself.
2. No calculators/PDAs/computers are permitted.
3. To receive partial credit, show all work.
4. If asked for a HTML snippet/fragment, just write the relevant part – no need to provide the prelude etc.

WORK QUICKLY AND DO THE EASY PROBLEMS FIRST!

TOTAL(60 pts) _____

Note: After completing this exam, you may not discuss it with anyone until after Friday, 4 Nov.

(From the 6wk exam – many struggled with this – make sure you understand it!)
Below is a legal XHTML document that includes JavaScript.

```
<?xml version = "1.0" encoding="utf-8" ?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
"http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">

<html xmlns = "http://www.w3.org/1999/xhtml">
  <head>
    <title>Test file</title>
    <script type = "text/javascript">
      a = 8;
      b = 4;
      c = 2;

      d = a + b / c + a;
      e = b + b + "b";
      f = "c" + c + c;
      g = 2;
      g = "two";

      document.writeln ("<p>");
      document.writeln ("<br /> d = " + d);
      document.writeln ("<br /> e = " + e);
      document.writeln ("<br /> f = " + f);
      document.writeln ("<br /> g = " + g);
      document.writeln ("</p>");
    </script>
  </head>

  <body>
    <p> Hello. </p>
  </body>
</html>
```

Show the complete result (output) of loading this page into a browser.

Write a JavaScript function that takes two integers X and Y and returns an array of size X where each array element is initialized to Y.

In the following code, what is the scope of variables G, H, and I?

```
function foo (G) {  
  var H = G + I;  
  return H;  
}
```

JavaScript is often used on the client side to validate form data before it is submitted to the server. If a form contains JavaScript to validate all such data, is it necessary for the server to validate the data? Why or why not?

What's the output of the following JavaScript code?

```
function fun1 (x) {  
  x = x + 3;  
  y = y + 4;  
  document.writeln("<br/> FUN1: "+x+ "," +y);  
}  
  
function fun2 () {  
  var y;  
  x = x + 10;  
  y = y + 20;  
  document.writeln("<br/> FUN2: "+x+ "," +y);  
}  
  
x = 1;  
y = 2;  
  
document.writeln("<br/> MAIN #1: "+x+ "," +y);  
fun1(x);  
document.writeln("<br/> MAIN #2: "+x+ "," +y);  
fun1(y);  
document.writeln("<br/> MAIN #3: "+x+ "," +y);  
fun2();  
document.writeln("<br/> MAIN #4: "+x+ "," +y);
```

What's the output of the following JavaScript code?

```
function dog( z ) {  
  z[0] = 23;  
  document.writeln("<br/> z is ",z);  
  document.writeln("<br/> z[0] is ",z[0]);  
}  
  
function cat( y ) {  
  y = 73;  
  document.writeln("<br/> y is ", y);  
}  
  
var array1 = [17, 21, 42];  
  
dog (array1);  
cat (array1);  
cat (array1[1]);  
  
document.writeln("<br/> array is ", array);
```

Write a HTML document that contains a single <p> element such that clicking on that element toggles the text between being bold and being not bold.

Modify the following code so that clicking on the link changes the text inside the <p> to “More stuff” and changes the color of that text to red.

```
<html xmlns = "http://www.w3.org/1999/xhtml">
  <head>
    <title>Change Link</title>
    <script type = "text/javascript">

        </script>
    </head>
  <body>
    <p>
      Check this out!
    </p>

    <form action=""> <br/>
      <input type="button" value="Proceed" />
    </form>
  </body> </html>
```

Write a HTML document that does the following:

- Uses a form to ask the user for a number between 10 and 20 (inclusive).
- When the user clicks on a button, the program reads the number and complains if it is out of bounds. Otherwise, it displays a popup with the result of computing $2^{\text{(that number)}}$.