

**SAMPLE SAMPLE SAMPLE**  
**IT350 Web & Internet Programming**  
**12-Week Exam**  
**30 Oct 2006**

Name \_\_\_\_\_ Alpha \_\_\_\_\_

Section:        2001            4001            6001

**Note:**

1. For this exam you may use the following (but these may not be shared with other students):
  - a. Your course handouts (with your written notes), including sample exams
  - b. Other handwritten notes you have brought
  - c. Your printed labs from this course
2. You may not use:
  - a. The textbook or any other book
  - b. Any printed materials not specifically listed above
3. No calculators/PDAs/computers are permitted.
4. To receive partial credit, show all work.
5. 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!**

Page 2 (8 pts)                    \_\_\_\_\_

Page 3 (8 pts)                    \_\_\_\_\_

Page 4 (8 pts)                    \_\_\_\_\_

Page 5 (8 pts)                    \_\_\_\_\_

Page 6 (6 pts)                    \_\_\_\_\_

Page 7 (9 pts)                    \_\_\_\_\_

**TOTAL(47 pts)**                    \_\_\_\_\_

Note: After completing this exam, you may not discuss it with anyone until Thurs, 2 Nov.

(8 pts) Below is a valid XHTML document that contains two text boxes. Make all necessary changes so that:

- when the cursor moves into the first box (due to the user clicking on that box or hitting Tab until cursor reaches the box), the paragraph containing that box changes to have a thick CSS border.
- when the cursor moves out of that first box, that same paragraph changes to have a thin CSS border.

If possible, use an appropriate function to avoid repeating the same code.

```
<?xml version = "1.0" encoding="utf-8" ?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1//DTD/xhtml1-transitional.dtd">
<html xmlns = "http://www.w3.org/1999/xhtml">
  <head>
    <title>Changing Colors</title>
    <style type="text/css">
      p      { border-width: medium; border-color: black;
                border-style: solid}
    </style>

    </head>
  <body>

    <form action="submit.cgi" method="get" >

    <p> First name:

      <input type = "text" name = "first" />

    </p>

    <p> Last name:

      <input type = "text" name = "last"  />

    </p>

    <p>
      <input type = "submit" value = "Submit" />
    </p>
  </form> </body> </html>
```

(8 pts) Write a JavaScript function `getNumber (min, max)` that takes two arguments, `min` and `max`. This function should ask the user to enter a number (via a pop-up dialog box), and keep asking until they successfully enter a value that is in the range `[min, max]` (equal to `min` or `max` is okay). Once a suitable value is entered, `getNumber ()` should return that value. Example: this function might be called as follows:

```
num = getNumber(2.3, 2.8);
```

Write the function only – no HTML needed.

(2 pts) Is the following code a legal JavaScript snippet?

YES            NO

If not, why?

```
function getMax (int a, int b) {  
    if (a < b)  
        return a;  
    else  
        return b;  
}
```

(2 pts) Consider the following XHTML snippet:

```
<td headers = "quantity"> 3</td>
```

What is the purpose of the “headers” attribute?

- a.) To indicate the title that should appear above this column
- b.) To indicate the help text that should appear when hovering over this cell
- c.) To enable screen reader software to match this cell to the appropriate column heading
- d.) To enable the code to pass XHTML validation

(2 pts) Which of the following is true about cookies?

- a.) Cookies are rarely used on the web
- b.) Cookies are stored on the browser user’s computer
- c.) By default, cookies never expire
- d.) By default, cookies are encrypted for privacy

(2 pts) Implementing standards for Web Accessibility is...

- a.) Always optional
- b.) Legally required if your web traffic crosses state lines
- c.) Legally required for all commercial websites
- d.) Legally required for all federal agencies

(8 pts) Write a JavaScript function `makeArray()` that takes one argument, an integer `N`, and returns an array of size `N` that is initialized to hold the values `1, 2, ..., N`. So `makeArray(4)` should return the array `[1, 2, 3, 4]`. Write the function only – no HTML needed.

(6 pts) Consider the following valid XHTML document:

```
<?xml version = "1.0"?>
<!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>Using Cookies</title>

    <script type = "text/javascript">
      color = "blue";

      if (document.cookie) {
        tokens = document.cookie.split("=");
        color = tokens[1];
      }

      if (document.cookie) {
        document.writeln("<p>Welcome!</p>");
        document.cookie = "color=red";
      }
      else {
        document.writeln("<p>Hello!</p>");
        document.cookie = "color=yellow";
      }

      document.writeln("<p>Your favorite color: "+color+"</p>");
    </script>
  </head>
  <body>
    <p>Bye.</p>
  </body>
</html>
```

a.) Assume no cookies are stored on your computer. What would be the output of this file when first loaded into a browser?

b.) Suppose you then reload the page. What would be the output this time? If the same, just write “identical”.

(9 pts) What is the output of executing the following JavaScript program?

```
function compute1(p) {
  for (j = 0; j < p.length; j++) {
    p[j] = p[j]+10;
  }
  return j;
}

function compute2(p, q) {
  var j;
  for (j = 0; j < p.length; j++) {
    q += p[j];
  }
  document.writeln("<br/> compute2, q="+q);
}

var k = [2, 3, 4];
j = 13;

q = compute1(k);
document.writeln("<br/> Main 1, k="+k+" j="+j+" q="+q);

k = [1,2,3];
j = 27;
q = 10;

compute2(k, q);
document.writeln("<br/> Main 2, k="+k+" j="+j+" q="+q);

m = k;
m[1] = 72;
document.writeln("<br/> Main 3, k="+k+" m="+m);
```

Show output here, in order: