CSE-C3210 Web Software Development : Exam

December 2014

- All answers should easily fit on a single answer sheet.
- Write on each paper your name, your student number including any checking characters, the code and name of this course, examination hall, date, the number of papers returned and your signature.
- If the question number is followed by an asterisk ©, you should select all options that apply. If there is no asterisk, select only one.
- No additional material, calculators etc. allowed.

HTML & CSS

1. What is the key difference between `div` and `span` elements? (max 2 sentences)
   (2 points)

2. For the following fragment of HTML
```
<div>
    <p id="first">Short paragraph of text...</p>
        <img src="myFigure.png" alt="image" >
    <p id="second">More text..</p>
</div>
```
   and CSS style definition
```
img { float: right; }
#first { float: left; }
#second { clear: both; }
```
   Which of the following best describes the resulting layout? **(1 point)**

a)

Short paragraph of text...

IMG

More text...

b)

Short paragraph of text....

More text...

IMG

c)

Short paragraph of text...

IMG

More text...
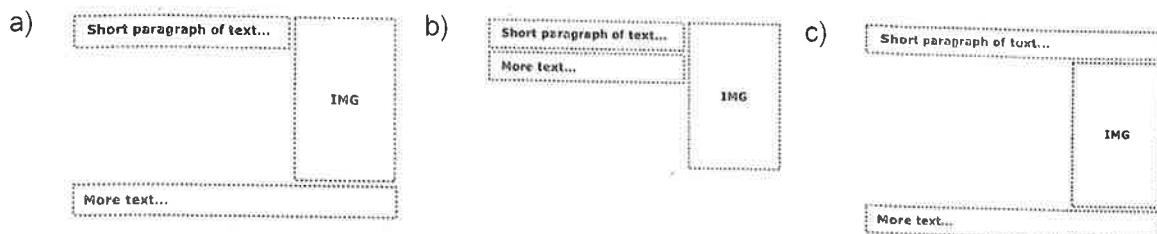
HTTP

3. Explain **briefly** what is a *conditional* HTTP Request and what is it used for.
   (max 2 sentences, **2 points**)

4. Explain briefly the **bolded** lines of the following HTTP Response
   (2 points)

   HTTP/1.1 200 OK
   Date: Wed, 10 Dec 2014 08:31:39 GMT
   Server: Apache/2.2.22 (Ubuntu)
   Last-Modified: Mon, 03 Oct 2011 14:31:37 GMT
   ETag: "469df-1ca-4ae65d519a440"
   Accept-Ranges: bytes
   Content-Length: 458
   Access-Control-Allow-Origin: *
   Content-Type: application/json

JavaScript & jQuery

5. The following JavaScript is executed. What will be the contents of variable d? **(1 point)**
```
var d = {"a": 0, "b": 3, "c": 7 };
function sum(obj) {
    obj['sum'] = obj.a + obj.b + obj.c;
}
sum(d);
```

6. Explain briefly what happens in the following line of jQuery code. You can refer to the line numbers in your explanation. When are the different parts of the code executed? (3 points)

```
1.   $(document).ready(
2.     function() {
3.       $("#contents").append("<p>End.</p>");
4.     }
5.   );
```

APIs

7. Explain briefly what is JSONP and how it works (max 4 sentences, 3 points)

Sessions & Security

8. Mallory is writing a blog post on a blogging service where she wrote the following as a title for the post. The beginnings of the texts she wrote are shown below. What is she trying to do? Explain briefly. (2 points, 1 for each)

   a) Cat'); INSERT INTO ..... *rest of the text not shown* ....
   b) Cat<script> ..... *rest of the text not shown* ....

9. How would you protect your site against this? (max 3 sentences) (1 point)

Django

10. ✪ Which claims below are true about Django's models (1 point)
    a. Models are typically changed in templates
    b. Django's models don't have to be designed for a specific relational database (MySQL, Postgres, etc..)
    c. Models convert data from relational database form to objects and vice versa
    d. ForeignKey fields can be used to refer to other objects

11. ✪ Which of the following statements are true for Django templates? (1 point)
    a. Templates should always be used to render CSS files
    b. It is possible to make a for-loop over a list of items in a template
    c. Variables can be used in templates this way: `{% variable_name %}`
    d. Templates can contain and execute arbitrary Python code
    e. Templates can specify HTTP Headers for the response

12. Choose what best describes Django's middleware... (1 point)
    a. It handles interaction with the database
    b. It processes requests and responses
    c. It handles executing JavaScript code