

UNIVERSITY OF LONDON

GOLDSMITHS COLLEGE

B. Sc. Examination 2006

COMPUTING AND INFORMATION SYSTEMS

IS52019A (IT226)

INTERACTIVE APPLICATIONS AND WEBSITE DESIGN

Duration: 1.5 hours

Date and time:

There are a total of three questions in this exam. You should answer two questions only.

Full marks will be awarded for complete answers to a total of TWO questions. Each question carries 25 marks. The marks for each part of a question are indicated at the end of the part in [.] brackets.

No calculators should be used.

THIS PAPER MUST NOT BE REMOVED FROM THE EXAMINATION ROOM

PART B (ANSWER ONLY 2 QUESTIONS FROM THIS PART)

Question 1

- a)
 - i. What is meant by an HTML ‘tag attribute’? [2]
 - ii. How are HTML tag attributes used on an HTML document? [3]
- b)
 - i. What constrains or limitations brought about the creation of CSS? [3]
 - ii. Why are there two (possibly three) CSSs? [2]
- c)
 - i. What are the main components of a cascading style rule? [4]
 - ii. Give an example of a style rule, styling level 2-headings to blue colour [3]
- d) What is meant by the term ‘type selector’? [2]
- e) Style sheets implement a tree-like structure through inheritance.
 - i. How does it effect the HTML stylistic properties? [2]
- f) CSS permits inheritance overriding.
 - i. Write down a small example that demonstrates the overriding mechanism. [4]

Question 2

- a) What does PHP stand for and what are two of its advantages? [3]
- b) Write down the basic steps followed each time you develop and run a PHP script. [3]
- c) What PHP function(s) can you use to output HTML elements on a PHP script? [2]
- d) Which of the following are not valid PHP variable names?
1. \$x^2counter,
 2. \$_1x,
 3. \$@soccer,
 4. \$_Time_C_ounte__r,
 5. taxRate,
 6. &income

Explain why your selection(s) are not valid PHP. [3]

- e)
- ii. What are the operator evaluation rules in PHP? [4]
 - iii. What would be the values of \$x and \$y after executing the following statements?

```
<?php
  $x = (10 + 6 ) % 3;
  $y = 13 * (50/33 + 2)+1*5;
?>
```

[3]

- f)
- i. What is the difference between a text box, text area, and a password box in HTML forms? [3]
 - ii. Create an HTML FORM that contains one text box, one password box, one submit button and one reset button. [4]

Question 3

a) List three types of conditional statements and three types of looping statements supported in PHP. [6]

b) What is the value of **\$i** after running the following PHP code segment?

```
%i = 7; $j = 4;
if ($i > $j)
    $i = $i + 1;
elseif($i < $j)
    $i = $i - 1;
else
    $i = 0;
```

[3]

c) How many times will the loop in the following code be repeated?

```
$flag = 0;
$ctr = 0;
while(!$flag){
    $ctr = $ctr + 1;
    if($ctr > 5)
        $flag = 1;
}
```

[3]

d)

i. Provide two advantages of writing your own functions in PHP. [2]

ii. What would be the output from executing the following PHP code?

```
function change_value($input){
    $input = $input * $input;
}
$input = 5;
change_value(&$input);
print("Answer = $input");
```

[3]

f)

i. Provide two advantages of using arrays in PHP scripts. [2]

ii. What would be the output from executing the following PHP code? [3]

```
$std = array("Michael, Daniel", "Bright, Erica", "Miller, Steven", "Jones, Fiona");
print "$std[0] and $std[3] have enrolled on a computing course";
```

g) Show an SQL statement that creates a table called 'Library' and has the following four columns: [3]

```
title(VARCHAR(50)), author(VARCHAR(50)),  
isbn(VARCHAR(30)), status(INT)
```