

OLLSCOIL NA hÉIREANN, CORCAIGH
THE NATIONAL UNIVERSITY OF IRELAND, CORK

COLÁISTE NA hOLLSCOILE, CORCAIGH
UNIVERSITY COLLEGE, CORK

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Semester 1 - Winter 2015

CS1115 Web Development 1

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Answer all questions.

Total marks: **75**

90 minutes

**PLEASE DO NOT TURN THIS PAGE UNTIL INSTRUCTED
TO DO SO.**

ENSURE THAT YOU HAVE THE CORRECT EXAM PAPER.

1. These questions deal with the general architecture of the Internet and the HTTP protocol. **20 marks**

Consider a website where members of certain groups can communicate with each other. Social networks like Facebook and professional 'groupware' applications fall into this category.

The exact purpose and design details of the site are not relevant.

We assume that the site features instant *notifications* such as *Incoming chat request from user [name]!*.

- a) Explain the technical reason why the notification feature cannot be implemented using only the HTTP protocol and the HTML markup language. (10 marks)
- b) Name one additional technology which might be used to implement this notification feature. (10 marks)

2. For each of the opening html tags listed below cases, answer the question whether or not the *parameters are valid*.

Answer with 'Yes' or 'No'. Whenever your answer is 'No', justify your reasoning! **20 marks**

- a) `` (2 marks)
- b) `` (2 marks)
- c) `` (2 marks)
- d) `` (2 marks)
- e) `` (2 marks)
- f) `` (2 marks)
- g) `` (2 marks)
- h) `` (2 marks)
- i) `<link rel="stylesheet" type="text/css" href="#css">` (2 marks)
- j) `<link rel="stylesheet" type="text/css" href="css/style1.css">` (2 marks)

3. These questions deal with an example of formally correct but still unfavourably written HTML page.

We consider the markup shown below. The page lists some features of some UCC course modules. The actual content is not relevant. **20 marks**

```
<!DOCTYPE HTML>
<html>
  <head>
    <title>Some Modules</title>
  </head>
  <body>
    <center><h1>Some Modules</h1></center>
    <h2 style="position: relative; left: 3em"><font size="5">
      CS1115 Web Development 1</font></h2>
    <b>Credit Weighting:</b> 5<br>
    <b>Module Objective:</b> To provide students with an
    introduction to web site development<br>
    <b>Assessment:</b> Total Marks 100:
    Formal Written Examination 75 marks;
    Continuous Assessment 25 marks.<br>
    <br><br>
    <h2 style="position: relative; left: 3em"><font size="5">
      CS1116 Web Development 2</font></h2>
    <b>Credit Weighting:</b> 5<br>
    <b>Module Objective:</b> To provide students with an
    introduction to web programming<br>
    <b>Assessment:</b> Total Marks 100:
    Formal Written Examination 75 marks;
    Continuous Assessment 25 marks.<br>
  </body>
</html>
```

- a) Name and briefly elaborate on 4 reasons why the code above is unfavourable (badly written).
(10 marks)
- b) Write an improved version of the page above so that all the reasons from your answer to a) are addressed. You don't have to copy all texts, i.e. you may use ellipsis or abbreviations.
(10 marks)

4. These questions deal with HTML markup and CSS.

15 marks

a) Consider a HTML file with the following content:

```
<!DOCTYPE html>
<HTML>
  <HEAD>
    [BLANK]
  </HEAD>
  <BODY>
    <A HREF="index.html">
      <IMG ID="logo" SRC="logo.png" ALT="company Logo" HEIGHT="100" WIDTH="100">
    </A>
    <DIV ID="main">
      <H1>Introduction</H1>
      [TEXT A]
      <IMG SRC="team_photo.jpg" ALT="Photo of our team">
      [TEXT B]
    </DIV>
  </BODY>
</HTML>
```

The two markers [TEXT A] and [TEXT B] stand for some longer passages of HTML. The exact content of these passages is not relevant. [BLANK] stands for some blank passage which *you are required to fill*. You may not modify any other part of this file.

The completed file should meet these requirements when viewed in the browser:

- The entire page is 400mm wide and 300mm tall.
- The company logo logo.png should be placed at the top left corner of the page. It should never cover any text or other elements, even if the whole page content occupies more than 300mm vertical space.
- No borders are added around the company logo.
- The photo team_photo.jpg is placed at the left margin in such a way that the text [TEXT B] floats around the photo and continues below.
- There is a 4mm transparent margin around the 4 edges of this photo (team_photo.jpg).
- Headlines are placed 40mm further right than where they would normally occur.
- Headlines are written in red text colour.

Your code should be clear and concise.

(10 marks)

- b) Consider an online translation service, similar to the one investigated in the lectures. We assume that this service exports an API which can be queried as the following example shows:

`http://money-converter.com?from=EU&to=USD&amount=200`

The query above means *What is the equivalent of 200.-Euros in US Dollars?* The query parameters have the following meaning:

from The currency to be converted from. This parameter might have any of these values: EU, USD and GBP.

to The currency to be converted to. Again, possible values are: EU, USD and GBP.

amount The amount to be converted.

Write a HTML form that utilizes this remote service to convert any Euro amount to either USD or GBP. This means, the from-parameter cannot be set by the user since it is always EU.

Give only the form code in your answer (complete HTML page not required). (5 marks)