

DUBLIN INSTITUTE OF TECHNOLOGY  
KEVIN STREET, DUBLIN 8.

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# BSc Computer Science

Year 1

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SUMMER EXAMINATIONS 2011

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## Web Development I

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Monday 23<sup>rd</sup> May 2011  
4.00 p.m. – 6.00 p.m.

Answer question (1) and *any two* of questions (2), (3), (4)

Question (1) is worth **40** marks.  
Questions (2), (3), (4) are worth **30** marks each

1. (a) (i) What is a *search engine*? (3 marks)
- (ii) When configuring an image map, describe the relationship between the <image>, <map> and <area> tags. (6 marks)
- (b) (i) You are designing a survey form for a client. One of the questions has 10 possible responses. Only one response can be selected per question. What type of form element would you use to configure this question on the Web page? (2 marks)
- (ii) Provide the HTML code necessary to create this element in a form. (3 marks)
- (iii) What does the following frame-set definition mean for a browser window that is 1000 pixels wide?  
`<frameset cols="30%, 400, 2*,*">` (3 marks)
- (c) (i) Describe the purpose of the header and the body sections of a web page. (3 marks)
- (ii) Which type of XHTML list will automatically number the items in the list. Use code to support your answer. (6 marks)
- (d) (i) What tags does XHTML provide for using layers on a web page? (2 marks)
- (ii) What is the difference between the *Internet* and the *World-Wide-Web*? (4 marks)
- (e) (i) What output functions are there in Javascript? (2 marks)
- (ii) Write the JavaScript code for the following scenario – the user will be prompted for a quantity and must enter a quantity greater than 0. If the user enters a value of 0 or a negative number, there will be an error message displayed. If the user enters a value greater than 0, a message will be displayed thanking the user for the order. (6 marks)

2. *LanceArmstrong.com* is a sports web-site detailing the life and achievements of the cyclist, Lance Armstrong. The website has a number of web pages and uses embedded CSS to style each web page. The site uses an image as its background (. The text colour, throughout the web-site, is black (#000) and the background colour is white. The web-site uses tables for its page layout.

(a) Describe *two* advantages in using CSS in a commercial web-site?

(4 marks)

(b) Write the CSS code, to apply the following style characteristics to *LanceArmstrong.com*:

- Background image – LM.gif
- Font colour #000?

(4 marks)

(c) What does *embedded CSS* mean?

(4 marks)

(d) Why would it be advantageous to use CSS in an external file rather than embedded CSS in *LanceArmstrong.com*?

(6 marks)

(e) How would an external CSS file be referenced in a web page?

(6 marks)

(f) Write the CSS code to apply the following table characteristics to *LanceArmstrong.com*:

- Text alignment is centre
- The height of the table should take up the whole page
- The table has no border

(6 marks)

3. (a) (i) Name *three* advantages that layers have over tables?

(6 marks)

(ii) Describe two ways that layers can be positioned on a web page?

(6 marks)

(iii) How will the following piece of html code be rendered, and why?

```
<div style="width: 200px; background: gray; float:left;">Layer 1</div>
<div style="width: 200px; background: red; float:left;">Layer 2</div>
```

(6 marks)

(b) (i) What do the following tags do when used with tables?

- <caption>
- <title>

(4 marks)

(ii) Write the html code for the following table:

Category	Age	#1	#2
Male Respondents	22	A	B
	19	C	B
Female Respondents	19	D	C
	20	C	B

(8 marks)

4. (a) What are the possible basic elements in a form?

(7 marks)

(b) How can form information be sent in an email?

(4 marks)

(c) Write the html code for the following form:

Customer Information

Name:

E-mail:

Phone:

Question or Comments:

Please type your question or comment here

(9 marks)

(d) What is the html code for a password box in a form?

(4 marks)

(e) Form data can be validated using JavaScript. Write a function to validate if the Customer Information Name has been entered.

(6 marks)

