DUBLIN INSTITUTE OF TECHNOLOGY

DT8266 Masters Qualifier for MSc in Computing

SUMMER EXAMINATIONS 2017/2018

WEB & USER INTERFACE DESIGN [CMPU4063]

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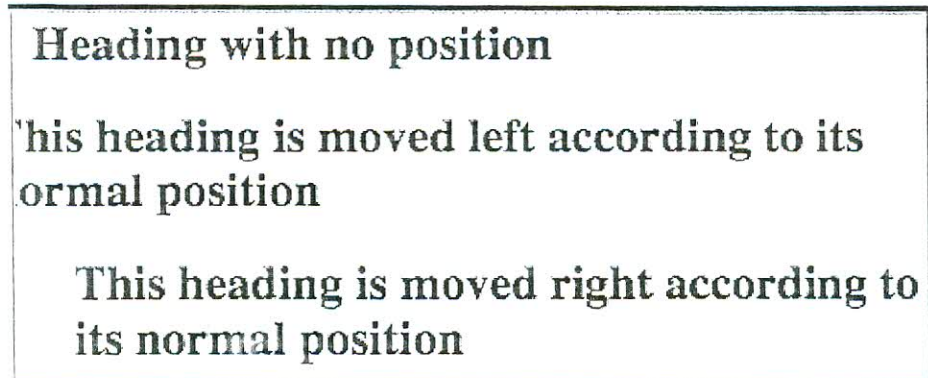FRIDAY 11TH MAY   6.30 P.M. – 8.30 P.M.

TWO HOURS

INSTRUCTIONS TO CANDIDATES

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. The **position property** specifies the type of **positioning** method used for an element.

   a. Discuss how the position value, *absolute*, is used, using code to support your answer.

   (3 marks)

   b. Discuss how the position value, *fixed*, is used, using code to support your answer.

   (3 marks)

   ii. Write the relevant CSS and HTML code for the following screenshot.

   > **Heading with no position**
   >
   > **'his heading is moved left according to its ormal position**
   >
   > **This heading is moved right according to its normal position**

   (9 marks)

   (b) i. What is the meaning of *mobile first*?

   (3 marks)

   ii. Provide **two** advantages to the mobile first approach.

   (4 marks)

   iii. Provide **one** disadvantage to the mobile first approach.

   (2 marks)

   (c) i. What is the meaning of *Miller's chunking*?

   (3 marks)

   ii. How is chunking relevant to user interface design?

   (3 marks)

   (d) i. Outline **one** advantage and **one** disadvantage of using *skeuomorphism* in web design.

   (6 marks)

   ii. Discuss how *mental models* are used in web design.

   (4 marks)

2. **(a)**   i.   Discuss **three** methods that could be used to <u>test</u> a website.

(9 marks)

ii.   Discuss **three** methods that could be used to <u>evaluate</u> a website.

(9 marks)

(b)   i.   In terms of web design, what is the meaning of a *wireframe*?

(4 marks)

ii.   Outline **two** differences between a wireframe and a low fidelity prototype.

(4 marks)

(c)   What is the meaning of *Search Engine Optimisation (SEO)*, in terms of web design?

(4 marks)

3. (a)   Write the CSS and HTML code which will render the following menu list horizontally, rather than vertically:

- Home
- About us
- Animals
- Contact us

(8 marks)

(b)   Adjust the code so that the menu has the following attributes:

a.   The entire menu has a black border of 1px. The border has curved corners.

(4 marks)

b.   Each menu item has a white border and the text is centred.

(4 marks)

c.   There is 2px between each menu item.

(4 marks)

d.   The entire menu spans 60% of the page and is centred on the page.

(4 marks)

(c)   Write a **media query** that will render the entire menu as 100% of the page rather than 60%, when the page is viewed on a mobile screen.

(6 marks)

4

4. **(a)** There are various principles that can be used for evaluating websites.

      i.   Name **one** of these sets of principles.

                       (3 mark)

      ii.   Discuss how **three** of these principles (from the set set of principles chosen in 4(a)(i) are relevant to website evaluation.

                       (6 marks)

(b) What is the meaning of *Rule of Thirds* in terms of interface design? Use examples to support your answer.

                       (6 marks)

(c)   i.   What is the *Document Object Model* in Javascript and how can it be used?

                       (8 marks)

      ii.   Create a script to display dates inside a <p> element with id="demo" .

                       (4 marks)

      iii. Write the Javascript codes which sorts the following array alphabetically.

         fruits = ["Banana", "Orange", "Apple", "Mango"];

                       (3 marks)