DUBLIN INSTITUTE OF TECHNOLOGY

DT265/1 Higher Diploma in Computing

DT265A/1 Higher Diploma in Computing

DT265B Masters Qualifier for MSc in Computing

DT265C Masters Qualifier for MSc in Computing

WINTER EXAMINATIONS 2016/2017

WEB & USER INTERFACE DESIGN [CMPU4063]

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FRIDAY 13TH JANUARY   1.00 P.M. – 3.00 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)** Write an *id selector* that centres a layer that is 50px wide.

(5 marks)

(b) What is the meaning of the *Box Model* in web development? Use code, where necessary to support your answer.

(8 marks)

(c) Explain the following piece of code and what it does, when applied in a HTML webpage.

```
p.inline {
    display: inline;
}
```

(5 marks)

(d) i. What is the *Document Object Model* in Javascript?

(6 marks)

ii. Write JavaScript that calculates the sum and product of all numbers from 1 to some user provided number. Print the results to the page.

(8 marks)

(e) When coding a website, discuss four ways that you can improve your *SEO (search engine optimisation)*. Use code to support your answer.

(8 marks)

2. **(a)** What is the meaning of *responsive design*?

(4 marks)

(b) What is the meaning of *adaptive design*?

(4 marks)

(c) What is the difference between *responsive design* and *adaptive design*?

(6 marks)

(d) What are the advantages and disadvantages of responsive design?

(8 marks)

(e) What are the advantages and disadvantages of adaptive design?

(8 marks)

3. **(a)** Outline **four** ways that images are dealt with responsively when developing a website. Use code to support your answer.

(20 marks)

(b) i. Explain the following piece of code and what it does when applied in a HTML webpage.

```
div {
    border: 2px solid;
    border-radius: 25px;
}
```

(4 marks)

ii. Discuss **two** other uses of *CSS3*, using code to support your answer.

(6 marks)

4. (a)   i.   What are the *Gestalt Principles* and what do they aim to do?

(6 marks)

ii.   In web design, how can the *similarity law* improve the user experience?

(9 marks)

(b)   When positioning a layer, the coder must consider whether it and other layers are in the natural flow. What is meant by "the natural flow". Use code to support your answer.

(8 marks)

(c)   Explain the following piece of code and what it does when applied in a HTML webpage.

```
img {
    float: left;
}

p.clear {
    clear: both;
}
```

(7 marks)