

SCHOOL OF MATHEMATICAL AND COMPUTER SCIENCES

Computer Science

F27WD

Web Design and Databases (Mock exam Q1-2)

Semester 2 201516

Duration: Whatever

ATTEND LECTURES
WASH T-SHIRTS INSIDE-OUT
WATCH OUT FOR CYCLISTS

Welcome to the F27WD mock.

This paper is designed to give you some idea of what to expect in Questions I and II.

I have pitched the difficulty level slightly harder than the exam.

However, things always seem harder in the exam, because of the pressure.

This paper exists in two versions:

- One version without answers.
- One version with answers.

You'd be wise to try the version **without** answers first.

Good luck.

Q1

- (a) (i) State what **URL** and **URI** stand for. (2)
- (ii) Write out in full what is probably the most famous URL, and explain your choice in detail. (2)
- (b) Explain in specific detail the connection between the following, with emphasis on its relevance to web design: (4)
- Isaac Newton's observation that white light is composed of three primary colours.
 - HTML references colours using six-character hexadecimal strings often indicated in the form RRGGBB.
 - The human eye has three types of colour receptor (called *cones*), each sensitive to a distinct wavelength of light.
 - Computer displays, when viewed under magnification, can be seen to consist of a mosaic of little coloured dots.
- (c) (i) In the context of web design, explain what **navigation bars** are, and how they are used, giving at least one concrete example. (2)
- (ii) Give one example of a navigation-bar like structure that predates the Internet and has nothing to do with web browsers. (2)
- (iii) Give one example of a navigation-bar like structure that predates the Internet and has nothing to do with computers. (2)
- (d) Fact 1: "Going back", as in "pressing the back button" is the most-used navigational action in web browsing. (6)
- Fact 2: webpages are typically far shorter than a book chapter.
- By comparing and contrasting the act of web browsing with the act of reading a book, put both facts in a detailed context and explain their relevance to web design.

Q2

- (a) (i) Give the key reason that books and similar documents are typeset using pdf, and give two distinct reasons that webpages are typeset using HTML. (6)
(Note that this answer is worth six marks and not three, so your reasons should be given in reasonable detail and including specific examples where appropriate.)
- (ii) The following HTML fragment contains four distinct errors: (5)
- ```

<a>
```
- State these errors (repeats of the same mistake count as only one error), and write a corrected version.
- (b) Your colleague says that he wants to manage his webpage layout using tables. (4)
- Moments after saying this, hair sprouts on the palms of his hands, then he is struck by lightning, eaten by a dinosaur, pooped out, and what is left is trampled into the earth by a passing rampaging herd of elephants and then washed away by a freak rainstorm.
- (i) Explain why this fate was well-deserved, and describe how layout should properly be managed in web design. (3)
- (ii) Describe the one and only situation where using a table is appropriate. (1)
- (c) (i) You see `px`, `em`, and `%` in a CSS file. What do they mean? (3)
- (ii) For each of `px`, `em`, and `%` give natural situations in they are most appropriate. (3)

END OF PAPER