UNIVERSITY OF EDINBURGH

COLLEGE OF SCIENCE AND ENGINEERING

SCHOOL OF INFORMATICS

INFR10022 PROFESSIONAL ISSUES

Wednesday 30$\underline{\text{th}}$ April 2014

14:30 to 16:30

Year 3 Courses

Convener: S. Viglas
External Examiners: A. Cohn, T. Field

INSTRUCTIONS TO CANDIDATES

Answer QUESTION 1 and ONE other question.

Question 1 is COMPULSORY.

All questions carry equal weight.

This is an OPEN BOOK examination.
You may consult any books or other documents during this examination.
The use of Calculators is permitted.

1. **You MUST answer this question.**

Consider the following extract from the Scottish Government report: *Scotland's Digital Future - Delivery of Public Services* that outlines the Scottish Government vision for the future of public services:

> *And so our vision for Scotland is a country in which:*
> - *Digital technology provides a foundation for innovative, integrated public services that cross organisational boundaries and deliver to those in most need, and for services for business that promote growth.*
> - *Digital technology captures patterns of service use and feedback, so that users of public service are more directly involved in service design and improvement.*
> - *This use of digital technologies provides a firm basis for a shared commitment to, and responsibility for, public services.*

(a) This outlines the vision for Scottish Public Services. Suppose you are a computing professional working for Scottish Public Services. Review this vision against the BCS code of conduct and highlight three to five potential issues for your professional conduct arising from this vision. *[10 marks]*

(b) Consider the following two groups: (a) homeless people, and (b) people living in remote areas. For each of these groups point out a potential benefit and a potential disadvantage of this vision. *[5 marks]*

(c) "Bullet points are a speaker's best friend." Discuss. *[5 marks]*

(d) Give two examples of a whistleblower relevant to Informatics students, and briefly explain why each is relevant. *[5 marks]*

2. Imagine you are working for a company that has a diverse range of software products. You have been tasked with writing a short survey that the company will use to assess the potential impact of new EU data protection regulations on its products. You should do the following:

   (a) You plan to produce a first version of the survey to go to your management. In this first version you plan just to explore what you see as the two changes in regulation that will have the most impact on products. List these two changes and argue why they are particularly important in assessing the impact of the new regulation on your products. [*5 marks*]

   (b) For **each of your two changes**:

       i. Provide an example of systems where the change will require only minor modification to the system. Justify your choice. [*8 marks*]

       ii. Provide an example of a system where the change will potentially require significant change to the system. Justify your choice. [*8 marks*]

   (c) For one of your chosen changes in regulation, list up to four questions you would like to ask the product manager concerning the potential cost of the change. [*4 marks*]

3. Consider the following text.

> Recently, web application development has become one of the most promising areas of research in Computer Science. Not only because web applications offer distributed and concurrent access over heterogenous execution environments — resulting in a high degree of client ubiquity —, but also because they also provide their administrators the ability to update and maintain them without even distributing and installing software on a huge amount of client computers. In addition to ubiquity and maintenance, we can enumerate usability advantages of web applications, like platform independence and user comfort (due to web browser familiarity).

(a) Rewrite the above text in between half and two thirds as many words, without losing any significant information. (It should serve as a drop-in replacement for the above text.) [*13 marks*]

(b) Rewrite the text again, but this time as a series of examples, replacing each abstract point by concrete imagery. (Because each general point is replaced by a specific example, it need not serve as a drop-in replacement for the above text.) [*12 marks*]