

FOR INTERNAL SCRUTINY (date of this version: 2/12/2017)

UNIVERSITY OF EDINBURGH
COLLEGE OF SCIENCE AND ENGINEERING
SCHOOL OF INFORMATICS

PROFESSIONAL ISSUES

Thursday 1st April 2010

00:00 to 00:00

Year 3 Courses

Convener: ITO-Will-Determine
External Examiners: ITO-Will-Determine

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. This question is COMPULSORY.

A civil rights organisation has retained you to consult on the technical aspects of video surveillance. In particular they are concerned about a chain of supermarkets whose stores typically have between 50 and 100 cameras located in an around the store that capture high resolution video images.

- (a) As a professional, you feel the need to discuss your professional obligations before undertaking the contract. What are the two key aspects of the BCS code of conduct you would raise with the organisation before agreeing to work with them? Select your two aspects and justify why you would choose these as the two main points to raise with the organisation. [8 marks]
- (b) The organisation has decided to make a request for information from the supermarket chain on their use of video data. You have been tasked with devising three questions you would most like to ask about the supermarket chains use of video data. State the three questions and justify your choice. [9 marks]
- (c) The civil rights organisation is interested in how to use the GDPR to exert pressure on the supermarket chain to change its use of video data. They have asked you what you consider to be the two most useful parts of the GDPR that could be used to exert pressure on the supermarket chain. State the two aspects of the GDPR that you consider most useful and justify your choice. [8 marks]

2. You should either answer this question or question 3.

You are employed by a small company developing software for a number of customers that up until recently has used an organic structure to organise the company. Recently there have been several new hires and the organic organisational style is no longer an effective way of managing the larger workforce.

- (a) Suggest a suitable organisational style and justify your choice. [7 marks]
- (b) Your boss has asked you to recruit and lead a team developing a learning analytics app that is intended to look for patterns in students use of learning resources and provide information to the instructors on how the students are progressing.
 - i. The team will comprise around 10 people. Your boss has asked you to write brief notes on the composition of the team to help in the writing of the job descriptions. You should take account of the BCS codes of conduct and good practice and information on the structure of effective teams. Provide your first draft of these notes. [6 marks]
 - ii. Your boss has also asked you to write short notes on the ethical issues arising from the collection and use of such data. Provide brief notes on this. [6 marks]
 - iii. Your boss also want to know what you see as the key ethical safeguards you could put in place to ensure the systems you are writing will be ethically acceptable to most clients. Name the safeguards and justify your choice. [6 marks]

3. You should either answer this question or question 2.

Imagine you work for an insurance company that has established a partnership with a mobile phone company to develop an app that uses the information from phone sensors to monitor the physical activity of the user of the phone. The app sends information to the insurance company and it uses the information to calculate various health risks for the user and so calculates their health insurance premiums on the basis of their risk profile.

- (a) Provide brief notes that identify potentially sensitive information that the phone could provide to the insurance company. [7 marks]
- (b) Provide brief notes on the privacy issues that might arise from the ability to access such information. [6 marks]
- (c) The company is particularly concerned about discrimination, provide brief notes for your company on this issue in relation to the proposed app. [6 marks]
- (d) The insurance company grew out of a small group of individuals who offered insurance services and so is structured as a partnership. The company is concerned it may suffer litigation due to privacy violations. Comment on the suitability of this structure and suggest alternatives. [6 marks]