The University Of Sheffield.

Data Provided: None

DEPARTMENT OF COMPUTER SCIENCE   **Autumn 2020-2021**

COM6655 PROFESSIONAL ISSUES   **2 Hours**

Answer all THREE questions.

All questions carry equal weight. Figures in square brackets indicate the percentage of available marks allocated to each part of a question.

Each question (including all its parts) must be answered in no more than 1000 words. If you write more, only the first 1000 words will be marked.

1. A UK company called JohnnyCab runs a taxi service. Customers order a taxi and pay for it using a smartphone app, which requires information about the customer's name, location and credit card details. Since it started trading ten years ago, JohnnyCab has amassed a huge amount of customer data and uses this for data analysis (for example, to predict demand at different times of year). Because the volume of data is so large, JohnnyCab does not store it on its own computer system. Instead, it buys in cloud services from another company, MegaCloud, which handles data storage and provides computational resources to process the data.

   Hackers gain access to MegaCloud's servers and download a large amount of the data belonging to JohnnyCab. The hackers exploit a weakness in MegaCloud's servers that had not been patched. The hackers threaten to release the data on the internet unless JohnnyCab pays them a ransom of £50,000. If the ransom is paid, the hackers promise to destroy their copy of the data. JohnnyCab decides that it will not inform the authorities or its customers, and pays the ransom.

   a) Critically evaluate the action of JohnnyCab from the point of view of the following schools of moral philosophical thought:

      (i) Utilitarianism

                                                                          [10%]

      (ii) Kantian ethics

                                                                          [10%]

   b) Several months after the events described above, it becomes widely known that JohnnyCab suffered a data breach. Explain the legal responsibilities and liabilities of JohnnyCab and MegaCloud in regard to data protection law. In your answer, you should identify the relevant legislation, state any assumptions that you make and define any terms that you use.

                                                                          [40%]

   c) How would the criminal liability of the hackers in the above scenario differ if the incident occurred (i) in the year 1985 (ii) in the year 2005? Give reasons for your answer, and identify the relevant legislation in each case.

                                                                          [20%]

   d) If the hackers did not destroy the data after accepting the ransom, could JohnnyCab seek a resolution through the law of confidence? Give reasons for your answer.

                                                                          [20%]

2. The Darnall Widget Company (DWC) has a UK manufacturing facility that makes small mechanical items using conventional hand tools. Competition with other companies is fierce, and DWC is considering whether to automate by installing a number of industrial robots.

a) What advice would you give to the managing director of DWC in this situation? In your answer, explain the likely benefits and challenges associated with automation of the DWC factory.

[40%]

b) Subsequently, DWC decide to automate their factory and install five industrial robots made by a company called BigBot. The robots are supplied under a lease arrangement, in which BigBot provide the robots and keep them properly maintained in return for an annual fee. Because the items being produced are small and quite intricate, it is still necessary to do some aspects of the manufacturing process by hand. This means that human workers and robots need to work in close proximity, which is not recommended by BigBot. Furthermore, the lease agreement states that BigBot is not liable for personal injury resulting from use of their robots under any circumstances.

After several months, there is an accident at DWC. One of the robots behaves unexpectedly when an employee is close to it, and she sustains serious injuries as a result. The problem is traced to an error in the software that controls the robot.

Explain whether the injured employee can take action through the following areas of law. In your answer, refer to relevant legislation and case law:

(i) Contract law

[30%]

(ii) Negligence

[20%]

(iii) Product liability

[10%]

3. This question concerns two UK computer game companies, called Sunny and EggsBox. Sunny has recently released three games that have been very successful. Wanting to capitalise on the same market, EggsBox quickly produce three similar games. Sunny suspects that their intellectual property rights have been infringed.

a) Indicate whether infringement of intellectual property rights has occurred in each of the following. Give reasons for your answers and explain the applicable legislation and case law.

(i) EggsBox decompiled one of Sunny's games, to see how it works. Having gained some insight into Sunny's program code, which was written in Java, EggsBox wrote their own version from scratch in C++.

[25%]

(ii) EggsBox hired a former employee of Sunny to write a second game. In this case, the structure of the EggsBox and Sunny games are very similar, and they are written in the same programming language. However, the only literal similarity in the program code is a part that implements the Z-buffer algorithm, a standard approach for hidden surface detection in computer graphics.

[25%]

(iii) In the case of the third game, EggsBox did not copy any of Sunny's program code. However, the idea of the game is the same, the playing experience is the same, and there are clear similarities between the screen designs and icons used in the EggsBox game and Sunny's game.

[25%]

b) Sunny sell their games through an online retailer called Rainforest. The game is supplied in a sealed box, which contains a CD-ROM and a licence agreement.

A customer purchases one of Sunny's games from Rainforest, but when they open the package and read the licence they realise it forbids them from making a backup copy. They cannot accept this, so decide to return the game to Rainforest and request a refund. However, Rainforest refuses, claiming that the contract of sale is complete, and that any complaint about the terms of the licence must be raised with Sunny directly.

Answer the following by referring to relevant legislation and case law:

(i) Are the actions of Rainforest justified?

[15%]

(ii) Can the customer make a backup copy of Sunny's game regardless of the licence agreement?

[10%]

END OF QUESTION PAPER