Name: Class: Mark:

1. Special Simulation Systems is a company that creates simulation software. Their employees are highly skilled programmers and IT professionals who are expected to follow the Code of Practice published by the British Computer Society.

a) One of the topics that the code covers is that professionals need to “Maintain their technical competence”. Describe **two** ways in which employees can achieve this. [4]

b) Another topic that the code covers is that professionals must “Participate maturely”. Describe **one** way in which employees can achieve this. [2]

c) Discuss the impact of ensuring that employees ‘maintain their technical
competence’ on both the company and its employees. [6]

2. The text below describes how Cambridge Analytica harvested the profiles of millions of Facebook users as part of a sophisticated cyber-campaign to influence the American electorate to vote for Donald Trump in the 2017 US elections.

 In 2014, Cambridge Analytica entered into a commercial arrangement with Global Science Research, (GSR), owned by a Cambridge academic, Dr Alexandr Kogan (who later changed his name to Dr Spectre, before changing it back again). In 2014, Kogan set out to acquire personal data by means of a psychological profiling tool which used Facebook data.

 The scheme worked as follows:

 Stage 1

 Kogan advertised for people who were willing to be paid $2-$5 to take a detailed personality/political test that required them to log in with their Facebook accounts. The test included pictures like the two shown below, asking the question, “How important should this message be to all Americans?”

 Stage 2

 At the end of the test, participants gave permission to the company to access their Facebook profiles – including their friends’ data. On average, each of the 320,000 people who took the personality test also gave access to at least 160 other people’s profiles. These friends would not have realised this. Within weeks, Kogan had collected millions of profiles.

 Stage 3

 The app collected data such as *likes* and personal information from the test-taker’s account, as well as their friends’ data.

 Stage 4

 The personality quiz results were paired with the participants’ Facebook data, such as *likes*, to discover psychological patterns.

 Stage 5

 Algorithms combined the data with other sources such as voter records to create a superior set of records (initially 2 million people in 11 key states in the USA) with hundreds of data points per person.

 Stage 6

 These people were then targeted with highly personalised advertising and propoganda.

 The parent company of Cambridge Analytica was a company called SCL group, which had expertise in ‘psycological operations’ (psyops) and was a UK and US defence contractor. SCL Elections had previously used similar tools to affect more than 200 elections around the world.

 (Source: “The Cambridge Analytica files”, The Observer 18/03/18)

 Discuss the motivation and behaviour of Cambridge Analytica, with particular reference
to the ethics and morals of their actions. [8]

[Total 20 marks]