

AQA Computer Science A-Level
4.8 Consequences of uses of computing
Past Paper Questions

January 2009 Comp 2

9 One principle of the Data Protection Act refers to 'internal data security'. It states that, 'Appropriate technical and organisational measures shall be taken against unauthorised or unlawful processing of *personal data* and against accidental loss or destruction of, or damage to, personal data.'

9 (a) What is personal data?

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(1 mark)

9 (b) Imagine you are working for an organisation that uses personal data.

Describe **three** measures you would propose that will contribute to the organisation complying with the above principle of the Data Protection Act.

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3

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(3 marks)

January 2010 Comp 2

11 A company that develops computer software has just taken on a new employee.

11 (a) The actions of the employee and company are covered by several laws.

Name the law that would be most relevant in each of the following cases.

11 (a) (i) The employee brings into work a copy of a computer game that he has purchased and already installed on his home computer. He installs it on his work computer.

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(1 mark)

11 (a) (ii) The employee gains access to company confidential data by correctly guessing a manager's username and password.

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(1 mark)

11 (a) (iii) The company issues the employee with a voucher once a year for a free eye test.

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(1 mark)

11 (b) The company makes the employee sign a Code of Conduct before he is allowed to start work.

11 (b) (i) What is a Code of Conduct?

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(2 marks)

11 (b) (ii) Why does the company have a Code of Conduct rather than just expecting employees to obey the law?

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(2 mark)

January 2011 Comp 2

- 11 (a)** If you borrow a shop bought music CD and "rip" (copy) the tracks to your hard disk before you give the CD back to your friend, you have probably broken a law.

State which law you are likely to have broken.

.....
(1 mark)

- 11 (b)** Alternatively, you could download music from an official music website on the Internet. The website owners might protect this music using Digital Rights Management.

Give **two** examples of how Digital Rights Management could prevent you from sharing downloaded music with a friend.

1.....

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2.....

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(2 marks)

January 2011 Comp 3

January 2012 Comp 2

- 7** An Internet Service Provider (ISP) has instructed a firm of solicitors to investigate the download activities of the ISP's clients.

7 (b) The clients under investigation are alleged to have downloaded music files from a file-sharing site.

The ISP wishes the firm of solicitors to investigate whether any laws have been broken.

State the **full name** of the law which might have been broken by the clients downloading music files.

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(1 mark)

7 (c) The ISP stores personal data concerning each of its clients.

What is meant by the term *personal data*?

.....
.....
(1 mark)

7 (d) The firm of solicitors discovers during their investigation that the same clients have been downloading personal data relating to other clients of the ISP without authorisation.

7 (d) (i) State the **full name** of the law that may have been broken by the ISP.

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(1 mark)

7 (d) (ii) State the **full name** of the law that may have been broken by the clients.

.....
(1 mark)

January 2013 Comp 2

8 Students often search online for music files and then download them to their computer, mobile phone or music player.

8 (a) State the **full name** of the law that students might have broken by downloading music files in this way.

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(1 mark)

8 (b) State **two** arguments against music being available for free on the Internet.

Your answers should **not** refer to the law asked for in part (a).

Argument 1

.....

Argument 2

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(2 marks)

June 2011 Comp 2

9 A large bank has a Data Controller who determines how personal data collected by the bank is processed.

9 (b) State if each of the following data sets, held by the bank, are covered by the Data Protection Act. Give a reason for each answer.

9 (b) (i) Details of the different types of loan that the bank sells.

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(1 mark)

9 (b) (ii) The names and addresses of all of the bank's customers.

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(1 mark)

9 (c) (i) The bank posts a letter to an ex-customer using an address that the customer has not lived at for five years.

Which principle of the Data Protection Act has been broken?

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(1 mark)

- 9 (c) (ii) There is a bug in the computer program that the bank uses to operate its online banking system. This allows Internet users to view the bank account details of any bank customer.

Which principle of the Data Protection Act has been broken?

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(1 mark)

- 9 (d) Customers who use the bank's online banking system communicate with the bank's web server over the Internet. Interception of these messages is illegal except by certain organisations under specific circumstances.

Under which Act is the interception of these messages illegal?

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(1 mark)

June 2012 Comp 2

- 9 You have been asked to design and set up a computer work area for the employees of a library.

- 9 (a) State the legislation that is concerned with how the work area should be physically set out and state **two** ways that this legislation will affect the design.

Legislation:.....

Affect 1:

.....

Affect 2:

.....

(3 marks)

- 9 (b) Application software has already been installed onto computers in another room.

- 9 (b) (i) State the **full name** of the law that may be broken by installing the same software onto the new computers.

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(1 mark)

9 (b) (ii) What information should you find out before installing this software to ensure that you will comply with the law identified in part (b) (i)?

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(1 mark)

June 2013 Comp 2

7 A school has recently launched a 'Parent Portal' which is a website that provides information from the school. By logging on to the portal a parent can access the information that is stored about their son or daughter. This information includes academic reports, discipline records and other personal data.

7 (a) A parent recently contacted the school because he was concerned that when he logged on to read his daughter's report he could access the reports of all the other students.

The school should immediately look into this concern as a law has been broken.

State the **full name** of the law that has been broken.

.....

(1 mark)

7 (b) Which principle of the law identified in your answer to part (a) has been broken?

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.....

(1 mark)

7 (c) State another principle of the law identified in your answer to part (a).

.....
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(1 mark)

June 2017 Paper 2

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Between 2008 and 2010, a company that was gathering data for an online mapping system, using cars fitted with cameras and WiFi equipment, collected some information that was being transmitted on personal WiFi networks. The company apologised for doing this and an investigation found that a small number of software developers had been responsible for adding this functionality to the mapping system data collection software.

In the context of this example, discuss:

- how it was possible for this data to be collected.
- what steps the owners of the networks could have taken to prevent the data from being collected.
- what legal and ethical issues might have arisen as a result of collecting this data.
- what lessons the company might have learnt from the incident and how their practices might have changed as a result of it.

In your answer you will be assessed on your ability to follow a line of reasoning to produce a coherent, relevant and structured response.

[12 marks]

June 2009 Comp 2

8 Imagine that you are a computer programmer in a company that stores personal data. The company must comply with the Data Protection Act.

8 (a) What is personal data?

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(1 mark)

8 (b) You are writing a new program to handle personal data.

State **one** principle of the Data Protection Act that could be met by the careful design of your program.

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(1 mark)

8 (c) Name **one** feature that you could include in your program and describe how it would help the company comply with the principle stated in part (b).

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(2 marks)