

Level 3 Cambridge Technical in IT 05838/05839/05840/05841/05842/05877

Unit 3: Cyber security

Monday 22 May 2017 – Morning
Time allowed: 1 hour

You must have:

- Insert (C387)

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|---------------|---|---|---|---|---|------------------|---|---|--|--|--|
| First Name | | | | | | Last Name | | | | | |
| Centre Number | | | | | | Candidate Number | | | | | |
| Date of Birth | D | D | M | M | Y | Y | Y | Y | | | |

INSTRUCTIONS

- Use black ink.
- Complete the boxes above with your name, centre number, candidate number and date of birth.
- Answer **all** the questions.
- Write your answer to each question in the space provided.
- If additional answer space is required, you should use the lined page(s) at the end of the booklet. The question number(s) must be clearly shown.

INFORMATION

- The case study should be used to answer questions in Section A.
- The total mark for this paper is **60**.
- The marks for each question are shown in brackets [].
- Quality of extended response will be assessed in the question marked with an asterisk (*).
- This document consists of **12** pages.

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|-----------------------|------------|
| Question No | Mark |
| 1 | /8 |
| 2 | /14 |
| 3 | /10 |
| 4 | /7 |
| 5 | /16 |
| 6 | /5 |
| Total | /60 |

Section A

Answer **all** the questions.

- 1 (a) The aims of cyber security include protecting information and making it available.

Using an example related to OCR Hotels, describe what is meant by the term availability within the context of cyber security.

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..... [2]

- (b) One target for cyber security threats are the customers of OCR Hotels.

- (i) Explain **one** reason why a hacker might want to gain access to OCR Hotels customer data.

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..... [2]

- (ii) Identify **one other** target for cyber security threats at OCR Hotels. For your chosen target, identify information that could be gained from them and explain how it could be used by a hacker.

Target

Information gained

.....

How used

.....

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..... [4]

2 OCR Hotels has suffered a cyber security attack which has resulted in the theft of customer data.

(a)* Discuss possible impacts of the cyber security incident involving the theft of customer data on the customers of OCR Hotels.

[10]

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(b) The customers are one stakeholder at OCR Hotels.

Explain the impact of the cyber security incident on **two other** different stakeholders at OCR Hotels.

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[4]

3 Following the cyber security incident, a report needs to be completed.

(a) The report includes the following sections:

- Title
- Target

For each of the sections, explain how the information will be used.

Title

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Target

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[4]

(b) Describe **two** ways the information required for the description of the incident could be gathered.

1

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[4]

(c) Explain **one** reason why it is important to complete the section on the impact of the incident in the cyber security incident report.

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[2]

4 OCR Hotels decides to employ an ethical hacker.

Evaluate the implications to OCR Hotels of employing an ethical hacker.

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SECTION B

Answer **all** the questions.

5 Companies offer intrusion testing to see if a network is vulnerable.

(a) Describe **two** different intrusion tests a company could use to identify potential vulnerabilities in a network.

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[4]

(b) Explain **two** reasons why an individual should employ a company to conduct intrusion testing of their network.

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[6]

(c) Identify **two** different hardware security controls that the company could implement to protect its network. For each control, describe how it can protect the network.

1

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How it protects

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2

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How it protects

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[6]

6 One possible motivation for a cyber security attack is for the attacker to generate income for themselves.

(a) Identify **two** ways that a cyber security attack on an individual could be used to generate income by the attacker.

1

2

[2]

(b) One cyber security control that could be implemented to protect data stored on an individual's computer is cryptography.

What is meant by the term **cryptography**?

.....

..... [1]

(c) One consequence of a cyber security attack could be that the data is now inaccessible to the individual. One way that this could be done is by the hacker using cryptography.

Identify **two other** ways that a hacker could make the data inaccessible.

1

2

[2]

END OF QUESTION PAPER

ADDITIONAL ANSWER SPACE

If additional space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margin(s).

The form consists of a solid vertical line on the left margin and horizontal dotted lines extending across the page, providing a grid for writing answers.



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