OCR
Oxford Cambridge and RSA

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

Unit 3: Cyber security

Thursday 11 January 2018 – Afternoon
Time allowed: 1 hour

You must have:
- a clean copy of the pre-release (Insert C387)

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 this 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	/2
2	/24
3	/12
4	/10
5	/8
6	/4
Total	**/60**

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Answer **all** the questions.

Section A

This section relates to the case study on OCR Phones.

An employee at OCR Phones has put a paper-based list of customer details in the waste paper bin. The list was handed to a journalist who reported the incident in a newspaper.

1 Identify **two** impacts to OCR Phones of accidentally disclosing personal information of its customers.

1 ....

....

2 ....

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[2]

Following the disclosure, OCR Phones conducted a review of its procedures. The review identified several areas where its network is vulnerable to being hacked.

2 **(a)** One area of concern that was uncovered by the review is that the servers are running software that is over eight years old and no patches or updates have been applied.

Explain **three** implications to OCR Phones of running software that has not been updated.

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2 ....

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3 ....

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[6]

(b) The review also highlighted that the security of the OCR Phones network had minimal physical or hardware controls.

Identify **two** physical and **two** hardware controls that OCR Phones could use to improve the security of the network.

Physical Control	Hardware Control

[4]

(c) The review identified a lack of operational security at OCR Phones.

Using examples, describe **two** operational security measures that OCR Phones could apply to improve the security of the network.

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2...

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[4]

Turn over

4

(d)* Following the review, OCR Phones has decided to implement monitoring of its employees.

Discuss the use of monitoring by OCR Phones as a method of reducing the likelihood of being hacked.

[10]

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Three months after the review was conducted and its recommendations implemented, OCR Phones website was hacked and made unavailable.

3 **(a)** Describe **two** different hacks that could have been used to take the website offline.

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[4]

(b) An investigation into the hack was conducted and a cyber security incident report created. The hack was given an incident category of *significant*.

What is meant by an incident category of *significant*?

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....**[1]**

6

(c) Evaluate the importance of the cyber security incident report in preventing future cyber security incidents.

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Section B

You do not need the case study to answer these questions.

4 **(a)** Explain **two** reasons why cyber security is important for individuals.

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2..

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[4]

(b) A system attack is one type of vulnerability that can be exploited by hackers.

Identify **one** other type of vulnerability that can be exploited by hackers attacking individuals.

....**[1]**

Turn over

(c) One type of hacker is known as a script kiddie.

    (i) What is meant by a script kiddie?

      ....

      ....**[1]**

    (ii) Describe **two** characteristics of a script kiddie.

      1 ....

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      2 ....

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      [4]

5 Mrs Davies receives many emails during the week. Some of these are phishing emails.

    (a) Describe **two** motivations of a cyber-criminal who sends phishing emails.

      1..

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      2..

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      [4]

(b) Identify **two** measures that could be taken to minimise the risk of being hacked when choosing a password for an online account. For **each** measure given, identify how it reduces the risk.

1..

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How reduces risk ....

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2..

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How reduces risk ....

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[4]

6 There are a wide range of threats to cyber security including those threats which are accidental or intentional.

Using examples, describe the difference between an accidental and an intentional cyber security threat.

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....**[4]**

END OF QUESTION PAPER

ADDITIONAL ANSWER SPACE

If additional answer space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margin(s) – for example 2(d) or 3(c).

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