OCR
Oxford Cambridge and RSA

Wednesday 21 May 2025 – Afternoon

Level 3 Cambridge Technical in IT

05839/05840/05841/05842/05877 Unit 3: Cyber security

Time allowed: 1 hour
C384/2506

C384-2506

You must have:
- a clean copy of the Pre-release (inside this document)

05839-03

Please write clearly in black ink. **Do not write in the barcodes.**

Centre number | | | | | | Candidate number | | | | |

First name(s) _____

Last name _____

Date of birth | D | D | M | M | Y | Y | Y | Y |

INSTRUCTIONS
- Use black ink.
- Write your answer to each question in the space provided. If you need extra space use the lined pages at the end of this booklet. The question numbers must be clearly shown.
- Answer **all** the questions.
- Use the Insert to answer the questions in Section A.

INFORMATION
- 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 questions marked with an asterisk (*).
- This document has **12** pages.

ADVICE
- Read each question carefully before you start your answer.

Section A

Use the case study on **PH Software** in the **Insert** to answer the questions in this section.

PH Software suspect that one of its competitors has obtained confidential client information and the code for its new applications.

1

(a) Identify **two** types of attackers that could have gained the information from PH Software.

Tick **two** boxes.

- Cyber criminal ☐
- Hacktivist ☐
- Phisher ☐
- Scammer ☐

[2]

(b) Describe **one** characteristic of an **insider**.

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..... **[2]**

(c) Identify **two** possible motivations of the insider giving the information to a competitor.

1 .....

2 .....

[2]

2

(a) Explain **two** reasons why PH Software needs to protect the code for its new applications.

1 .....

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2 .....

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[4]

(b) Describe **three** methods the insider could have used to obtain the confidential client information from PH Software.

1 .....

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2 .....

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3 .....

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[6]

(c) Explain **two** impacts to PH Software of its confidential client information being obtained by the insider.

1 .....

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2 .....

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[4]

(d) Identify **two** ways that PH Software could know which information the insider handed to its competitors.

1 .....

2 .....

[2]

(e)* Discuss how PH Software can use the cyber security incident to assist in its future management of cyber incidents.

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[10]

3* Evaluate the effectiveness of an Intrusion Detection System (IDS) for preventing insider attacks.

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[7]

Section B

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

Ryan tried to access their online bank account but it was not available. Ryan thinks they have been hacked.

4

(a)

(i) What is meant by **availability**?

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..... **[1]**

Ryan is concerned that their bank account is no longer confidential.

(ii) What is meant by **confidentiality**?

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..... **[1]**

Ryan fears the integrity of the bank account has been compromised.

(iii) What is meant by **integrity**?

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..... **[1]**

(b) Identify **three** risks to Ryan of the hacker having access to their online bank account.

1 .....

2 .....

3 .....

[3]

Ryan has confirmed their account was hacked.

The hacker has broken the Computer Misuse Act 1990 when accessing Ryan's online bank account.

5

(a) Explain why the hacker can be prosecuted under this Act.

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..... **[4]**

(b)

(i) Identify **one other** Act that has been broken when the hacker accessed the online bank account.

..... **[1]**

(ii) How has this Act been broken?

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..... **[2]**

6

(a) The following table shows cyber security access control methods and their descriptions.

Complete the table by filling in the missing methods and descriptions.

Method	Description
Biometric Access	
	Applying an update to software to close a security vulnerability
Firewall	
Backup	
	Physically connect a computer to a desk to prevent theft

[5]

(b) Identify **one** method that will keep the account data safe when in transit and describe how it keeps the data safe.

Method .....

How it keeps the data safe .....

.....

..... **[3]**

END OF QUESTION PAPER

EXTRA ANSWER SPACE

If you need extra space use these lined pages. You must write the question numbers clearly in the margin.