

# Thursday 23 May 2024 – Afternoon

## Level 3 Cambridge Technical in IT

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

Time allowed: 1 hour C384/2406

#### You must have:

· a clean copy of the Pre-release (inside this document)



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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						

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#### **INSTRUCTIONS**

- Use black ink.
- Write your answer to each question in the space provided. If you need extra space use the lined page at the end of this booklet. The question numbers must be clearly shown.
- Answer all the questions.
- Use the Insert to answer the guestions 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 **Charlie's Home Network** in the **Insert** to answer the questions in this section.

1 (a)	One of the aims of cyber security is to protect information by making sure information has confidentiality, integrity and availability.
(i)	Describe availability of information.
	[2]
(ii)	Give <b>one</b> example of a <b>cyber security measure</b> Charlie can use to protect the availability of their information.
	[1]
(b)	One of the threats to cyber security is environmental.
	Identify one <b>environmental</b> threat and describe how Charlie's network is vulnerable to it.
	Environmental threat
	Description
	[2]

2 (a)	Charlie suspects the teenager who lives on the other side of the street has hacked into the street.	heir
	network.  One motivation for the teenager is thrill seeking.	
	Identify <b>two other</b> motivations for the teenager to hack into Charlie's home network.	
	identify two other motivations for the teerlager to hack into charlie's nome network.	
	Motivation 1	
	Motivation 2	
		[2]
(b)	After doing some research, Charlie believes that the teenager is a script kiddie.	
	One characteristic of a script kiddie is that they are likely to be a teenager.	
	Identify two other characteristics of a script kiddie.	
	Characteristic 1	
	Characteristic 2	
		[2]
(-\	I de attraction and an extraction and a suitable construction of the construction of t	
(c)	Identify <b>two other</b> types of attacker who might have hacked into Charlie's network.	
	1	
	2	
		[2]

ა (a)	Following the hack on their network, Charlie discovers that some files cannot be opened.
(i)	Identify and describe the type of cyber security incident that has occurred.
	Type of incident
	Description
	[2]
(ii)	Charlie has found some of their personal information posted to a local neighbourhood website.  Identify and describe the <b>type of cyber security incident</b> that has occurred.
	Type of incident
	Description
	[2]

(b)	The disruption to Charlie's life caused by the attack on their network includes loss of privacy, financial and reputational damage.
	Explain <b>two other</b> ways Charlie's life could have been <b>disrupted</b> by the attack on their network.
	Way 1
	Way 2
	[6]

a)*	The ethical impacts on Charlie of being attacked include loss of privacy, financial and reputational damage.
	Discuss the <b>ethical impacts</b> of loss of privacy, financial and reputational damage on Charlie.

(b)	Charlie decides to take an online course in cyber security.					
	One of the modules is about vulnerability testing.					
	Describe the following vulnerability testing techniques.					
	Penetration testing					
	Sandboxing					
	[4]					
(c)	Explain why fuzzing would <b>not</b> be an appropriate vulnerability technique for Charlie to use on their network.					
	[2]					

(d)	Explain <b>three</b> ways Charlie can mitigate the risk of a future attack on their network.					
	1					
	2					
	3					
	[6]					

### Section B

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

A company has implemented a set of procedures to improve the security of its network and started to use cryptography to protect valuable documents.

When starting work on a Monday morning, the company was surprised to discover that it had been the victim of a ransomware attack.

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,	The company is completing a Cyber Security incluent Report (CSIR).						
	One of the sections relates to the <b>impact of the incident on business, data and recovery time</b> .						
	Explain how this section of the CSIR would be used by the company.						

### **END OF QUESTION PAPER**

### **EXTRA ANSWER SPACE**

If you need extra space use t margin.	his lined page. You must	write the question numb	ers clearly in the



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