



Oxford Cambridge and RSA

# Monday 18 January 2021 – Morning

## Level 3 Cambridge Technical in IT

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

Time allowed: 1 hour

C384/2101



**You must have:**

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

Please write clearly in black ink.

Centre number

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Candidate number

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First name(s)

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Last name

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Date of birth

D	D	M	M	Y	Y	Y	Y
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### INSTRUCTIONS

- Use black ink.
- Write your answer to each question in the space provided. You can use extra paper if you need to, but you must clearly show your candidate number, the centre number and the question numbers.
- Answer **all** the questions.
- Use the Insert to answer Questions 1, 2 and 3.

### 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.

FOR EXAMINER USE ONLY	
Question No	Mark
1	/20
2	/7
3	/14
4	/3
5	/4
6	/12
<b>Total</b>	<b>/60</b>

**Section A**

Answer **all** the questions.

1 (a) Stevenson Research has appointed a Director of Cyber Security. One of their responsibilities is to produce policies and procedures to protect the organisational data.

(i) Explain **two** reasons why it is important to protect the organisational data at Stevenson Research.

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2 .....

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**[4]**

(ii) Identify **two** other types of data that need to be protected at Stevenson Research.

1 .....

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2 .....

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**[2]**

- (b) Two of the cyber security threats to the data at Stevenson Research are environmental and physical.

Describe, using examples, what is meant by environmental and physical threats.

Environmental.....

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Physical .....

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[4]

- (c) The Director of Cyber Security needs to be aware of the types, characteristics and motivations of attackers who might be a threat to Stevenson Research.

- (i) Describe the following types of attacker.

Hacktivist.....

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Cyber terrorist .....

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[4]

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

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[2]

(iii) Describe **two** motivations of an insider.

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**(b)** The Director of Cyber Security is investigating the use of Intrusion Detection Systems (IDS) and Intrusion Prevention Systems (IPS).

Describe two differences between IDS and IPS.

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**[4]**



**Section B**

Answer **all** the questions.

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

TechnoBabble are security consultants who can be hired to consult on all areas of cyber security.

4 Three types of security incident are given below with one word missing from each. Complete the sentences below using the most appropriate word.

1 \_\_\_\_\_ access includes hacking and escalation of privileges.

2 \_\_\_\_\_ includes using malware and deliberate erasure.

3 Inaccessible \_\_\_\_\_ includes account lockout and denial of service.

**[3]**

5 (a) One of the services offered is vulnerability testing. One type of vulnerability testing is penetration testing.

Describe what is meant by penetration testing.

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**[2]**

(b) Identify **two** other types of vulnerability testing that could be offered by TechnoBabble.

1.....  
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2.....  
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**[2]**

6 TechnoBabble has been asked to investigate a cyber security incident on a network and produce a cyber security incident report.

(a) TechnoBabble needs to categorise the incident.

Draw a line to connect each incident category with its description.

Incident Category
Minor
Critical
Negligible
Significant

Description
Little or no impact on the system or users
Can be handled internally by IT support and security staff
Involves a serious breach of network security
Impacts a small number of users and likely to disrupt non-essential services

[4]

(b) TechnoBabble recommends that a set of written procedures should be followed in the event of a cyber security incident.

Explain why it is an advantage to have the procedures written down.

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[4]

(c) Explain **two** reasons why it is necessary to include the techniques used by the attackers to gain access to the network, in the cyber security incident report.

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2.....

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**[4]**

**END OF QUESTION PAPER**



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