

**Modified Enlarged 24pt  
OXFORD CAMBRIDGE AND RSA  
EXAMINATIONS**

**Monday 18 January 2021 – Morning**

**Level 3 Cambridge Technical in IT**

**05839/05840/05841/05842/05877**

**Unit 3: Cyber security**

**Time allowed: 1 hour plus your additional  
time allowance**

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

**Please write clearly in black ink.**

**Centre  
number**

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**Candidate  
number**

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**First name(s)** \_\_\_\_\_

**Last name** \_\_\_\_\_

**Date of  
birth**

D	D	M	M	Y	Y	Y	Y
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**READ INSTRUCTIONS OVERLEAF**

## **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 (\*).**

## **ADVICE**

**Read each question carefully before you start your answer.**

**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. [4]**

**1**

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2

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**(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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**(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** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Cyber terrorist** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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

1

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2

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[2]

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

1

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2

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[4]









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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.**

**1**

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**2**

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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. [3]**

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

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

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

**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 opposite to connect each incident category with its description. [4]**

<b>Incident Category</b>	<b>Description</b>
<b>Minor</b>	<b>Little or no impact on the system or users</b>
<b>Critical</b>	<b>Can be handled internally by IT support and security staff</b>
<b>Negligible</b>	<b>Involves a serious breach of network security</b>
<b>Significant</b>	<b>Impacts a small number of users and likely to disrupt non-essential services</b>



**(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.**

**1**

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**2**

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**[4]**



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