



Oxford Cambridge and RSA

Wednesday 15 January 2020 – Morning

Level 3 Cambridge Technical in IT

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

Time allowed: 1 hour

C384/2001



You must have:

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

Please write clearly in black ink.

Centre number

Candidate number

First name(s) _____

Last name _____

Date of birth

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.

INFORMATION

- Use the Insert to answer Questions 1 and 2.
- 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	/34
2	/6
3	/6
4	/3
5	/5
6	/6
Total	/60

Section A

Answer **all** the questions.

This section relates to the case study on Fairest Physiotherapy.

Fairest Physiotherapy runs a computer network to support its business.

1 (a) The computer network is vulnerable to different types of threats.

For each of the scenarios shown in the table below, identify whether the type of attack is a system attack, a physical threat or an environmental threat.

Scenario	Type of Attack
Burst water pipe in the server room	
ID access card being stolen	
Brute force password hack	

[3]

(b) (i) Fairest Physiotherapy has been mentioned on a hacking forum as a possible target.

Describe the following motivations for attacking the company: public good, righting perceived wrongs and score settling.

Public good

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Righting perceived wrongs.....

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Score settling

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[6]

(ii) Explain why Fairest Physiotherapy might be vulnerable to a cyber security incident that is state sponsored.

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.....[2]

Fairest Physiotherapy is concerned that the likelihood of a cyber security incident has increased, as they have been mentioned as a possible target on a hacking forum.

(c) (i)* Analyse the possible impacts of a cyber security incident on Fairest Physiotherapy.

[10]

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(ii)* Explain how Fairest Physiotherapy could identify the areas of the company that are most at risk from a cyber security incident.

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[7]

(iii) Describe **three** measures that Fairest Physiotherapy could take to reduce the impact of a cyber security incident on its customers and business.

Measure 1

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Measure 2

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Measure 3

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[6]

Fairest Physiotherapy has outsourced its backup provision to Oliver Backup Services.

2 (a) Explain why the information on the backup needs to be kept secure.

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[4]

(b) Explain why the backup needs to be accessible by Fairest Physiotherapy.

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[2]

Section B

Answer **all** the questions.

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

- 3 Shaad Higgins accessed his bank account online, and saw some transactions that he did not recognise. He concluded that his bank account had been hacked.

Identify **three** items of information Shaad Higgins will need to give to his bank to enable them to investigate the hack. For each item, give a reason why the bank will need it.

Item 1

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Reason

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Item 2

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Reason

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Item 3

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Reason

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[6]

- 4 Health data is one type of personal data that an individual needs to protect.

Identify **three other** types of personal data that an individual needs to protect.

Type 1.....

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Type 2.....

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Type 3.....

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[3]

5 Jack is a salesman for aeroplane control systems, and travels to many different countries. He has recently received cyber security training.

(a) During his training three terms that were frequently used were *data at rest*, *data in transit* and *in the cloud*.

Define what is meant by each of these terms.

Data at rest

.....

Data in transit

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In the cloud

.....

[3]

(b) The training Jack received included cryptography.

Identify **two** types of cryptography that Jack could have been told to use to protect data stored on his computer.

1.....

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2.....

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[2]

6 Paulina has been having problems with her computer. She has been advised to check if any patches have been released for the software she is using.

(a) Explain why it is important that Paulina installs the patches to the software as soon as they are released.

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[4]

(b) What is the difference between an update and a patch?

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[2]

END OF QUESTION PAPER

ADDITIONAL ANSWER SPACE

If additional answer space is required, you should use the following lined pages. The question numbers must be clearly shown in the margins – for example, 1(a) or 2(b).

A large vertical rectangular area containing 25 horizontal dotted lines for writing answers.

A series of horizontal dotted lines for writing, spanning the width of the page.

A vertical solid line runs down the left side of the page. To its right, there are 25 horizontal dotted lines spaced evenly down the page, providing a guide for handwriting practice.



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