



Oxford Cambridge and RSA

Monday 16 January 2023 – Morning

Level 3 Cambridge Technical in IT

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

Time allowed: 1 hour

C384/2301



You must have:

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



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

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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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 Questions 1 and 2.

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

Answer **all** the questions.

- 1 (a) Mia has been told that she needs to protect the personal data submitted by the members on her network from both information disclosure and data modification.

Describe the difference between information disclosure and data modification.

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

- (b) One of the types of security incident that Mia needs to be aware of, is **denial of service (DoS)**.

- (i) What does **denial of service (DoS)** mean?

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

- (ii) Identify **two** ways Mia can **prevent** a DoS attack.

1

.....

2

..... [2]

- (iii) Identify **one other** type of cyber security incident Mia would need to protect against.

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

(c) Mia has been warned that she might receive emails from scammers.

Describe **two** motivations of a scammer who sends emails to Mia.

1

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.....

.....

.....

2

.....

.....

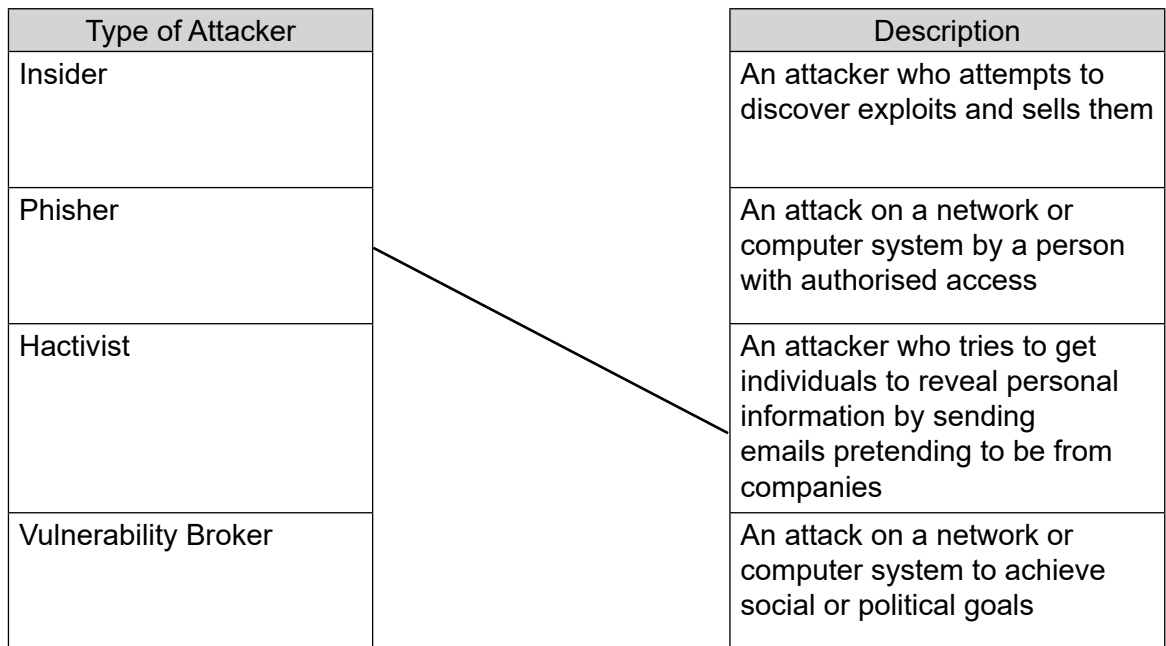
.....

[4]

(d) There are different types of attacker who may target Mia and the data on her network.

Draw a line to connect each type of attacker with their description.

One has been done for you.



[3]

(b) Describe how Mia could use **device management** to restrict access to the data stored on the webserver.

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..... [3]

(c) Describe **two other** software-based cyber security controls Mia could use to protect the data on the webserver.

1

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2

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..... [4]

Section B

Answer **all** the questions.

3 (i) Identify **one** UK law that applies to IT.

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

(ii) Describe the impact of the law you have identified on an organisation.

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

4 A company has suffered a cyber security incident and an incident report needs to be completed.

(i) Describe why it is necessary to record the date of the incident in the report.

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.....

.....

..... [2]

(ii) The cyber security incident can be placed into one of four categories.

Complete the paragraph describing the different categories.

Use the following list of terms.

You do not need to use all the words.

- critical
- effect
- impact
- insignificant
- major
- minor
- serious
- significant
- small
- substantial

If the incident is categorised as _____ then this means it involves a serious breach of network security. A negligible incident is one that has little or no _____ on the system or the users. A _____ incident is likely to disrupt non-essential services. A _____ incident can be handled internally by IT support.

[4]

(iii) One of the sections of the **cyber security incident** report is responses needed.

Identify **two** different groups of people who would need to be informed of the **cyber security incident**.

For each group, explain why they would need to know.

Group:

Explanation:

.....

.....

.....

Group:

Explanation:

.....

.....

.....

[6]

5 Describe how **sandboxing** can be used to test a program suspected of containing a virus.

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[4]

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(f) or 2(a).

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



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