



# Cambridge International AS & A Level

CANDIDATE  
NAME

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CENTRE  
NUMBER

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CANDIDATE  
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## INFORMATION TECHNOLOGY

9626/31

Paper 3 Advanced Theory

May/June 2023

1 hour 45 minutes

You must answer on the question paper.

No additional materials are needed.

## INSTRUCTIONS

- Answer **all** questions.
- Use a black or dark blue pen.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen or correction fluid.
- Do **not** write on any bar codes.
- You may use an HB pencil for any diagrams, graphs or rough working.
- Calculators must **not** be used in this paper.

## INFORMATION

- The total mark for this paper is 70.
- The number of marks for each question or part question is shown in brackets [ ].

This document has **12** pages. Any blank pages are indicated.

1 Describe how the use of social media can improve access to Government for individuals and organisations.

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4 (a) Describe what is meant by a botnet.

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[3]

(b) Malicious botnets are used to attack systems and can be a threat to the security of stored data.

Explain how these botnets can be used to gain unauthorised access to data.

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[6]



- 6** Prosthetics are artificial devices that are used to replace missing body parts to try to restore normal functions.

Describe the impact of Information Technology on the development and use of prosthetics.

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10 The security of data can be threatened by unauthorised destruction or modification.

(a) Explain these terms. Give an example of each.

(i) data destruction

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(ii) data modification

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(b) Describe ways that data can be protected from unauthorised destruction and modification.

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