



Cambridge International AS & A Level

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INFORMATION TECHNOLOGY

9626/11

Paper 1 Theory

May/June 2026

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. Do **not** use correction fluid or tape.
- 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 **16** pages. Any blank pages are indicated.



1 Data may be described as direct or indirect.

(a) Describe **two** differences between direct and indirect data.

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..... [2]

(b) Identify and explain **one** circumstance in which it would be better to use indirect data for a project.

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..... [2]





- 2 A company employs drivers to deliver parcels in a city. The company uses an expert system to plan the routes each driver will follow each day.

Describe how an expert system can be used to provide route scheduling in this scenario.

[8]





3 A teacher is creating a spreadsheet.

(a) Describe **two** ways in which the spreadsheet can validate data at the input stage.

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..... [2]

The spreadsheet will include both absolute cell referencing and relative cell referencing.

(b) Define the term absolute cell referencing.

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..... [1]

(c) Identify and explain **one** benefit of using relative cell referencing when creating a spreadsheet.

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..... [2]





(d) The teacher has used the following formula in a cell:

```
=IF(C2="Dog", (IF(D2="Male", "Block A", "Block B")), (IF(D2="Male", "Block C", "Block D")))
```

Describe how the spreadsheet will produce the result to be displayed.

[6]



4 Computer models make use of what-if analysis.

(a) Describe, with the use of relevant examples, how what-if analysis can be used as part of a model of population growth.

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..... [4]





- (b)** Evaluate the use of a computer simulation as a suitable method to plan a response to a natural disaster.

[8]



5 A video has been created with an aspect ratio of 16:9.

(a) Describe what is meant by an aspect ratio of 16:9.

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..... [1]

(b) Explain **two** reasons why an aspect ratio of 16:9 rather than an aspect ratio of 4:3 has been chosen.

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..... [2]

6 A student has to record an audio clip of him delivering a speech and wants to save this file. He can use MP3 or MP4a file formats.

Compare the use of MP3 and MP4a file formats to export this audio clip.

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..... [2]





7 A company has been hit by a ransomware attack.

(a) Describe the possible effects of this ransomware attack on the company.

[2]

(b) Evaluate the use of physical methods to prevent a second ransomware attack on the company.

[6]





- 8 A combined heating and air conditioning system has been installed in a house. The system measures the temperature in the house and reacts as programmed. The user can override the temperature settings of the system to suit their needs.

(a) Identify **two** input devices that will be used as part of this system.

input device 1

input device 2

[2]

(b) Explain, with the example of a pump, the purpose of an actuator in this system.

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..... [2]



The system has the following rules:

- If the temperature exceeds 28 degrees Celsius, a fan will turn on and the heating system will turn off.
 - If the temperature falls below 19 degrees Celsius, the fan will turn off and the heating will turn on.
- (c) Complete the pseudocode algorithm to show the processing that takes place in this combined system. The variable `temperature` represents the temperature of the house.

```
REPEAT  
    INPUT temperature
```



- (a)** Justify the use of the GUI for this computer system.

..... [6]



(b) Identify and explain **two** reasons why a dialogue interface may **not** be suitable for this system.

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..... [4]









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