



Cambridge International AS & A Level

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INFORMATION TECHNOLOGY

9626/12

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 **12** pages.



- 1 A businesswoman is opening a shop which will sell sports goods. She has decided to research into the spending habits of potential customers.

(a) (i) Describe **one** source of direct data she could use for this purpose.

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..... [1]

(ii) Identify **one** source of indirect data that she could use for this purpose.

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..... [1]

(b) With reference to **both** relevance of data and age of data, explain why the information obtained from the direct data source may produce better quality information.

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..... [4]



The businesswoman has decided to use indirect data for her research into the spending habits of potential customers.

- (c) Identify and explain **two** possible reasons, other than relevance of data and age of the data, for her decision to use indirect data for this purpose.

reason 1

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reason 2

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[4]



- 2 A partially completed algorithm is shown. Line numbers are given for reference. Some lines are incomplete.

The user will input five numbers, one number at a time.

After five numbers have been entered, the largest number and the smallest number will be displayed as part of a suitable message.

The algorithm uses a WHILE loop.

```

10  Count  ←  0
20  Number ←  0
30  Largest_Number ← 0
40  Smallest_Number ← .....
50  INPUT Number
60  Largest_Number ← Number
70  Smallest_Number ← Number
80  WHILE Count < .....
90      INPUT .....
100     IF Number ..... Largest_Number
110         .....
120             Largest_Number ← Number
130         .....
140             IF Number ..... Smallest_Number
150                 THEN Smallest_Number ← Number
160             ENDIF
170     .....
180     Count  ←  .....
190 ENDWHILE
200 PRINT "The largest number is "Largest_Number"
      and the smallest number is "Smallest_Number"."

```





- (a) Use the table to show how each line may be completed. Line 40 has been done for you as an example of how the question should be answered.

line	current code	completed code
40	Smallest_Number $\leftarrow$	Smallest_Number $\leftarrow$ 0
80	WHILE Count <	
90	INPUT	
100	IF Number Largest_Number	
110		
130		
140	IF Number Smallest_Number	
170		
180	Count $\leftarrow$	

[8]

- (b) Explain why `Largest_Number` (line 60) and `Smallest_Number` (line 70) are both set to the same value collected in line 50.

[4]

[4]





3 A student has created a spreadsheet to store data.

- (a) Describe **two** features of spreadsheet software that can be used to make the process of entering data into the spreadsheet easier for the student.

feature 1

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feature 2

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[2]

The student needs to analyse the information she has entered.

- (b) Describe **four** features of spreadsheet software that can be used to analyse the information that has been entered into the spreadsheet.

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[4]





4 In a school, a student needs to include sections from books in an essay he is writing.

Each section must be an exact copy of the section in the source material.

- (a)** Compare the use of visual checking and double data entry to verify the sections used. You must include similarities and differences in your answer.

[4]

In a workplace, a file containing employee details, including employee ID numbers, is going to be transferred by File Transfer Protocol (FTP) to a manager's computer. The integrity of the file has to be checked after it has been downloaded.

- (b) Identify and describe **one** method of verification, other than visual checking and double data entry, that can be used to check the integrity of the file downloaded to the manager's computer.

[3]





5 A school has paper-based records of all students that have attended the school since 1993.

These records include:

- home addresses and contact details
- the grade each student achieved in each of their end of year exams
- the years when they joined and left the school.

The school is going to create and use a single database to store these records.

(a) Compare the use of flat file database structures and relational database structures to store these records.

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..... [4]

The database will include validation rules.

(b) Identify and describe **one** validation rule that could be applied to the database. State why it is important.

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..... [3]





6 (a) Justify the use of a computer simulation as a suitable method to train helicopter pilots.

[8]

(b) Identify and explain **one** drawback of using a simulation as the only method to train helicopter pilots.

..... [2]





7 A mechanic uses an expert system.

This system has a user interface and an explanation system.

(a) Identify and describe **two** other components of an expert system.

component 1

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component 2

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[4]





(b) Evaluate the use of this system.

[8]

- 8 Compare the use of batch processing and real-time processing as methods of updating a record of daily sales in a supermarket that closes overnight.

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..... [4]

- 9 One type of utility software is anti-virus software. This detects viruses and malware that may damage files on a computer system.

(a) Define the term utility software.

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..... [1]

(b) Identify **one** other type of utility software that protects files on a computer system.

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..... [1]

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