Cambridge Assessment
International Education

Cambridge International AS & A Level

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

INFORMATION TECHNOLOGY **9626/11**

Paper 1 Theory **May/June 2025**

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 **16** pages. Any blank pages are indicated.

1 A teacher is collecting information from her students about what items they recycle.

Describe **two** factors that can affect the quality of the information gathered in this scenario.

Factor 1 ....

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Factor 2 ....

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[2]

2 The manager of a gymnasium wishes to keep records of all the members' details including performance results. She is unsure whether to use a spreadsheet or a database.

Discuss the benefits and drawbacks of using a spreadsheet to undertake this task.

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.... [6]

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3 Describe **four** ways a firewall increases security of personal data.

Way 1 ....

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Way 2 ....

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Way 3 ....

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Way 4 ....

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[4]

4 Describe the drawbacks of using microprocessors to control devices and appliances in a smart home.

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.... [6]

5 A manager can either choose off-the-shelf software or custom-written software for their company.

Explain why the manager would choose off-the-shelf software.

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.... [6]

6 Describe, by referring to **two** affected groups, what is meant by the digital divide.

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.... [4]

7 Sensors can be used to collect data about physical variables over a period of time.

(a) Describe the use of different sensors to collect data about the weather.

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(b) Describe how the data from the sensors can be processed.

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8 A customer pays for their shopping at a checkout by using their bank debit card. Funds are transferred electronically.
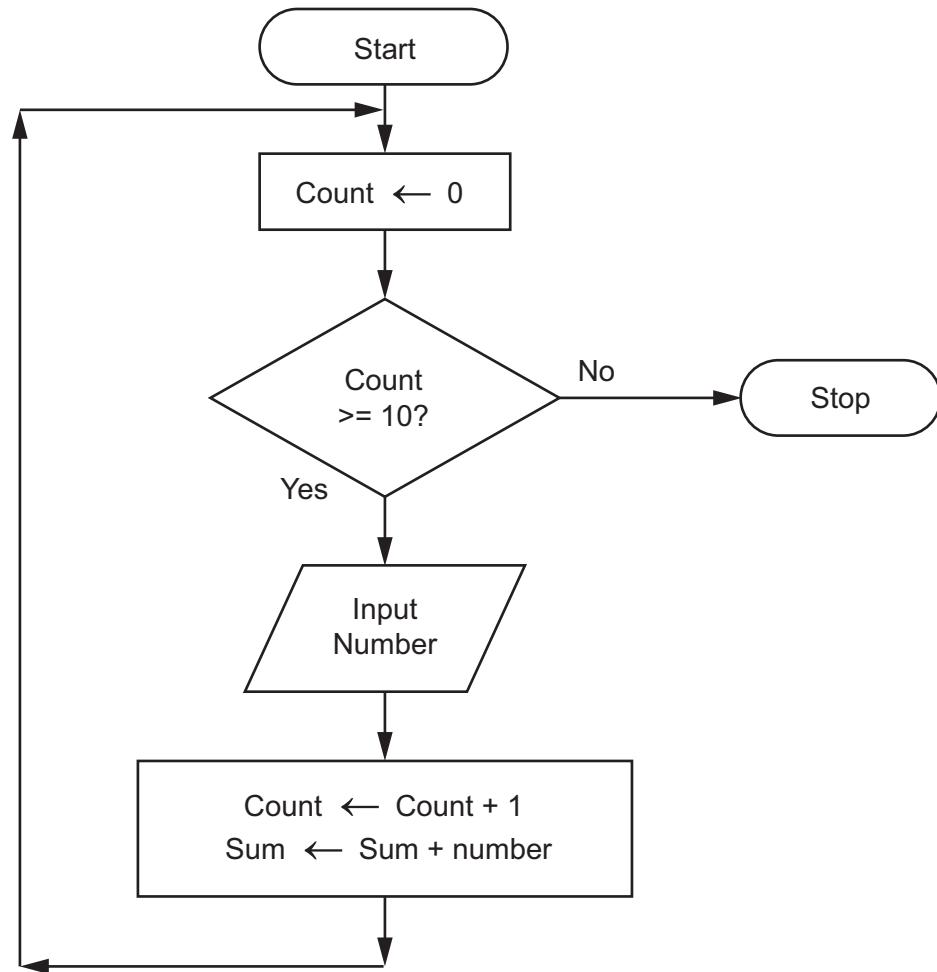
Describe the process of electronic transfer of funds.

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9 The program flowchart produces the output of the sum of 10 numbers.

There are errors and omissions in the flowchart.

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                    ┌─────────────┐
                    │    Start    │
                    └──────┬──────┘
          ┌────────────────┤
          │         ┌──────▼──────┐
          │         │  Count ← 0  │
          │         └──────┬──────┘
          │                │
          │             ╱──▼──╲
          │            ╱ Count  ╲      No     ┌─────────┐
          │           ◇ >= 10?   ◇──────────▶│  Stop   │
          │            ╲        ╱             └─────────┘
          │             ╲──┬──╱
          │           Yes  │
          │         ┌──────▼──────┐
          │         │   Input     │
          │         │   Number    │
          │         └──────┬──────┘
          │                │
          │   ┌────────────▼─────────────┐
          │   │  Count ← Count + 1       │
          │   │  Sum ← Sum + number      │
          │   └────────────┬─────────────┘
          └────────────────┘
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Explain **two** corrections that should be made to the flowchart.

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.... [4]

10 Describe the following types of database query:

(a) summary

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(b) complex

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(c) nested

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11 Discuss the benefits and drawbacks of using an interpreter to convert a program written in a high-level language into a low-level language.

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12 A spreadsheet is to be used to store students' examination results.

Each examination is marked out of 60, with the lowest mark being 0.

Only whole marks are allowed.

Each mark is validated using this validation rule >=0 and <=60

The developer is trying to test the validation rule.

Complete the table for the **three** types of test data. For each mark the developer enters, suggest how the validation rule deals with the mark.

Type of test data	Example of mark entered	How the validation rule deals with the mark entered
Normal		
Abnormal		
Extreme		

[6]

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