* 0000800000001 *

Cambridge Assessment International Education

Cambridge International AS & A Level

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

6129827713

INFORMATION TECHNOLOGY **9626/13**

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.

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[Turn over

1 Observation is one method of collecting direct data.

Identify and describe **two** other ways of collecting direct data.

Way 1 .....

Description .....

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Way 2 .....

Description .....

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[4]

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2 Describe the use of TLS/SSL.

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3 Describe the reasoning used by an inference engine in an expert system.

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4 Describe what is meant by the malware term *trojan*.

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5 A student created a spreadsheet that requires users to enter numerical data. This data must be within a set range.

Identify and justify **three** types of test data that can be used to test this numerical data.

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6 **(a)** Give reasons why a person editing a video would use fading effects.

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(b) Give reasons why a person editing a video would use captions.

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7 A teacher is writing a program to process test marks for a class.

For marks above 70, the program will output “You have achieved a Distinction”.
For marks from 55 to 70, the program will output “You have achieved a Merit”.
For marks from 40 to 54, the program will output “You have achieved a Pass”.
For marks below 40, the program will output “You have not reached the Pass mark”.

Write a pseudocode algorithm using REPEAT...UNTIL which allows the teacher to input 20 test marks and outputs the correct message for each inputted mark.

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8 Interpreters and device drivers are types of system software.

(a) Describe the functions of device drivers.

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(b) Justify the use of an interpreter.

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9 Describe how a microprocessor-controlled car park barrier system makes use of an induction loop.

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10 A student is considering defragmenting their hard disk.

(a) Describe the benefits of defragmentation.

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(b) Describe the drawbacks of defragmentation.

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11 Evaluate the use of spreadsheets for financial modelling.

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12 Define the following types of database key fields:

(a) Composite key .....

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(b) Compound key .....

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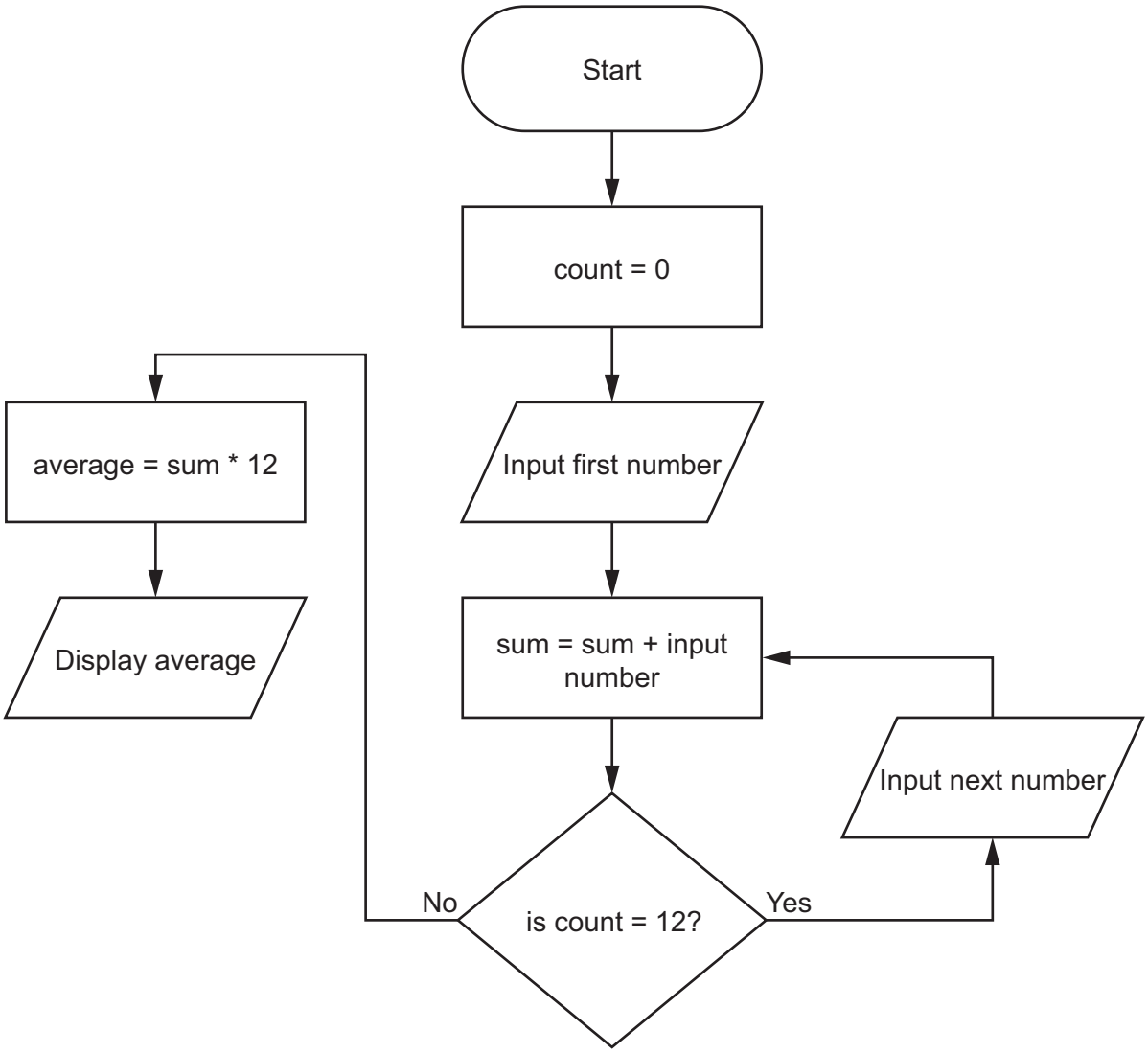
13 The average (mean) of a set of 12 numbers is calculated by:

- adding the numbers together to get a total
- dividing the total by 12.

A student has attempted to draw a flowchart of an algorithm which finds the average of 12 numbers. They have made some errors.



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Redraw the flowchart, with the errors corrected. [5]

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