



# Cambridge International AS & A Level

CANDIDATE  
NAME

CENTRE  
NUMBER

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CANDIDATE  
NUMBER

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**INFORMATION TECHNOLOGY**

**9626/12**

Paper 1 Theory

**May/June 2022**

**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 Some students have been asked by their teacher to carry out a study. They will collect data about the families living in five streets close to their school. They will carry out the study using direct data sources and will not use records from the 2020 census which are kept at the city hall.

Describe the suitability of using direct data sources rather than the census data for the study.

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- 2 Encryption has many uses, including the encryption of hard disks.

Describe hard disk encryption.

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6 Sensors are used in monitoring systems to measure physical variables. It is important that sensors are calibrated before use.

(a) Describe, in detail, these sensors and give an appropriate use for each. Each use must be different.

Humidity .....  
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Sound .....  
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[4]

(b) Explain the importance of calibration.

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(c) Describe the differences between one point calibration and two point calibration.

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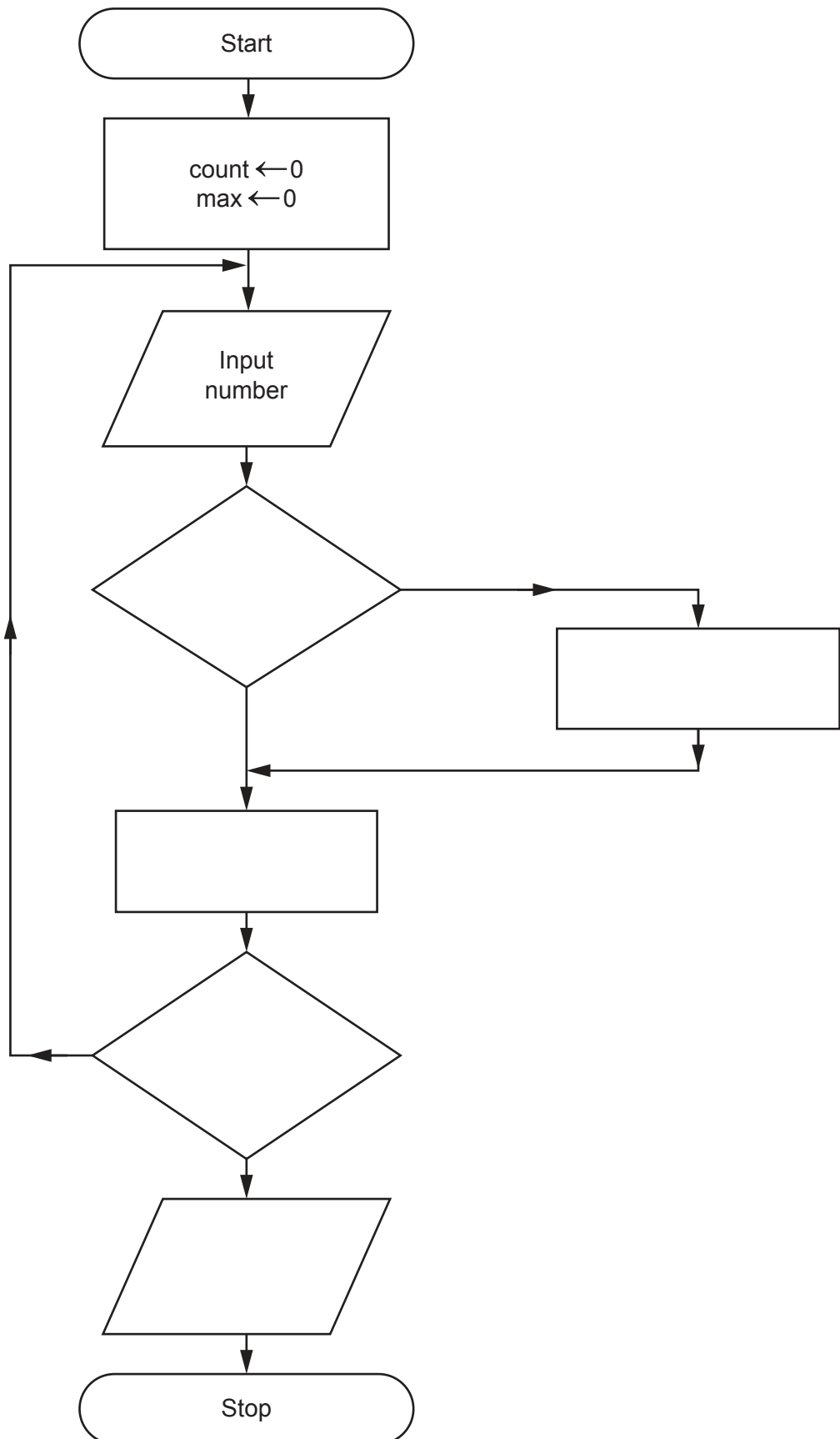
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..... [5]

7 Josefine has started to draw a flowchart which inputs 10 numbers and outputs the largest value.

Complete the flowchart by filling in the empty boxes and by placing yes and no as appropriate in the diagram.









(b) Updating a master file in a payroll system is an example of batch processing.

Discuss the advantages and disadvantages of using batch processing, compared to other types of processing, for a payroll system.

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