



Cambridge International AS & A Level

CANDIDATE
NAME

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CENTRE
NUMBER

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INFORMATION TECHNOLOGY

9626/12

Paper 1 Theory

February/March 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 A collection of data could be the following:

1989, Paolo, $\sqrt{\quad}$, ₹, ≠, OR

(a) Explain, by defining the term 'data', why this is just a collection of data and is not information.

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..... [4]

(b) Select **three** of these items of data. Explain what information each item might represent and how it could be used.

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..... [3]

2 An interpreter is a type of system software.

Describe how an interpreter operates.

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..... [4]

3 Mainframe computers are particularly suited to carrying out the transaction processing of online banks.

(a) Describe the features of a transaction processing system.

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..... [3]

- 6 A school secretary is updating a database by copying data from some hard copy records. Here are three of the records:

First_name	Family_name	Student_number	Previous_school	Date_of_birth
Jonathon	Odoki	12036	St Mary's	07/12/2004
Sven	Johansson	09132	The Grange	13/10/2007
Manjit	Sangherra	10102	Bluestars	11/03/2007

The Student_number will be stored as text, with the first two characters representing the year group the student belongs to.

The Student_number and Date_of_birth are the only data that need to be validated as they are entered. A range check, limit check or presence check would not be appropriate for validating these data.

- (a) Describe, in precise detail, **three** appropriate validation checks that could be used to validate the data. Each validation check must be different.

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10 (a) Define the following database terms.

(i) One-to-one relationship

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..... [1]

(ii) One-to-many relationship

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..... [1]

(iii) Compound key

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..... [1]

(b) Explain how a many-to-many relationship can be created in a database.

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..... [3]

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