



Cambridge International AS & A Level

CANDIDATE
NAME

CENTRE
NUMBER

--	--	--	--	--

CANDIDATE
NUMBER

--	--	--	--



INFORMATION TECHNOLOGY

9626/13

Paper 1 Theory

October/November 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.

2 A microprocessor controlled air conditioning system uses real-time processing.

Explain what is meant by real-time processing in this scenario.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... [5]

3 Back-up software and anti-virus software are both types of utilities that are often provided with operating systems.

(a) Without detailing the different methods of detection, describe the features of anti-virus software.

.....
.....
.....
.....
.....
.....
.....
.....
..... [3]

(b) Without referring to the different types of back-up, describe the features of back-up software.

.....
.....
.....
.....
.....
.....
.....
.....
..... [3]

5 A delivery company uses an expert system to help produce route schedules for its vehicles.

(a) Without describing its components, explain how an expert system would produce these schedules.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... [4]

(b) Explain what is meant by backward chaining.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... [3]

7 Describe the inputs, processing and outputs in a microprocessor controlled burglar alarm system.

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
..... [6]

11 Many companies store the personal data of their workers electronically.

(a) Describe what is meant by the term ‘personal data’.

.....
.....
.....
.....
.....
..... [2]

(b) Describe the methods that could be used to attempt to prevent unauthorised access to this personal data.

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
..... [4]

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge Assessment International Education Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cambridgeinternational.org after the live examination series.

Cambridge Assessment International Education is part of Cambridge Assessment. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate (UCLES), which is a department of the University of Cambridge.