Cambridge Assessment
International Education

Cambridge International AS & A Level

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

INFORMATION TECHNOLOGY **9626/12**

Paper 1 Theory **February/March 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 **12** pages. Any blank pages are indicated.

1 A college secretary has been given some data from a member of staff.

Chandra, Amruta, YR12538, 59, 75, 68, 04/07/2008

Explain, with examples, how these items of data can become information.

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2 Staff at a historical building are producing leaflets so that visitors do not have to be accompanied by a guide.

Visual checking is used to verify that the data is the same as the source document.

Describe, by using an example, how visual checking could still result in errors in the leaflet.

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3 Describe the following types of malware:

(a) adware

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(b) ransomware.

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4 A delivery company uses an expert system to suggest a schedule of deliveries to be followed by its drivers.

(a) Describe the advantages to the company of using an expert system for this purpose.

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(b) Describe how such an expert system would be created.

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5 Teachers at a school store records of their students and their examination scores on a computer system.

- Each examination is marked out of 120
- Each student at the school has a unique student number, such as L35725 or Z83499

The system already uses presence checks on the student number and examination scores.

Justify additional validation checks that could be used on the:

- student number
- examination scores.

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6 Describe how a local government can help reduce the digital divide in rural areas.

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7 Test scores can be used to track a student's progress over time. Describe **two** ways this can be done using a spreadsheet.

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Way 2 ....

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[4]

8   Describe the use of Internet Protocol Security (IPsec).

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9   Utility software is a type of system software designed to help optimise, manage and maintain the performance and health of computer systems.

(a) Explain how the delete utility works.

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(b) Explain why files can still be recovered even after they have been deleted.

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10 Audio editing software has many features. These can be used when editing an audio clip.

Describe the following terms when applied to audio clips:

(a) normalisation

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(b) noise reduction.

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11 A driving school is using computer simulations to improve its lessons.

Discuss the benefits and drawbacks of using simulators for this purpose.

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12 Employees log in to their company's database with a User ID and password.

A login screen is displayed. A user enters their User ID.

If employees have forgotten their password, they click on a 'Forgot Password?' button.

Draw a program flowchart to represent the following process.

- If the 'Forgot Password?' button is clicked, a message box appears and asks them to enter their User ID.
- A check will be performed to see if the system recognises the User ID.
- If the User ID is **not** recognised, an error message is displayed and the user will be returned to the start of the process.
- If the User ID is recognised, a security question is asked.
- The user's response to the security question will be checked. If the user's response is correct, then an email containing the password reminder will be sent to the user's email address.
- If an incorrect response is given, an error message will be displayed and the user will be returned to the start of the process.

Draw your program flowchart on the opposite page.

[8]

Draw your program flowchart below.

12

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