Cambridge Assessment
International Education

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Cambridge International AS & A Level

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

INFORMATION TECHNOLOGY **9626/33**

Paper 3 Advanced Theory **October/November 2024**

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.

[Turn over

1 JavaScript can manipulate and store strings in variables.

(a) Define the term string as used in JavaScript.

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.... [1]

(b) Describe how a string can be created in JavaScript.

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.... [1]

(c) A variable `text1` is used to store `Cambridge` and a variable `text2` is used to store `International Examinations` in a block of JavaScript code.

(i) Describe how the two strings can be joined together (concatenated) as `Cambridge International Examinations` and stored in a new variable called `text3` in a JavaScript statement.

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.... [2]

(ii) Describe **one** method by which the word `Examinations` can be extracted from `text3` for use in another variable.

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.... [2]

2 A new stock control system is being tested.

Explain how different types of test data are used to test this system.

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.... [6]

3 Describe what is meant by each of the following terms that refer to bitmap images.

(a) brightness

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.... [1]

(b) contrast

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.... [1]

(c) colour balance

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.... [2]

(d) highlights

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.... [2]

4 Colour management systems (CMS) are used in computer graphics.

Explain why a CMS is needed.

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.... [6]

5 The agile method of software development is to be used to create an app for smartphones.

Justify the use of the agile method of software development.

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.... [6]

6 Ultra-high definition (UHD) television systems have been developed and can be used to watch streaming videos.

(a) What is UHD television?

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(b) Describe the impact of the development of UHD television systems on the environment.

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7 System flowcharts are a visual representation of the flow of data in a system.
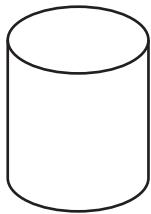
(a) State the use of each of the following symbols in a system flowchart.

(i)

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.... [1]

(ii)

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.... [1]

(b) Draw **one** other system flowchart symbol and describe how it is used.

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.... [2]

8 Data mining is used by businesses to analyse very large quantities of data.

Discuss the use of data mining by businesses.

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9 Explain the drawbacks to a business of using social media for advertising their products.

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10 (a) Describe what is meant by CGI in animation.

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.... [2]

(b) (i) Describe cel animation.

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.... [2]

(ii) Cel animation is rarely used to create animations.

Explain why computer software has replaced cel animation.

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.... [2]

11 Unauthorised access to computer files can result in the manipulation and modification of computer data.

(a) Describe the difference between data manipulation and data modification.

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.... [2]

Please turn over for Question 11(b).

(b) Evaluate the use of software methods in helping to prevent unauthorised access to computer data and files.

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