



Cambridge International AS & A Level

CANDIDATE
NAME



CENTRE
NUMBER

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CANDIDATE
NUMBER

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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.





1 JavaScript can manipulate and store strings in variables.

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

.....
.....
.....

[1]

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

.....
.....
.....

[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.

[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]

DO NOT WRITE IN THIS MARGIN





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

Explain why a CMS is needed.

[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.

[6]

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

(a) What is UHD television?

[2]

[2]





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

[4]





7 System flowcharts are a visual representation of the flow of data in a system.

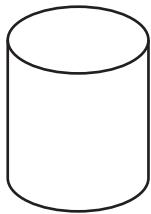
(a) State the use of each of the following symbols in a system flowchart.

(i)



[1]

(ii)



[1]

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





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

Discuss the use of data mining by businesses.

[8]





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

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

[2]





- DO NOT WRITE IN THIS MARGIN
- (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.

[8]

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