Cambridge International AS & A Level

CANDIDATE NAME	

CENTRE NUMBER		CANDIDATE NUMBER	

INFORMATION TECHNOLOGY **9626/03**

Paper 3 Advanced Theory **For examination from 2022**

SPECIMEN PAPER **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 **14** pages. Blank pages are indicated.

1 (a) A developer has been asked to create a new smartphone 'app' and is considering using the conventional 'Waterfall' method of software development.

Explain the drawbacks of using this method to develop the new 'app'.

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(b) The waterfall method is easy to use and understand.

Describe **two** other benefits of using the waterfall method to develop the new 'app'.

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2 Danial works from home providing financial services to clients. He also travels to different towns to visit his clients and uses the free, public Wi-Fi in hotels and cafes where he accesses client data stored on his own servers over the internet.

Analyse the use of free, public Wi-Fi by Danial when conducting his business.

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3 **(a)** Describe **one** way in which advertisements could be inserted into a blog.

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(b) Explain why a microblog is used when sharing ideas with others.

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4   Discuss the advantages and disadvantages of using copper cables as a data transmission medium.

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5   Describe **three** differences between a system flowchart and a data flow diagram.

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6 JavaScript code can use logical operators when manipulating data.

(a) Describe the function of a logical operator when used in JavaScript code.

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(b) (i) Describe what is meant by the term 'keyword' when creating code in JavaScript.

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(ii) Explain how an array is used to store data.

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(iii) Describe how a loop can be used to simplify JavaScript code.

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7   Discuss the advantages and disadvantages of the use of social media in health care.

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8   Describe the advantages and disadvantages of using microwaves to transmit data between buildings.

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9   A smartphone accessing an email server is an example of a client-server system.

Describe the roles of the smartphone and the email server in the client-server system.

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10 Explain the reasons why the parallel running method would be used when implementing a new computer system in a bank.

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11 A new online (web) form is to be designed to gather data from users.

Describe the features that must be considered when designing a new form.

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