Cambridge International AS & A Level

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

INFORMATION TECHNOLOGY **9626/32**

Paper 3 Advanced Theory **May/June 2021**

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 90.
- The number of marks for each question or part question is shown in brackets [ ].

This document has **16** pages. Any blank pages are indicated.

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1 Describe the limitations of using wireless access points (WAPs) to connect portable computers to a cabled network.

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2 Describe how information technology can enhance vision for visually impaired people.

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3 Ferdinand shops online using his credit card. Ferdinand has noticed that fraudulent transactions have appeared on his credit card statement.

Describe how it is possible for Ferdinand to be subjected to fraud when using his credit card for online shopping.

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4 Evaluate, by weighing up the advantages and disadvantages, the use of encryption to protect confidential data.

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5 Describe the benefits and drawbacks of using electronic funds transfer systems in eBusiness.

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6 Switches are devices used in computer networks.

Describe the role and operation of a network switch.

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7 Computer-assisted translation (CAT) can be used by companies whose products and services are available worldwide.

(a) Describe how CAT could be used by a software company creating computer games that are available in many different countries.

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(b) Describe the benefits to the company of using CAT.

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(c) Describe **one** drawback of the company relying on CAT for translations in computer games.

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8   Biometric payment systems can be used to pay for school meals. Students do not need to carry or use a payment card to buy goods but can use their fingerprints at the Point-of-Sale terminal.

   (a) Describe **three** components of a biometric payment system that might be used.

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   (b) Describe how the biometric payment system is used by students to pay for meals.

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9 A new store is being opened and a spreadsheet is being created to manage its finances and to calculate the projected profits.

(a) There are several ways of prototyping software during development.

Suggest reasons why incremental prototyping would be the most appropriate method to use.

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Test data has been created to fully test the spreadsheet.

(b) Explain why test data is being used.

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10 A regional government is planning to install broadband internet technology throughout its rural areas.

Analyse the effectiveness of using pilot implementation when installing the technology.

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11 It is sometimes possible for people to gain unauthorised access to computer rooms. A school has a computer room with a number of standalone computers.

Evaluate, by weighing up the advantages and disadvantages, methods for protecting data stored on these computers.

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12 A portrait painter has a website which he uses to display photographs of his work. The website uses thumbnail and large images to show the photographs.

Analyse the use of bitmap graphics for this purpose.

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13 Bluetooth and infrared can both be used to send data between devices.

Contrast, by describing the differences between, the use of Bluetooth and the use of infrared for transmitting data between devices.

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14 (a) Describe bit streaming.

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(b) Describe the differences between real-time bit streaming and on demand bit streaming.

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