



Cambridge International AS & A Level

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INFORMATION TECHNOLOGY

9626/03

Paper 3 Advanced Theory

For examination from 2020

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. You may use an HB pencil for any diagrams, graphs or rough working.
- 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.
- 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. Blank pages are indicated.

1 A television station makes its programmes in studios on the ground and transmits them via satellites to receivers in viewers' homes.

(a) Describe how a programme is transmitted from the station's studio to a viewer's satellite receiver.

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(b) Explain **two** advantages to the viewer of using satellites to receive television programmes.

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(c) Explain **two** disadvantages to the viewer of using satellites to receive television programmes.

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2 Anderson Chemicals have a computerised payroll system which has recently become out of date. Jasbir, a systems analyst, has been asked to update the current system and will need to research this problem.

(a) Discuss the advantages **and** disadvantages of the different methods Jasbir could use for collecting information.

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[8]

(b) After developing the new computerised payroll system Jasbir will need to create a test plan.

Describe how he would do this, including the type of testing he would carry out.

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(c) When the new computerised payroll system is implemented, perfective maintenance will be carried out.

Describe **two** other types of maintenance and suggest reasons why they would be needed in this scenario.

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(c) Explain how the bank could use encryption techniques to attempt to prevent its data from being read by unauthorised people.

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[6]

5 In computer programming, explain what is meant by the following terms.

(a) variable

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(b) iteration

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(c) loop

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6 People are spending a large amount of time using social networking sites.

Identify the positive and negative implications for society.

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7 RockIT is an international company. The senior managers are based on the same site and use face-to-face meetings to communicate with each other. The senior managers use video-conferencing to communicate with the company's other offices around the world.

(a) Describe the features of a video-conference.

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8 Shafiq has just logged on to a secure website.

(a) Describe how he knows that the website is secure.

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(b) Describe the steps that the web browser will go through to ensure that Shafiq has logged on to a secure website.

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