

Candidate Name	Centre Number	Candidate Number
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OXFORD CAMBRIDGE AND RSA EXAMINATIONS
General Certificate of Secondary Education

INFORMATION AND COMMUNICATION TECHNOLOGY

2359/02

PAPER 3 (HIGHER TIER)

Tuesday **7 JUNE 2005** Morning 1 hour 15 minutes

Candidates answer on the question paper.
 No additional materials are required.

TIME 1 hour 15 minutes

INSTRUCTIONS TO CANDIDATES

Write your name, Centre number and candidate number in the spaces at the top of this page.

Answer **all** the questions.

Write your answers, in blue or black ink, in the spaces on the question paper.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets [] at the end of each question or part question.

No marks will be awarded for using brand names of software packages or hardware.

The total number of marks for this paper is **60**.

FOR EXAMINER'S USE	
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TOTAL	

This question paper consists of 9 printed pages and 3 blank pages.

Answer **all** questions.

- 1 State **three** different methods a systems analyst might use to collect information about a system that the systems analyst is investigating.

Method 1

Method 2

Method 3[3]

- 2 A company uses batch processing to produce wage slips for its employees.

Give **two** reasons why 'real-time processing' is **not** used for this task.

Reason 1

.....

Reason 2

.....[2]

- 3 Before creating a database the file structure has to be designed.

Give **two** items that need to be included in the design of the file structure.

Item 1

.....

Item 2

.....[2]

4 Most supermarkets have Point-of-Sale (POS) terminals which use bar code readers to input data. These produce itemised bills for customers.

(a) Give **two** advantages to the customer of receiving an itemised bill.

Advantage 1

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Advantage 2

.....[2]

(b) Give **two** advantages to the supermarket of giving the customer an itemised bill.

Advantage 1

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Advantage 2

.....[2]

(c) Explain how an automatic stock control system linked to the POS terminals would work.

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.....[5]

- 5 The final stage in the systems life cycle process is evaluation. Identifying the good and bad points of the final system is one part of this evaluation stage.

Describe **two** other processes undertaken during the evaluation stage.

Process 1

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Process 2

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.....[4]

- 6 A Training Officer is to give a multi-media presentation. She has a laptop computer with a fast processor, graphics card and the appropriate software already installed.

Describe the use of **two** extra items of hardware she might use for developing and displaying the presentation.

Item 1

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Item 2

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.....[4]

7 An aid organisation wishes to keep in touch with its representatives throughout the world. As each of its representatives already has access to a computer they have decided to investigate the use of video conferencing.

(a) State **two** additional items of hardware the representatives would need for video conferencing.

Item 1

Item 2[2]

(b) (i) Give **two** advantages to the organisation of using video conferencing in this situation.

Advantage 1

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Advantage 2

.....[2]

(ii) Give **two** disadvantages to the aid worker of using video conferencing in this situation.

Disadvantage 1

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Disadvantage 2

.....[2]

8 Three methods of changing from an old system to a new one are:

- Direct changeover (Big Bang)
- Phased implementation
- Parallel running

Give **one** advantage of using each of these methods.

Direct changeover (Big Bang)

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Phased implementation

.....

Parallel running

.....[3]

9 Validation and verification are two ways of checking data entered into a computer.

Describe, using an example for each, what these two terms mean.

Validation

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Verification

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.....[6]

10 A market gardener uses a computer-controlled system to keep the humidity in a large greenhouse suitable for growing plants. The system contains these components:

- a computer
- analogue to digital converters (ADC's)
- humidity sensors
- actuators
- humidifiers (devices which spray water into the atmosphere to keep the air humid)
- motors for the windows

Describe how these components form a control-feedback loop in this closed system.

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.....[6]

11 Beth works on a computer in a government department. She needs to archive and backup her data.

Describe the differences between the terms archive and backup and explain why Beth needs to do both.

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[5]

12 A large company is to install a star network.

Discuss the advantages and disadvantages of a star network compared to other network topologies.

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[5]

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