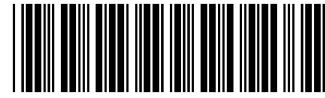


UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

INFORMATION TECHNOLOGY

Paper 2



0418/02

October/November 2004

1 hour 15 minutes

Candidates answer on the Question Paper.
No Additional Materials are required.

Candidate
Name

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Centre
Number

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Candidate
Number

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READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name on all the work you hand in.
Write in dark blue or black pen in the spaces provided on the Question Paper.
You may use a soft pencil for any diagrams, graphs, music or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **all** questions.

At the end of the examination, fasten all your work securely together.

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

DO NOT WRITE IN THE BARCODE.

DO NOT WRITE IN THE GREY AREAS BETWEEN THE PAGES.

If you have been given a label, look at the details. If any details are incorrect or missing, please fill in your correct details in the space given on this page.

Stick your personal label here, if provided.

For Examiner's Use

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This document consists of **11** printed pages and **1** blank page.



1 Ring **two** output devices which would be used to provide high quality printouts.

- | | | | |
|------------------------|---------------------------|------------------------|-----|
| Deskjet printer | Dot matrix printer | Graphics tablet | |
| Laser printer | Monitor | Speaker | [2] |

2 Ring **two** items which **must** be present in an IT system for you to take part in an electronic video conference using a wide area network.

- | | | | |
|---------------------|--------------------------|------------------------|-----|
| CD ROM Drive | Floppy disk drive | Graphics tablet | |
| Microphone | Midi | Modem | [2] |

3 Complete each sentence below using one item from the list.

- | | | |
|--------------------------|---------------------------------|---------------------|
| a bar code reader | a data logger | a simulation |
| MICR | a magnetic stripe reader | DTP |
| OCR | validation | verification |

Recording the weather conditions in a remote area would be done using

Data from the back of a cheque card is input using

Airline pilots are trained using

Inputting text directly from a document is done by using[4]

4 Tick **two** benefits of using computers in hospitals.

Patients are always cured.	
Patients' medication can be controlled automatically.	
Doctors can find patients' records more quickly.	
Patients' beds are more comfortable.	
Fewer doctors are needed.	
Doctors don't have to be paid as much.	

[2]

5 Systems analysts have been employed to computerise a car dealer's record keeping. They will be creating one database of cars for sale and one of potential buyers.

(a) Ring **two** ways that the system could be implemented.

Create screen layouts

Design the file structure

Direct changeover

Interview salesmen

Parallel running

Specify the hardware [2]

(b) Give **three** reasons why the car dealer would want the record keeping system computerised.

1

.....

2

.....

3

.....[3]

(c) Circle the field which would be the best choice as the key field for the car database.

Colour

Make

Maximum speed

Registration number

[1]

(d) Here is part of the database which was created.

Make	Model	Registration number	Colour	Number of doors	Maximum Speed (Km/h)
Ford	Mondeo	KYP 2987	Red	4	182
Opel	Vectra	TRS 3421	Blue	5	178
Renault	Clio	KUP 2367	Grey	4	156

(i) Name **two** fields which could be validated using a range check.

- 1
-
- 2
-[2]

(ii) Which **two** fields would be most suited to using drop down list boxes.

- 1
- 2[2]

6 Tick the two features of a CAD system which would not be found in standard office software.

3D option	
Save	
Print preview	
Enlarge	
Crop image	
Automatic dimensioning	

[2]

7 Describe the inputs, processing and outputs of a computer controlled central heating system.

Inputs

.....

.....

Processing

.....

.....

.....

.....

Outputs

.....

.....[5]

8 Tick **two** applications which use batch processing.

Reserving a hotel room using an on-line booking system.	<input type="checkbox"/>
Producing electricity bills.	<input type="checkbox"/>
Computer controlled greenhouses.	<input type="checkbox"/>
Withdrawing money from an ATM.	<input type="checkbox"/>
Reading data from bank cheques.	<input type="checkbox"/>
A computerised burglar alarm system.	<input type="checkbox"/>

[2]

9 Computers are often used to create financial models.

(a) One of the features which make spreadsheets suitable for this is the ability to handle both text and numbers. Name **three** other features which make them suitable for this purpose.

- 1
-
- 2
-
- 3
-[3]

(b) Apart from financial models, there are other uses for computer modelling.

(i) Give **three** examples of such uses.

- 1
-
- 2
-
- 3
-[3]

(ii) Give **two** reasons, other than cost, why models are used instead of the real thing.

- 1
-
- 2
-[2]

10 Computers are now widely used in supermarkets.

(a) State the input device which is used to enter data about an item when it is purchased.

.....[1]

(b) Describe how the supermarket's computer checks that the data has been entered correctly.

.....
.....
.....[2]

(c) The supermarket computer is able to automatically re-order items when the supermarket is running low on stock. Describe this process, using the sample databases below.

This is part of the database of items in the supermarket.

Product	Number in Stock	Re-order level	Re-order quantity	Supplier code
Kollege Corn Flakes	152	200	1000	L23456
Crikey Orange Juice	217	120	400	G12345
Nice Café Coffee	321	200	500	L23456

This is part of the suppliers' database.

Supplier code	Name of supplier	Address of supplier	Supplier phone number
L23456	Lu Chen	14, Kinshasa Highway, Box 41324	72 34 45 67
G12345	Hameen	2356, Avenue Rios, Box 23456	24 17 39 81

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....[5]

11 Ali and Lee work in different offices of a multi-national company. They use e-mail to send messages to each other.

(a) Describe the computer processing involved after a message has been written on Ali's computer and before Lee opens the e-mail.

.....
.....
.....
.....
.....
.....[3]

(b) Describe **two** advantages and **two** disadvantages of using electronic mail rather than using ordinary letter post.

Advantage 1
.....
Advantage 2
.....
Disadvantage 1
.....
Disadvantage 2
.....[4]

12 When customers log in to a home banking service on the Internet they are asked to enter two items of information.

(a) Name these two items.

1

2[2]

(b) Using home banking customers can see their account balance and stop a cheque. Name **three** other services which are available to them.

1

2

3[3]

(c) Name **one** service which is **not** available to customers using home banking.

.....[1]

(d) Describe **two** advantages and **two** disadvantages of using home banking rather than visiting a bank.

Advantage 1

.....

Advantage 2

.....

Disadvantage 1

.....

Disadvantage 2

.....[4]

13 (a) Give **one** example of an application which uses an expert system.

.....
.....[1]

(b) Describe how the expert system will be created.

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....[4]

14 Robots are commonly used in the car manufacturing industry instead of employing people.

(a) One advantage of using a robot is that human errors are eliminated. Give **two** reasons why errors still occur.

1
.....
2
.....[2]

(b) Give **two** other advantages of using a robot to build cars.

1
.....
2
.....[2]

15 A large company has decided that it needs to computerise its staff records and has employed a systems analyst to help. Her first task will be to analyse the existing system by collecting information about it.

(a) Name three methods of collecting information that she will use.

1

.....

2

.....

3

.....[3]

(b) Describe three rules she could follow to ensure that staff data will be protected and remain confidential.

1

.....

2

.....

3

.....[3]

(c) Next she will design a database to store the records, using the existing hardware and software. Name three items about the database, other than security-related items, that she will need to design.

1

.....

2

.....

3

.....[3]

