

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

INFORMATION TECHNOLOGY

Paper 1



0418/01

May/June 2005

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 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.

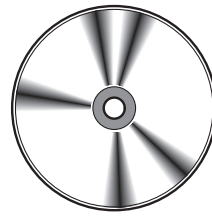
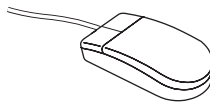
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This document consists of **10** printed pages and **2** blank pages.



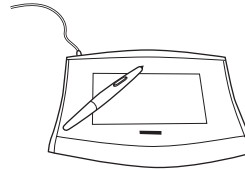
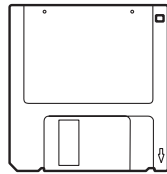
1 Name the objects A, B, C, D and E using the words from the list.



A

B

C



D

E

- | | | | |
|-----------------|---------------|-----------------|------------------|
| Bar code reader | CD Rom | Deskjet printer | Desktop computer |
| Floppy disc | Graph plotter | Graphics tablet | Laptop computer |
| Laser printer | Mouse | Scanner | Tracker ball |

[5]

2 Ring **two** items which are used to store data on a computer.

- | | | |
|-----------------|-------------|--------------------|
| Bar code reader | Floppy disc | Graph plotter |
| Magnetic tape | Robot arm | Temperature sensor |

[2]

3 Tick whether the following statements are TRUE or FALSE.

	TRUE ✓	FALSE ✓
Viruses can be transmitted by opening e-mail attachments		
MICR is used to read data from bar codes		
Hard discs can store more data than DVDs		
Regular use of computers can cause coughs and colds		

[4]

4 Give **three** health problems which can be caused by the regular use of computers.

- 1
- 2
- 3[3]

5 A teacher wants to use mailmerge to create a standard letter to send to parents. Circle the **two** types of application software which would be best to use.

- | | | |
|------------------|----------------------|---------------------------|
| Control | Data handling | Desktop publishing |
| Measuring | Modelling | Word processing |
- [2]

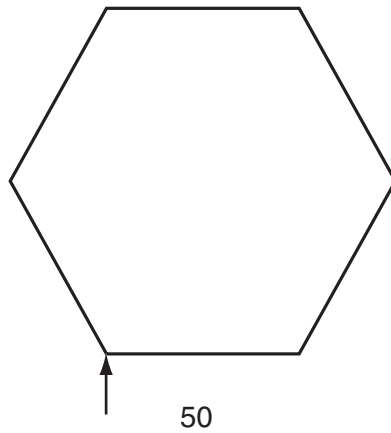
6 Students can use sensors in science lessons to measure the temperature of a liquid. Give **three** reasons why it is better to use a computer and sensors rather than manually taking the temperature readings.

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

7 A floor turtle can use the following instructions:

INSTRUCTION	MEANING
FORWARD n	Move n units forward
BACKWARD n	Move n units backward
LEFT t	Turn left t degrees
RIGHT t	Turn right t degrees
PENUP	Lift the pen
PENDOWN	Lower the pen
REPEAT n	Repeat the following instructions n times
END REPEAT	Finish the REPEAT loop

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Complete the set of instructions to draw this shape by filling in the blank lines.

PEN DOWN

..... 90

REPEAT

FORWARD

..... 60

.....

[5]

8 The table shows part of a spreadsheet file.

	A	B	C	D	E
1	Tuck Shop				
2	Item	Cost price	Selling price	Profit per item	Number in stock
3	Mars Bar	0.40	0.45	0.05	176
4	Twix	0.38	0.44	0.06	135
5	M&Ms	0.65	0.78	0.13	124
6	Bounty	0.42	0.51	0.09	45

- (a) Write down the cell reference of **one** cell containing numeric data.
.....[1]
- (b) State **one** cell reference that should include a formula.
.....[1]
- (c) How many rows are shown in the spreadsheet?
.....[1]
- (d) Give a cell reference for a cell that should be formatted as currency.
.....[1]
- (e) Give the cell reference that contains 124.
.....[1]

9 A school library uses databases. Give **three** ways databases can be used in school libraries.

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

10 An automatic washing machine is controlled by a microprocessor.

(a) Name **three** sensors which would have to be used in the machine.

- 1
- 2
- 3[3]

(b) Choose **one** of your answers. Write down what data would be input to the microprocessor. Describe how the microprocessor would use this data to control the washing machine.

-
-
-
-
-
-
-[3]

11 The science department in a school is going to computerise its stock records. It will use a database to store the information.

(a) Give **three** advantages to the department of a computer system compared to the manual system.

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

(b) Here are examples of records from the suggested database.

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Description of item (in words)	Code (4 digits)	Quantity in stock	Need re-ordering? (Y/N)	Name of supplier	Telephone number of supplier
Test tube	1023	45	Y	E Jones & Co	027 7891
Spatula	1036	67	N	B Sidhu	020 6357

As the data is entered it will need to be verified. Give **two** ways in which the data could be verified.

- 1
-
- 2
-[2]

(c) The data will also need to be validated. Using fields from the database as examples, describe **two** validation checks which could be performed on the data.

- 1
-
-
-
- 2
-
-
-[4]

(d) For each of these fields, choose from the list below the data type which would be most suitable.

- Quantity in stock.....
- Need re-ordering? (Y/N)
- Name of supplier.....
- Telephone number of supplier.....

Text/alphanumeric Boolean/logical numeric

[4]

12 Pupils want to produce a multi-media presentation to advertise their school. They prefer to do this rather than use a desktop published brochure.

(a) Name **two** forms of data which can be used in a presentation but cannot be used in a DTP document.

1

2[2]

(b) The pupils want to record themselves speaking. Their voices will be added to the presentation. Name **two** devices which their computer will need to do this.

1

2[2]

(c) When they have completed their presentation they will want to make a backup. Give **two** reasons why they feel it is necessary to make a backup.

1

2[2]

13 A teacher is organising a school sports day. Parents will be invited to see their children take part in a number of athletic competitions. The school will use a computer to help organise the day. Name **two** types of software which could be used. For each type of software write down the way in which it could be used.

Software 1

.....

Way 1

.....

Software 2

.....

Way 2

.....[4]

- 14 (a) Name an item of hardware that a home computer must have before it can be connected using a telephone line to the Internet. Give a reason why it is needed.

Hardware.....

Reason.....

.....[2]

- (b) Give **two** disadvantages of using the Internet in the home.

1

.....

2

.....[2]

- 15 A school is arranging a trip to Disneyland Paris. Not all pupils are being allowed to go. It is using a database to keep a record of which pupils are going and how much they have paid. Describe **three** ways in which personal data held on computers can be misused. For each way describe a method of preventing it.

Misuse 1

.....

Prevention.....

.....

Misuse 2

.....

Prevention.....

.....

Misuse 3

.....

Prevention.....

.....[6]

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