Centre Number	Candidate Number	Name

CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

INFORMATION TECHNOLOGY   **0418/01**

Paper 1

May/June 2003

1 hour 15 minutes

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

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.

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 at the top of this page.

Stick your personal label here, if provided.

For Examiner's Use

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

A

B
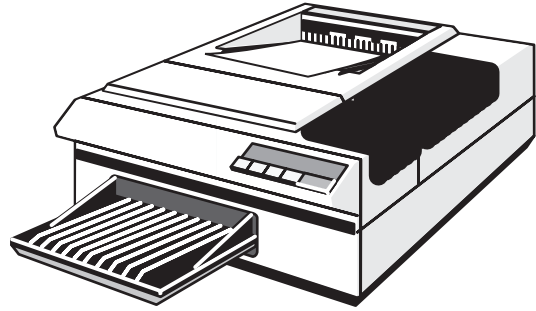
C
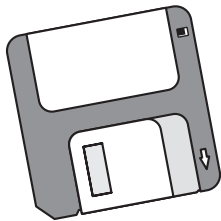
D
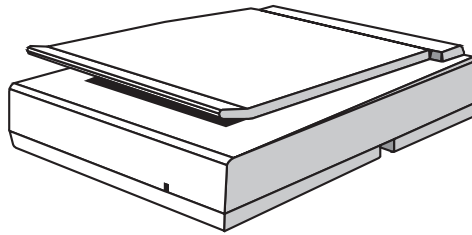
E

Bar Code Reader	CD Writer	Flatbed scanner	Floppy Disc
Graph Plotter	Joystick	Laptop computer	Microphone
Mouse	Printer	Sensor	Tracker Ball

A .... B ....

C .... D ....

E .... **[5]**

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

Keyboard	Monitor	Printer
Robot arm	Scanner	Speaker

[2]

3 Tick **two** changes which have happened in supermarkets due to the introduction of computers.

You can get an itemised receipt.	
Shopping is a lot quicker.	
You can pay by credit card.	
Supermarkets don't run out of stock so often.	
There are a lot more shop assistants.	
Supermarkets are open for longer.	

[2]

4 Write down **two** advantages to a librarian of using a computer.

1 ....

....

2 ....

....[2]

5 Write down **two** differences between sending a message by post and sending a message by e-mail.

1 ....

....

2 ....

....[2]

[Turn over

6 A floor turtle can use the following instructions.

INSTRUCTION	MEANING
Forward n	Move *n* mm forward
Backward n	Move *n* mm 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

25

Start
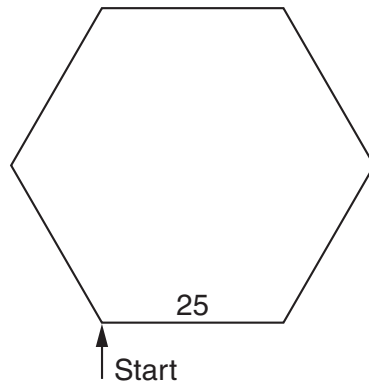
Write down a set of instructions to draw this hexagon of side 25 mm.

PENDOWN

_____ 90

REPEAT ____

_____

_____ 60

_____

[5]

7 A spreadsheet is being designed to contain data about a tuck shop.

The data to be stored is the item name, cost price, selling price, profit and number sold for each item. Profit = Selling price – Cost price. The Total profit per item = Profit x Number Sold.

	A	B	C	D	E	F
1	Item Name	Cost price	Selling price	Profit	Number sold	Total profit per item
2						
3						

(a) Write down **one** cell apart from those in row 1 which would store text.

....

(b) Write down **one** cell where the data would be numeric.

....

(c) Write down **one** cell which would contain a formula.

....

(d) Write down a formula to work out the total profit per item.

....[4]

8 A school office uses a computer to input data from class registers and at the end of each week the number of absences is calculated and output for each pupil. Give **one** input device and **one** output device which the office would need to use.

Input device ....

Output device ....[2]

9 A science experiment is being carried out to measure the cooling rate of a liquid. Write down **two** reasons why a computer should be used rather than manual methods.

1 ....

....

2 ....

....[2]

[Turn over

10 A student in a school has nearly completed his History coursework. He has done it all on computer. Write down **two** ways he could use to prevent another student from copying his work.

1 ....

....

2 ....

....[2]

11 (a) A computer is used to help organise a school fete. Name two **types** of software applications (**not** software names) which could be used.

1 ....

2 ....[2]

(b) For each type of software write down the way in which they could be used.

1 ....

....

2 ....

....[2]

12 A video shop is going to use a computer to input all the details of its members and its videos. Tick **one** item of hardware and **one** item of software that are required to do this.

	Hardware	Software
Sensor		
Bar code reader		
Database		
Desk top publisher		
Graph plotter		
Control software		

[2]

13 Write down **two** reasons why some situations must be modelled using a computer.

1 ....

....

2 ....

....[2]

14 State **two** ways of preventing your computer from getting a virus.

1 ....

....

2 ....

....[2]

15 Many people now use their computers to do their shopping on-line. State **two** disadvantages of doing this.

1 ....

....

2 ....

....[2]

16 A school weather station is to be computerised.

(a) List **three** sensors which must be used in such a weather station.

1 ....

2 ....

3 ....[3]

(b) Give **two** advantages of using a computer to collect the data rather than having it done by humans.

1 ....

....

2 ....

....[2]

[Turn over

17 A school's website contains details of all homework set by teachers. Students can use their computers at home to do their homework and post their answers back to the school using e-mail.

    (a) Describe **one** advantage and **one** disadvantage for students using this method.

       Advantage ....

       ....

       Disadvantage ....

       ....[2]

    (b) Describe **two** problems which might arise from the student using the Internet at home.

       1 ....

       ....

       2 ....

       ....[2]

18 The school library is to be computerised. The librarian will type in all the data about the books in the library. He will be typing in data for long periods. Describe **two** potential health problems which he could suffer and suggest how these problems could be prevented.

Health Problem 1 ....

....

Prevention 1 ....

....

Health Problem 2 ....

....

Prevention 2 ....

....[4]

19 A student needs to find some information about famous explorers. Describe **two** advantages of using a CD ROM encyclopaedia rather than the Internet to get this information.

1 ....

....

2 ....

....[2]

20 A teacher wishes to keep all her students' marks on a computer database. She will store the information using several fields. Some data types are written below. Write down the name of a suitable field for each type of data.

Text ....

Numeric ....

Boolean/logical ....

Date ....[4]

21 **(a)** Describe **three** ways in which computers containing personal data can be misused.

1 ....

....

2 ....

....

3 ....

....[3]

(b) For each of your answers above, explain a method for preventing it.

1 ....

....

2 ....

....

3 ....

....[3]

[Turn over

22 Describe some of the issues surrounding the increased use of computers for home banking.

....

....

....

....

....

....

....

....[4]

23 A school has been given some money to buy computers. It can now buy enough computers for every student. Discuss the advantages and disadvantages of having laptop computers or extra computer rooms connected to the network.

....

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....

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....[6]

24 A house has a burglar alarm system. Describe the hardware and processing involved in such a system.

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....

....

....

....[5]

12

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