Centre Number	Candidate Number	Name

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

INFORMATION TECHNOLOGY
Paper 1

0418/01
October/November 2004

1 hour 15 minutes

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

Candidate Name	

Centre Number		Candidate Number	

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.

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This document consists of **12** printed pages.

UNIVERSITY *of* CAMBRIDGE
International Examinations

[Turn over

1 Name the objects **A**, **B**, **C** and **D** using the words from the list.
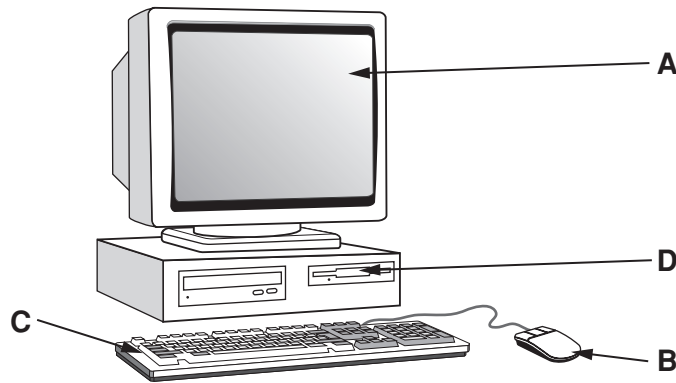
Floppy disc drive	**Joystick**	**Keyboard**
Midi interface	**Monitor**	**Mouse**
Plotter	**Printer**	**Scanner**

A .... **B** ....

C .... **D** ....[4]

2 Ring **two** output devices.

Keyboard	**Monitor**	**Mouse**	
Plotter	**Scanner**	**Sensor**	[2]

3 Tick **two** ways of preventing health problems caused by continuous use of computers.

Fit an anti-glare screen.	
Use a joystick instead of a mouse.	
Position your chair so that you are looking up at the screen.	
Work without a break.	
Drink plenty of fluids.	
Use a wrist rest.	

[2]

4 Tick the box which best describes each of the following items.

	Hardware	Software
Word processor		
Video camera		
Scanner		
Web page design program		

[4]

5 A computer in a greenhouse causes shutters to open when it gets hot and closes them when it is cooler. It also keeps a record of the temperature throughout the day. Circle the **two** types of application software which are being used.

Control	**Data Handling**	**Desktop publishing**
Measuring	**Modelling**	**Word processing**

[2]

6 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
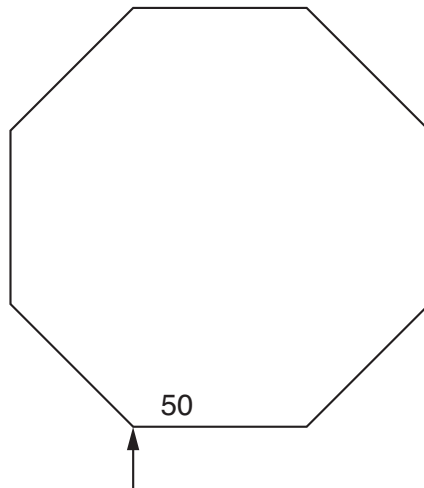
Complete the set of instructions to draw this shape by filling in the blank lines.

PENDOWN

_____ 90

REPEAT _____

FORWARD _____

_____ 45

_____

[5]

7 This table shows part of a database. In the table below it, tick whether the statements are TRUE or FALSE.

Make	Model	Weight (g)	Talk time (min)
Nokia	3310	113	255
Ericsson	A2618	140	240
Siemens	C45	107	300
Nokia	7110	141	225
Motorola	T250	102	210

	TRUE ✔	FALSE ✔
The column headed **Make** is a record.		
There are five records.		
Model is a field name.		
The database has been sorted by **Weight**		

[4]

8 A Biology class is going to do a study to see whether the local factory is polluting the local river. Students will measure the pollution by using sensors and recording the results on computer.

(a) Name **two** sensors they should use

1 ....

2 ....[2]

(b) Why is the computer unable to read the data directly from the sensors?

....[1]

(c) What device is needed to enable it to do so?

....[1]

(d) Give **two** reasons why computers are used rather than manual methods.

1 ....

....

2 ....

....[2]

(e) Name a type of software which would be used to store the results.

....[1]

(f) They will write a report including graphs which will be printed out. Name a type of software which would be used to produce this report.

....[1]

(g) Describe the steps required to produce the report.

....

....

....

....

....

....

....

....[3]

9 Describe **two** methods of preventing viruses other than by using virus protection software.

1 ....

....

2 ....

....[2]

10 A school has recently bought some laptop computers that can be used individually or connected to the network.

(a) Describe **two** advantages of connecting the laptops to the network.

1 ....

....

2 ....

....[2]

(b) Describe **two** disadvantages of connecting the laptops to the network.

1 ....

....

2 ....

....[2]

11 Many teachers are using presentation software to illustrate their lessons.

(a) Describe **two** features, other than text, which can be found on a slide in a presentation.

1 ....

....

2 ....

....[2]

(b) Teachers should always make a backup of their presentation.

(i) Describe what is meant by backup.

....

....

....[2]

(ii) Describe why backups are necessary.

....

....

....[2]

12 A school has just bought some learning materials which can be used by pupils both in the classroom and at home. They are available on a CD ROM or on the Internet.

(a) Discuss the advantages and disadvantages of using the CD ROM version compared with the Internet.

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....

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....

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....[4]

(b) Students save and carry their work from school on a floppy disc. Describe the problems this may cause and suggest ways of preventing or overcoming these problems.

....

....

....

....

....

....

....

....[4]

13 A deputy head in a school keeps a spreadsheet of pupil data on his laptop showing the progress of pupils in the three main subjects.
Below is a table which shows part of this spreadsheet.

	A	B	C	D	E	F	G	H
1	Second name	First name	Gender	English	Maths	Science	Average	
2								
3	Allen	Jeffrey	M	72	71	52	65	
4	Bi	Sabina	F	53	80	53	62	
5	Johal	Jatinder	M	72	61	68	67	
6	Ke Wong	Su	F	54	81	78	71	
7	McDonald	Calum	M	59	67	63	63	
8	Mohammed	Ali	M	71	60	82	71	
9	O'Neill	Michelle	F	50	49	45	48	
10	Rowlands	Jean	F	89	91	96	92	
11								

(a) Name the column which this spreadsheet has been sorted on.

....[1]

(b) Write down the formula which is in cell G4.

....[1]

(c) If all the data were now sorted on column G, in ascending order, write down the name of the student who would be at the top of the list.

....[1]

(d) The students do not want others to see their exam scores. Suggest **two** ways that the deputy head could prevent this from happening.

1 ....

....

2 ....

....[2]

(e) The deputy head wanted to compare the average exam score of the three subjects so he produced the following graph using the spreadsheet software. Describe the steps he had to go through to produce it.

....

....

....

....

....

....

....

....[5]

(f) The deputy head thinks that one of the reasons why Maths and Science teachers are getting better results is that they use computers in their lessons a lot and English teachers do not. Give **three** reasons why computers help students to improve.

1 ....

....

2 ....

....

3 ....

....[3]

14 A school has decided to convert one of its science laboratories into a computer room.

(a) Compare the advantages and disadvantages of doing this. Include in your answer any safety issues which may arise during the conversion.

....

....

....

....

....

....

....

....

....[5]

(b) The science department will use one of the computers to keep all their stock records on a database. Give **two** advantages of keeping information in a computer database rather than on paper.

1 ....

....

2 ....

....[2]

15 Many credit card customers are concerned that their data is held on computer. Describe **three** ways in which personal data held on computers can be misused. For each way explain a method for preventing it.

1 ....

....

Prevention ....

....

2 ....

....

Prevention ....

....

3 ....

....

Prevention ....

....[6]