

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS  
International General Certificate of Secondary Education

**INFORMATION TECHNOLOGY**

Paper 1



**0418/01**

October/November 2005

**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.

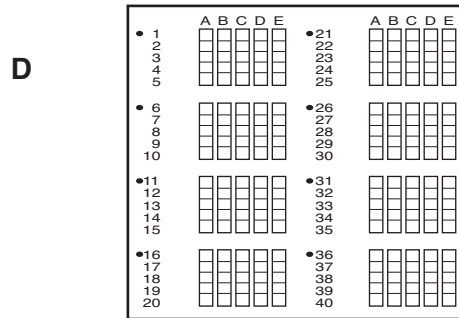
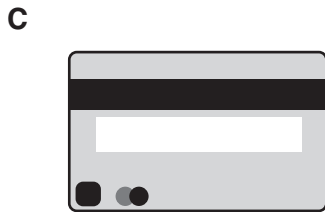
**For Examiner's Use**

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



1 Name the input devices which would read the information from objects A, B, C and D using the words from the list.



bar code reader

digital camera

graph plotter

graphics tablet

keyboard

magnetic ink reader

magnetic stripe reader

optical character reader

optical mark reader

**A** .....

**B** .....

**C** .....

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

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

Keyboard

Light pen

Monitor

Mouse

Printer

Sensor

[2]

- 3 Complete this list by drawing lines on the diagram to match each piece of software to its use. The first has been done for you.

Software	Use
<b>Control program</b>	<b>producing a slide show</b>
<b>Spreadsheet</b>	<b>recording the temperature of a cooling liquid</b>
<b>Database</b>	<b>keeping track of personal finances</b>
<b>Multimedia presentation</b>	<b>storing information about pupils</b>
<b>Measuring program</b>	<b>burglar alarm system</b>

[4]

- 4 Tick whether the following statements are TRUE or FALSE.

	TRUE ✓	FALSE ✓
A speaker is an Input Device		
A data file is made up of records		
DTP is used to create magazines		
Regular use of computers can cause RSI		

[4]

- 5 Tick the box which best describes each of the following items.

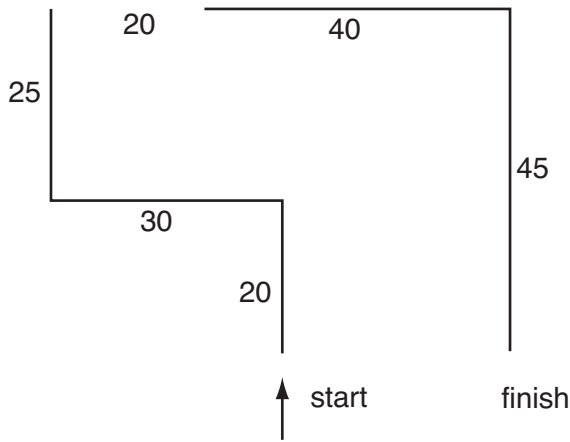
	Hardware	Software
Word processor		
Digital camera		
Printer		
Hard Disc		

[4]

6 A floor turtle can use the following instructions:

For  
Examiner's  
Use

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



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

PEN DOWN

FORWARD 20

LEFT 90

- .....
- .....
- .....
- .....
- .....
- .....
- .....
- .....
- .....
- .....
- .....

[5]

7 A number of schools in a big town have Local Area Networks /LANs in their buildings. Each pupil in a school using a LAN can access the same software and can save their work.

(a) Give **two** ways that pupils can prevent the work they save from being copied by other pupils.

1 .....

.....

2 .....

.....[2]

(b) The schools want to connect their LANs into a large Wide Area Network. They will probably use a modem to do this.

Explain why this device is needed.

.....

.....

.....

.....[2]

(c) When the WAN is set up the schools' pupils will be able to communicate with each other using a number of ways. Give **two** examples of these ways of communicating.

1 .....

.....

2 .....

.....[2]

(d) The headteachers of the schools will want to send confidential data to each other. Identify a method which will prevent hackers from understanding the data.

.....

.....[1]

- 8 Other than text and images name **three** IT features which can be inserted into a web page.

1 .....

2 .....

3 .....[3]

- 9 Below is a spreadsheet that Ali uses to keep a record of his daily spending. Each week he gets 5 dollars to spend. Each day he uses the money to buy one item. The spreadsheet tells him how much he has spent and how much money he has left.

	A	B	C	D
1	<b>Personal finance</b>			
2	<b>Day</b>	<b>Money at start of day</b>	<b>Cost</b>	<b>Money at end of day</b>
3	Monday	5.00	0.95	4.05
4	Tuesday	4.05	1.10	2.95
5	Wednesday	2.95	0.75	2.20
6	Thursday	2.20	1.25	0.95
7	Friday	0.95	0.85	0.10

- (a) Which cell contains 0.75?

.....

- (b) Write down **one** cell containing a label.

.....

- (c) Write down the formula which should go in cell D3.

.....

- (d) Write down a formula to work out the total money spent in the week.

.....

[4]

10 The school library is going to be fitted with a new computer system. The librarian is concerned about safety, viruses and the misuse of the Internet.

(a) Name **two** safety problems which might occur and for each describe a method of preventing it.

Safety Problem 1 .....

.....

Prevention 1 .....

.....

Safety Problem 2.....

.....

Prevention 2 .....

.....[4]

(b) The new system is going to have access to the Internet. The librarian feels that viruses may get into the system. She will use virus scanning software every day. Identify **three** other methods of preventing viruses from getting into a computer system.

1 .....

.....

2 .....

.....

3 .....

.....[3]

(c) If hackers get into the system they may be able to misuse the data. Describe what is meant by hacking.

.....

.....

.....

.....

.....

.....[3]





- 11 Here is part of a database of pupils born between 1st September 1989 and 31st August 1990. The date of birth is stored in the format – number of day/number of month/number of year. This is sometimes written as dd/mm/yy. The database shows the number of IGCSEs each pupil is taking next summer. No pupil is allowed to take more than 9 IGCSEs. Some of the data has been entered incorrectly.

Name of pupil	Date of Birth	Gender	Total Number of IGCSEs
Bi, Shanaz	06/05/90	F	7
Dixon, Paul	04/11/89	M	10
Francis, Carla	30/10/89	F	9
George, Moira	01/05/90	F	6
Hayer, Tony	15/12/89	X	5
Hussain, Parvez	18/09/88	M	8
Jandhu, Kulvinder	15/02/90	F	6
Minh, Li Ho	16/07/90	M	7

- (a) For each of these fields write down the name of the pupil whose data has been entered incorrectly.

(i) Date of birth

.....

(ii) Gender

.....

(iii) Total number of IGCSEs

.....[3]

- (b) The school secretaries who typed in the original data had verified the data to make sure they typed it in correctly. Identify **two** methods of verification they may have used.

1 .....

.....

2 .....

.....[2]

(c) For each field identify a validation check which would have prevented these errors.

(i) Date of birth

.....  
.....

(ii) Gender

.....  
.....

(iii) Total number of IGCSEs

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

12 (a) Describe a situation where computer modelling is used.

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

(b) Give **two** reasons why a situation is modelled before the real thing is used.

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

13 A geography class is going to set up a computerised weather station. They will need to use sensors to measure the weather.

(a) Name **three** sensors they should use.

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

(b) Give **two** reasons why computers are used rather than collecting the data manually.

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

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

- .....[1]

(d) The students want to produce a weekly newsletter on paper containing the weather data and graphs for the previous week. List the steps required to produce the newsletter.

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

14 A meal is to be cooked using a microprocessor controlled oven.

(a) Describe how the temperature and time are set.

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

(b) Describe the processing which occurs after the temperature and time are set.

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

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