



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS  
International General Certificate of Secondary Education

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**INFORMATION TECHNOLOGY**

**0418/01**

Paper 1

**May/June 2008**

**2 hours**

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.

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.

**For Examiner's Use**

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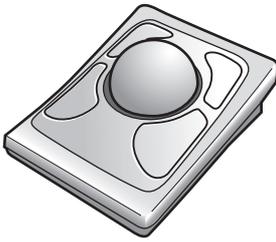
This document consists of **18** printed pages and **2** blank pages.



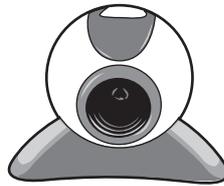
1 Name the devices **A**, **B**, **C**, **D** and **E** using the words from the list.

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**A**



**B**



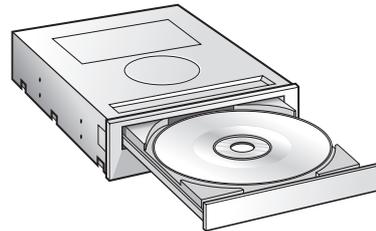
**C**



**D**



**E**



Digital camera

DVD drive

Joystick

Keyboard

Light pen

Magnetic stripe  
reader

Memory stick

Microphone

MICR

Remote control

Trackerball

Web cam

A .....

B .....

C .....

D .....

E .....

[5]

2 Ring **two** items which are output devices.

Bar code reader

Buzzer

Memory stick

Motor

Mouse

Zip disc drive

[2]

3 Tick **true** or **false** next to each of these statements.

	True	False
Presentation software would be used to process measuring data		
Database software would be used to store payroll records		
An Optical Character Reader is used to read information from bank cheques		
DVDs can store more information than CDs		
Speakers are used to input information to a multimedia presentation		

[5]

4 Complete each sentence below using **one** item from the list.

**a bank cheque**

**a CD ROM**

**a floppy disc**

**a keyboard**

**a magnetic stripe**

**a utility bill**

**a school register**

**a dot matrix printer**

**a graph plotter**

(a) Text is typed into a word processor using .....

(b) Optically read marks are used to record information on .....

(c) A very small file which needed to be moved from one computer to another for editing would be stored on .....

(d) Very large printouts would be obtained using .....

[4]

5 Copyright law applies whenever you buy software. Give **three** actions that would break copyright law.

*For  
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Use*

1 .....

.....

2 .....

.....

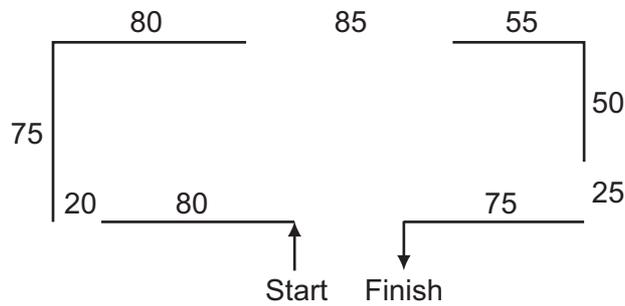
3 .....

..... [3]

6 A floor turtle can use the following instructions:

For  
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Use

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



Complete the set of instructions to draw these shapes by filling in the blank lines.

PEN DOWN .....

LEFT 90 .....

FORWARD 80 .....

.....

.....

.....

.....

.....

.....

[5]

7 RAM and ROM are types of storage.

(a) Describe the differences between RAM and ROM.

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

(b) Explain what RAM and ROM are used for.

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

8 The use of computers can lead to safety problems. Describe **two** safety problems and how they could be prevented.

Problem 1 .....

.....

Prevention .....

.....

Problem 2 .....

.....

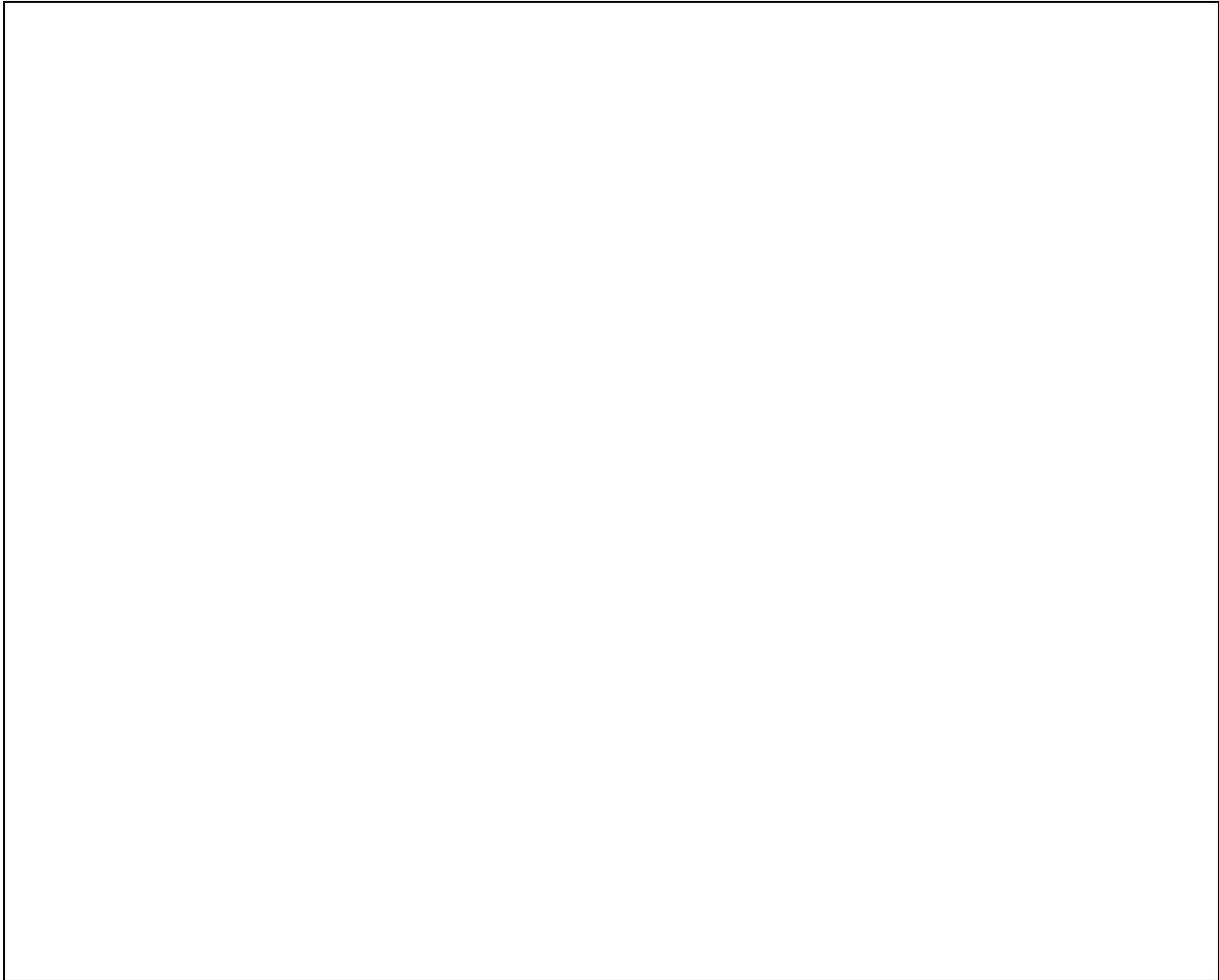
Prevention .....

..... [4]

9 A systems analyst has been asked by a travel agent to computerise the records she keeps about available holidays.

*For  
Examiner's  
Use*

(a) The systems analyst must produce a screen input form which the travel agent could use for typing in the details of each holiday. Design a suitable screen input form for inputting the details of **one** holiday.



[5]

(b) After the travel agent has typed in the data it will need to be verified. Explain **two** ways in which this could be done.

*For  
Examiner's  
Use*

1 .....

.....

.....

.....

2 .....

.....

.....

..... [4]

(c) Describe the differences between validation and verification giving **two** examples of validation checks.

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... [5]



(e) After the system is implemented the travel agent will be given documentation to go with it. This will consist of technical documentation and user documentation. Explain the purpose of each type of documentation and **two** different items that each type of documentation will contain.

Technical documentation

Purpose .....

.....

Item 1 .....

.....

Item 2 .....

.....

User documentation

Purpose .....

.....

Item 1 .....

.....

Item 2 .....

..... [6]

10 Robotics are now used in the production of motor cars. Describe the effects this had on the workers who used to manually produce cars.

.....

.....

.....

.....

.....

..... [3]



12 The head teacher of a school wants to build an automated weather station. He has selected a group of pupils to be responsible for the weather station. The pupils want to use sensors connected to a computer to do this.

(a) Name **three** sensors that will be needed to measure the weather conditions.

1 .....

.....

2 .....

.....

3 .....

..... [3]

(b) Explain why computers are unable to read the data directly from these sensors.

.....

.....

.....

..... [2]

(c) Describe **three** reasons why a computer would be used rather than relying on humans.

1 .....

.....

2 .....

.....

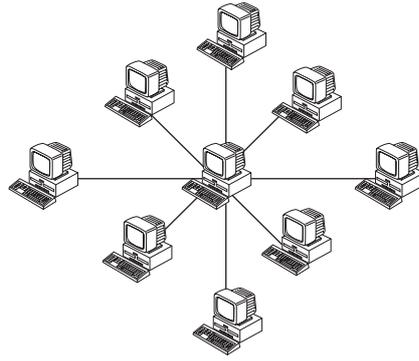
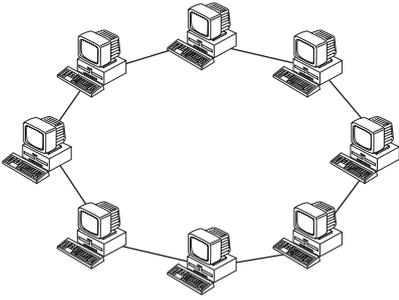
3 .....

..... [3]



14 (a) Name the following networks.

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Use



(i) .....

(ii) .....

[2]

(b) Give **two** advantages and **two** disadvantages of having computers networked.

Advantage 1 .....

.....

Advantage 2 .....

.....

Disadvantage 1 .....

.....

Disadvantage 2 .....

.....

[4]

- 15 The manager of a supermarket uses a database to store data about the products she sells. This is part of the database.

For  
Examiner's  
Use

Bar code	Producer	Food type	Number in stock
0049179000794 7	Herbot	Frozen Carrots	312
0027200190653 5	Caeser	Baking Powder	625
0010029000016 X	Brutus	Margarine	478
0014569021017 X	Malin	Garlic Paste	206
0010479001213 3	Holly	Chicken	513

- (a) How many records are there in this part of the database?

..... [1]

- (b) How many fields are there in this part of the database?

..... [1]

- (c) The records shown are to be sorted in descending order of number in stock. What will be the bar code of the first record in the database after it has been sorted?

..... [1]

- (d) Give the name of a field that contains numeric data.

..... [1]

- (e) Identity the field type of the Producer field.

..... [1]

- (f) Which field would be the key field?

..... [1]

(g) When goods are sold the database is automatically updated. Describe how this is done.

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

(h) When a customer pays for an item, chip and pin technology is used. Describe the steps involved in a customer transaction.

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

(i) The supermarket owner wants to make the supermarket's products available on-line. Name **two** pieces of data a customer would have to type in to gain access this system.

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

(j) To protect the customers' data the owner will make sure the system uses encryption. Describe encryption.

*For  
Examiner's  
Use*

.....

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.....

.....

.....

.....

..... [3]



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