

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

INFORMATION TECHNOLOGY

Paper 2



0418/02

October/November 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, 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.

<p>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.</p> <p>Stick your personal label here, if provided.</p>
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For Examiner's Use

This document consists of **11** printed pages and **1** blank page.



1 Ring **two** output devices.

microphone	printer	scanner
speaker	touchpad	tracker ball

[2]

2 Ring **two** ways that data can be entered at an ATM (cash machine).

bar code reader	graphics tablet	joystick
keypad	magnetic stripe	plotter

[2]

3 Ring **two** items which are used to store data.

CD ROM	keyboard	MIDI
modem	monitor	RAM

[2]

4 Complete each sentence below using items from the list.

analysis	a flowchart	hacking
a virus	implementation	data logging
encryption	a password	the world wide web

A program can be designed using

Using a computer to collect weather data using sensors is called

Gaining access to somebody else's work without permission is called

Changing data into a form which makes it difficult to understand is called

[4]

5 Tick **two** benefits to supermarkets of using computers.

Goods are better quality.	
Goods can be automatically re-ordered.	
Checkout operators are paid less.	
It is easier to see what is selling well.	
Higher prices can be charged.	
Mistakes are never made.	

[2]

6 Systems analysts have been employed to computerise a bookshop's record keeping. They will be creating a database of books.

(a) Tick **two** ways of carrying out research into the existing system.

Look on the Internet	
Evaluate the new system	
Read books on computers	
Get a catalogue of new computers	
Observation	
Collecting documents	

[2]

(b) Give **three** reasons why the bookshop owner would want the record keeping system computerised.

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

(c) (i) Circle **one** field which would be the best choice as the key field for the database.

- Title of the book** **Author's name**
- ISBN** **Publisher's name**

[1]

(ii) Why is this field the best choice?

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

7 Many people think it is easier to steal data when it is stored on computer rather than on paper. Tick whether the following statements are TRUE or FALSE.

	TRUE ✓	FALSE ✓
A hacker can copy data without leaving a trace.		
Password files are easy to read.		
Data kept on paper is never organised.		
Hackers don't need to physically break in to a building.		

[4]

8 A library uses a computer with database software. The librarian uses it to keep records of borrowers as well as records of the books in the library. Here is an example of part of a record on the book file.

ISBN	Title	Name of Author	Borrower number
0718102096	John Wyndham Omnibus	John Wyndham	654321

(a) Name **one** field in the borrower data file which would contain the same data as a field in the **book** file.

.....[1]

(b) The data files are stored on a hard disc. State the type of access needed to retrieve a single record quickly.

.....[1]

(c) The librarian has to type book details into the book data file. Describe the validation checks which could be used on the borrower number and the ISBN.

Borrower number

.....

.....

ISBN.....

.....

.....[4]

(d) When borrowers take out a book they will show their library card. Give a method of data input which could be used instead of typing in the borrower number.

.....[1]

(e) Give **two** reasons why this method is better than typing the number in.

1

.....

2

.....[2]

9 Robots are commonly used in the car manufacturing industry instead of employing people.

(a) Give **three** advantages of using a robot to build cars rather than people.

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

(b) Apart from unemployment give **two** effects that the introduction of robots has had on the workers.

- 1
-
- 2
-[2]

10 Tick **two** applications which use on-line processing.

A computerised burglar alarm system.	
Paying for goods using EFTPOS.	
Producing credit card statements.	
Producing electricity bills.	
Reading data from bank cheques.	
Sending out reminders for overdue books.	

[2]

11 A small company has asked a systems analyst to advise them about buying a computer system. He has analysed the existing system and has decided that a database of all the stock records needs to be created.

(a) He will now need to design the database to store the records, using the existing hardware and software. Name **three** items that he will need to design.

1

.....

2

.....

3

.....[3]

(b) Before the system can be implemented it must be tested. Name **three** types of test data that will be used to test the system.

1

2

3

.....[3]

(c) Name **two** methods of implementing the system. For each method give a reason for using it.

1

.....

Reason.....

.....

2

.....

Reason.....

.....[4]

(d) When the system is implemented the systems analyst will give the company documentation. One type of documentation is for the company to show them how the system works.

(i) Name this type of documentation.

.....[1]

(ii) List **two** items which will be contained in this documentation.

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

The other type of documentation is for the future analysts to update or maintain the system.

(iii) Name this type of documentation.

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

(iv) List **two** items which will be contained in this documentation.

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

12 Many publishers are now producing copies of software on CD ROM instead of on floppy disc. Give **two** reasons for this.

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

13 (a) Describe **one** use of an expert system.

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

(b) List the main features of an expert system.

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

14 Name **two** input devices other than a keypad which are needed at an EFTPOS (Electronic Funds Transfer Point of Sales).

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

15 Many people are now using their computers for home banking. Many transactions can now be done without having to travel to the bank.

(a) Identify **three** types of transaction which they can do from home.

1

.....

2

.....

3

.....[3]

(b) Identify **one** type of transaction which they cannot do from home.

.....

.....[1]

(c) Describe the advantages and disadvantages of using home banking rather than travelling to the bank.

.....

.....

.....

.....

.....

.....

.....

.....

.....[4]

16 Identify **two** advantages of using email compared with using the normal postal service.

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

17 Name **three** features of spreadsheets, other than being able to deal with text and numbers. These features could refer to cell contents or to the spreadsheet structure.

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

18 After a system has been implemented it must be evaluated.

List **three** items which should be present in the evaluation.

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

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