CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

INFORMATION TECHNOLOGY **0418/02**

Paper 2

October/November 2003

1 hour 15 minutes

Candidates answer on the Question Paper.
No additional materials are required.

READ THESE INSTRUCTIONS FIRST

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

This document consists of **10** printed pages and **2** blank pages.

UNIVERSITY of CAMBRIDGE
Local Examinations Syndicate

[Turn over

1   Ring **two** input devices.

Monitor   **Plotter**   **Printer**

Scanner   **Speaker**   **Touchpad**   [2]

2   Ring **two** items which are used to store personal data.

Customer database   **Graphics tablet**   **Magnetic strip on a credit card**

Product bar code   **A ROM chip**   **Sensor**   [2]

3   Ring **two** items which are used to connect computers to the Internet.

ISDN link   **Keyboard**   **MIDI**

Modem   **Monitor**   **RAM**   [2]

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

analysis   **data logging**   **encryption**

a flowchart   **hacking**   **implementation**

a password   **a virus**   **the world wide web**

Interviewing people about a system is ....

Parallel running is a method of ....

You can prevent someone accessing your work by using ....

A program which can damage the contents of a hard disc is called .... [4]

5   Tick **two** benefits of using computers for home shopping.

Goods are better quality	
People don't have to leave their house to do the shopping.	
People can only buy one of each item.	
Less chance of getting the wrong goods.	
People can do their shopping at any time of day.	
You can't touch the goods.	

[2]

6 Systems analysts have been employed to computerise the record keeping of a video rental shop. They will be creating one data file of videos and one of customers.

(a) Ring two items they will produce during the design phase.

evaluation   **existing documents**   **file structure**

questionnaires   **parallel running**   **screen layouts** [2]

(b) The customer file will contain details of what the customer looks like. State two input devices which would be suitable for inputting an image of the person into this file.

1 ....

2 .... [2]

(c) Circle the field which would be the best choice as the key field of the video file.

director's name   **video reference number**

video title   **rental price** [1]

7 Tick whether the following statements are **TRUE** or **FALSE**.

	True ✓	False ✓
Using computers for long periods of time can cure back strain		
An anti-glare screen reduces eye strain		
Radiation from computer screens can cause illness		
Repetitive Strain Injuries are caused by using wrist rests		

[4]

8 Architects use CAD packages to draw designs of houses. List three features, other than load, save and print, that you would expect to be included in such a package.

1 ....

....

2 ....

....

3 ....

.... [3]

[Turn over

9 Complete the sentences using words from the following list:

MICR   **OMR**   **RAM**   **ROM**   **Word Processing**

(a) School registers are read using ....

(b) The part of central memory which loses its data when the computer is switched off is

called ....

(c) A software package which allows secretaries to type in letters is called a

.... package.

[3]

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

Booking a flight at a travel agent.	
Producing gas bills.	
Sending out reminders for overdue books.	
Withdrawing money from a cash point.	
Reading data from bank cheques.	
Producing credit card statements.	

[2]

11 Computers are now widely used in libraries.

(a) State the input device which is used to enter data about a book when it is borrowed.

.... [1]

(b) Write down the validation check which would be used to make sure the data had been entered correctly.

.... [1]

(c) Library members must type in two items of information before they can access the Internet. List these items.

1 ....

2 .... [2]

12 A tennis club is planning to keep members' records on a computer database. New members will fill in an application form and be given a membership number.

The form will contain the member's personal details as well as their method of payment.

(a) Design a screen input form to enter all the details onto the computer.

[5]

(b) All the data except for the membership number can be amended. It is very important that this is copied correctly from the application form. Describe **two** methods of verification which could be used to check it has been entered correctly.

1 ....

....

2 ....

.... [2]

[Turn over

(c) Describe **two** methods of validation which could be used to make sure that the membership number given is valid.

1 ....

....

2 ....

.... [2]

(d) The club intends to connect to other local clubs using a Wide Area Network. Some of the members are concerned about this plan because they are frightened that their data may be misused.

Describe **three** ways in which their data might be misused.

1 ....

....

2 ....

....

3 ....

.... [3]

(e) After the system is designed it must be tested. Describe the three types of test data which are used to test a system.

1 ....

....

2 ....

....

3 ....

.... [3]

13 (a) Name **three** applications which involve the use of expert systems.

1 ....

2 ....

3 .... [3]

(b) For each of the above describe the inputs and outputs used by the system.

1 ....

....

2 ....

....

3 ....

.... [3]

14 At a supermarket checkout customers present their purchases to the checkout operator. After the goods have been passed through the checkout the customer pays, usually by credit or debit card.

(a) Name **two** items of information found in the magnetic strip on the back of the card.

1 ....

2 .... [2]

(b) The bank makes checks on the cards. Describe two of these checks.

1 ....

....

2 ....

.... [2]

(c) Describe the processing which takes place after the computer has completed these checks.

....

....

....

....

....

.... [2]

[Turn over

15 Describe **two** ways in which a newly created information system can be implemented and for each way give one disadvantage of its use.

....

....

....

....

....

....

....

.... [4]

16 Describe the two types of documentation that are found with newly created information systems. Give reasons why each type is needed.

....

....

....

....

....

....

....

....

....

....

....

.... [6]

17 More and more people are using the Internet for home banking and home shopping services.

Describe the benefits and limitations for individual people in their everyday lives.

....

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....

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....

....

....

....

.... [4]

[Turn over

18 The employees of many companies communicate through the use of electronic mail and video conferencing.

(a) What is meant by video conferencing?

....

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....

....

....

.... [3]

(b) Describe the advantages and disadvantages of video conferencing when compared with electronic mail.

....

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....

....

.... [3]

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12

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