



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

CANDIDATE
NAME

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INFORMATION AND COMMUNICATION TECHNOLOGY

0417/11

Paper 1

October/November 2013

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.

DO NOT WRITE IN ANY BARCODES.

No marks will be awarded for using brand names of software packages or hardware.

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.

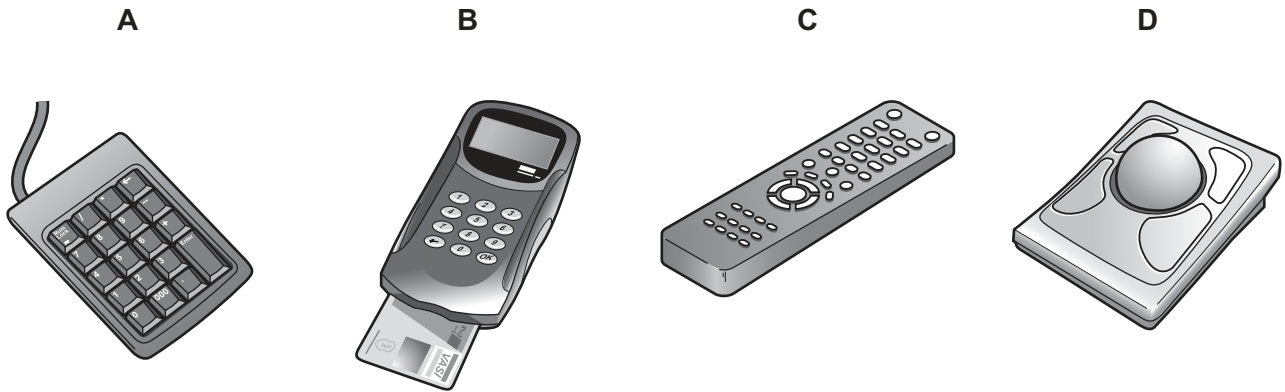
For Examiner's Use

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



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



- Bar code reader**
- Chip reader**
- Graphics tablet**
- Laser printer**
- Magnetic Stripe Reader**
- Numeric keypad**
- Remote control**
- Trackerball**

A B

C D

[4]

2 Ring **two** network devices.

- Bridge**
- DVD R**
- Light pen**
- Magnetic tape**
- Printer**
- Switch**

[2]

3 Tick **True** or **False** next to each of these statements.

	True	False
Withdrawing money from an ATM is an example of batch processing.		
The processing of bank cheques is an example of batch processing.		
Booking a theatre ticket is an example of online processing.		
Producing utility bills is an example of online processing.		

[4]

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

a bar code

a chip

a dot matrix printer

a DVD RW

an inference engine

an inkjet printer

(a) The **most suitable** storage medium for storing data on a bank card is

.....

(b) The tool which searches for matches in a knowledge base is

.....

(c) An optical disc which can have data updated is

.....

(d) Multipart stationery is used with

.....

[4]

5 Draw **five** lines on the diagram to match the input device to its **most appropriate** use.

Input device

Use

Bar code reader

to enter hard copy images into a computer

Microphone

creating a piece of text

Scanner

selecting items from a menu

Keyboard

inputting data from a food item at a POS

Mouse

creating a voice over for a presentation

[5]

6 As well as PCs, mobile phones (cellphones) can be used to access the Internet.

(a) Give **two** advantages of using a PC rather than a mobile phone for this purpose.

1

.....

2

..... [2]

(b) Give **two** disadvantages of using a PC rather than a mobile phone for this purpose.

1

.....

2

..... [2]

7 Tick **Internet** or **intranet**, next to each statement, as appropriate.

	Internet	intranet
is a network of computer networks		
exists usually within one organisation		
anybody can access it		
can be expanded to become an extranet		

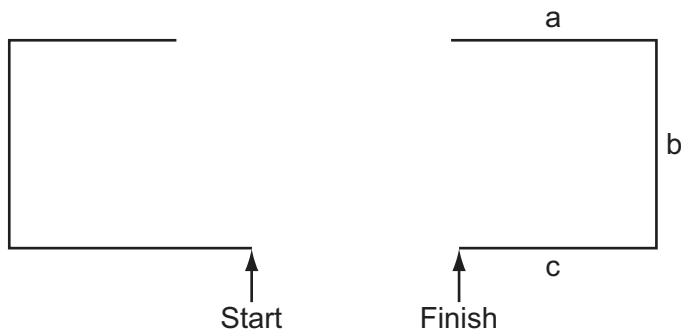
[4]

8 Tick **spam** or **pharming**, next to each statement, as appropriate.

	spam	pharming
is the sending of several emails at once		
requires malicious code to be downloaded		
re-directs the user to a fake website		
is the sending of unsolicited messages		

[4]

9 A student wishes to use a floor turtle to draw this shape:



Name and explain the meaning of **four** instructions that the turtle graphics software would contain in order to draw the shape. Note: a, b and c are the same length.

Instruction 1

Meaning

Instruction 2

Meaning

Instruction 3

Meaning

Instruction 4

Meaning

[8]

10 Tick whether the following statements are **true** or **false** about student records in a database.

	True	False
A file is a collection of related records.		
A field is one item of data such as name or address.		
The same value can occur several times within a key field.		
A record is the complete data about one student.		

[4]

11 Hospitals often use computers to continuously monitor patients.

(a) Describe the monitoring process.

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

(b) Give **four** advantages of using a computer rather than nurses to monitor patients.

1
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2
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3
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4
..... [4]

12 A shop owner uses a spreadsheet to calculate his profits. This is part of the spreadsheet.

For
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Use

	A	B	C	D	E	F	G
1	Producer	Food type	Number in stock	Cost Price	Selling Price	Profit	Total profit
2	Logekks	Potato flakes	168	\$1.80	\$1.90	\$0.10	\$16.80
3	Squarebranch	Chocolate bar	202	\$0.75	\$0.80	\$0.05	\$10.10
4	Roofs	Beefburgers	88	\$2.05	\$2.25	\$0.20	\$17.60
5	Kapats	Gravy	120	\$3.20	\$3.45	\$0.25	\$30.00
6	Startle	Yoghurt cream	122	\$1.50	\$1.65	\$0.15	\$18.30
7							
8		Total in stock	700		Overall profit		\$92.80

(a) Give the cell reference of the cell that contains \$3.45.

..... [1]

(b) Give the cell reference of a cell that contains a label.

..... [1]

(c) How many columns are shown in the spreadsheet?

..... [1]

(d) Write down the formula which should go in cell G2.

= [1]

(e) Formulae similar to that used in cell F2, that is to say = E2 – D2, have been used in cells F3 to F6. These were not typed.

Describe how these were entered.

.....

 [2]

(f) Spreadsheets can be used for modelling.

Give **three** reasons why computer models are used rather than the real thing.

1

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2

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3

..... [3]

13 Describe the differences between a **CLI** (Command Line Interface) and a **GUI** (Graphical User Interface).

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..... [4]

- 14** The head teacher of a school has employed Pierre, a systems analyst, to create a new database system to keep details of all students. Each student will be allocated a unique ten digit reference number.

Pierre has written out some of the questions that the head teacher might ask. He can then analyse these in order to design a database which may answer these questions. Some are:

Which year is Johann Schmidt in? (the school has students in years 7 to 13)
Does Anita Nash have a sibling (brother or sister) in the school?

- (a)** Complete the data dictionary table below giving the field names which would be used in the database and identifying a validation check for each field.

Field name	Validation check
Reference_number	
Year	
First_name	
	None

[6]

- (b)** Explain the differences between verification and validation giving reasons why both are needed when data is entered into a database.

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[5]

15 Floyd has purchased a laptop computer. He wants to use it for Internet banking.

(a) Explain why Floyd would need the following two items.

Browser

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ISP

..... [2]

(b) Discuss the advantages and disadvantages to customers of using Internet banking rather than visiting the bank.

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..... [6]

16 Describe what is meant by a Wiki.

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..... [4]

17 There are a number of health and safety risks associated with using computers.

For the **three** safety risks given below, describe a way in which each can be minimised.

Electrocution

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Fire

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Tripping

..... [3]

18 There are many microprocessor-controlled devices in the modern home.

Describe **five** effects of these devices on people's lifestyles.

1

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2

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3

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4

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5

..... [5]

19 Describe encryption and discuss the benefits and drawbacks of using it to make data secure.

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..... [5]

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