



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE
NAME

CENTRE
NUMBER

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INFORMATION AND COMMUNICATION TECHNOLOGY

0417/12

Paper 1

May/June 2015

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 an HB pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, glue or correction fluid.

DO NOT WRITE IN ANY BARCODES.

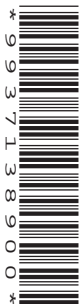
No marks will be awarded for using brand names of software packages or hardware.

Answer **all** questions.

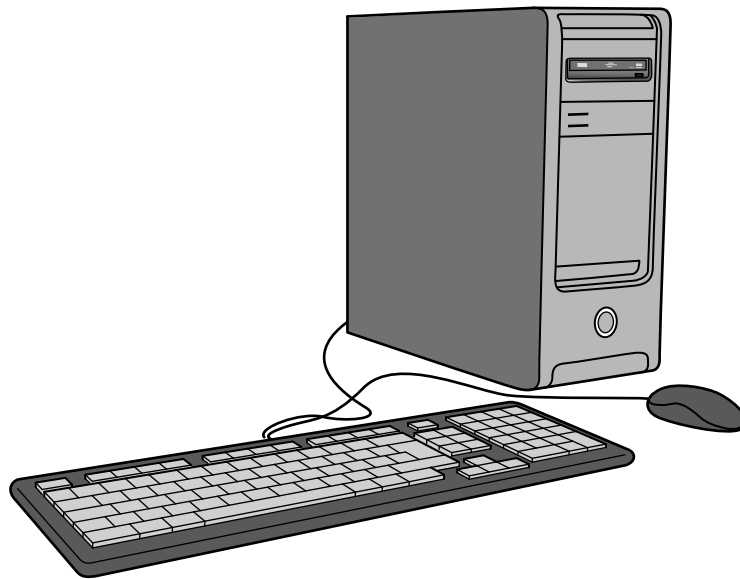
At the end of the examination, fasten all your work securely together.

The number of marks is given in brackets [] at the end of each question or part question.

This document consists of **13** printed pages and **3** blank pages.



1 This diagram shows a tower PC.



(a) Name **two** input devices apart from a keyboard and mouse, which could connect directly to the tower.

1

2

[2]

(b) Name **two** storage **devices** which would be available in the PC shown above.

1

2

[2]

(c) Name **two** output devices which could connect directly to the PC shown above.

1

2

[2]

- 2 Below is a list of statements. Each statement is true for only one of the given methods of implementation. Tick the method which matches the statement.

	Parallel running ✓	Direct Changeover ✓	Pilot running ✓
All of the old and new systems run at the same time.			
If the system fails in one branch, the rest of the company is not affected.			
The new system has to be completely free of errors before implementation.			
The benefits of the new system are available immediately.			

[4]

- 3 Below is a list of uses of ICT.
Tick the device which would be most appropriate for each activity.

	Input device ✓	Output device ✓	Storage device ✓
Making a backup of work			
Typing a document			
Printing out student records			
Reading details from a bar code			
Making a soft copy for future use			

[5]

- 4 Tick whether the following items are found in user documentation only, technical documentation only or are found in both.

	User ✓	Technical ✓	Both ✓
Systems flowchart			
How to save a document			
List of variables			
The purpose of the system			

[4]

5 There are a number of methods of direct data entry.

Complete the sentences using words from the list below.

(a) The method of inputting bank codes from the bottom of a cheque is called[1]

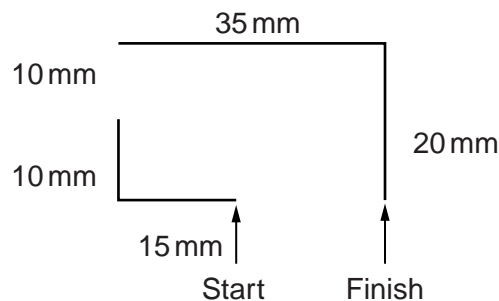
(b) The device used for inputting details from a label on a product is called[1]

(c) The device used for inputting data directly from a bank card is called[1]

- a bar code reader
- a PIN pad
- OMR
- MICR
- a keyboard
- a graphics tablet
- a mouse
- a chip reader

6 A floor turtle can use the following instructions:

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



The turtle is facing up the page and the pen is up.

A student has written the following set of instructions to make the floor turtle draw the above shape.

1. PENDOWN
2. LEFT 90
3. FORWARD 15
4. RIGHT 90
5. PENUP
6. FORWARD 20
7. RIGHT 90
8. PENUP
9. FORWARD 90
10. RIGHT 35
11. FORWARD 20

Although the first **four** instructions are correct, this set of instructions would not draw the shape exactly as shown. **One** instruction has been missed out and **four** are incorrect.

(a) Write down the missing instruction and indicate where it should be positioned in the list of instructions provided.

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

(b) Identify the **four** incorrect instructions and state the correct instructions to be used.

1

.....

2

.....

3

.....

4

.....

[4]

- 14 A headteacher wishes to store details of her students in a computer database. She has been given an example of one student record by the school secretary:

Strauss, Johann, SR132516, 83, 01/09/2011

This corresponds to family_name, first_name, Student_Id, Maths_test_score, joined_the_school.

The file is currently stored in the form of plain text with each record separated by a line break.

- (a) Give a file extension which is appropriate for this file.

.....[1]

- (b) For each field identify the **most** appropriate data type. The Maths_test_score is used in calculations.

Field name	Data type
family_name	
first_name	
Student_Id	
Maths_test_score	
joined_the_school	

[5]

- (c) Identify the **two** fields for which a format check would be the **most** appropriate validation check. In each case describe how the format check would work.

1

.....

.....

2

.....

.....

[4]

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