Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME	

CENTRE NUMBER						CANDIDATE NUMBER			

INFORMATION AND COMMUNICATION TECHNOLOGY **0417/11**

Paper 1 **October/November 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.
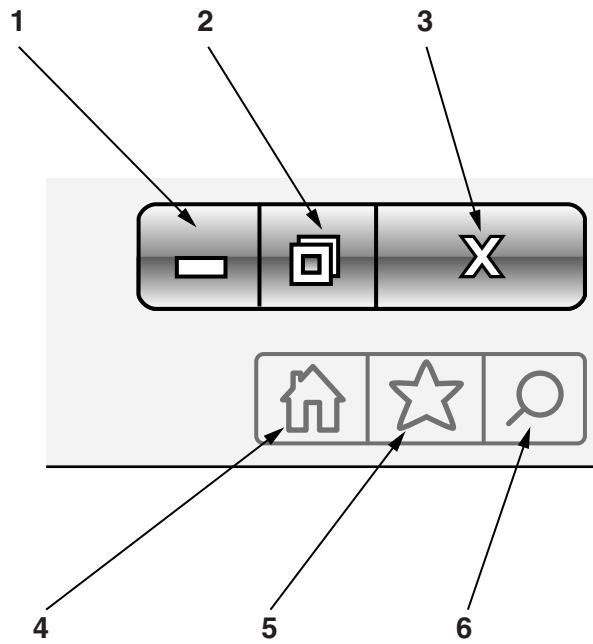
Answer **all** questions.

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 **12** printed pages.

CAMBRIDGE International Examinations

[Turn over

1   This picture shows a part of a web page.

There are six numbered icons in the picture.

Write down what happens when you click each of the six numbered icons.

icon 1 ....
    ....

icon 2 ....
    ....

icon 3 ....
    ....

icon 4 ....
    ....

icon 5 ....
    ....

icon 6 ....
    ....

[6]

2 Tick the **most** appropriate output device for each of the following applications.

Application	Graph plotter ✓	Laser printer ✓	Dot matrix printer ✓
Rapid, high quality and high volumes of output			
CAD, where large printouts are required such as A0			
Industrial environments such as car repair companies			
Printing on multipart forms			

[4]

3 Complete the table by identifying the **most** appropriate storage method for each type of application.

Application	Storage method
Theatre booking systems	
Storing photographs in a camera for printing at a later time	
The most portable device used to transport data from computer to computer	
A disc used to sell music albums without video	

[4]

4 Tick whether the following are uses of modelling, control or measurement.

Use	Modelling ✓	Control ✓	Measurement ✓
The maintaining of growing conditions in a greenhouse			
Simulating car driving			
Monitoring the environment			
Using what ifs			

[4]

5 Complete each sentence using words from the following list.

ROM   **a bar code reader**   **RAM**

magnetic tape   **a joystick**   **OCR**

a chip reader   **MICR**

(a) The input device used in flight simulation is

.... [1]

(b) The type of memory used to store the work that the user is currently working on is

.... [1]

(c) A medium used to backup data is

.... [1]

6 A student wishes to use a floor turtle to draw this shape. All lines are of different lengths.
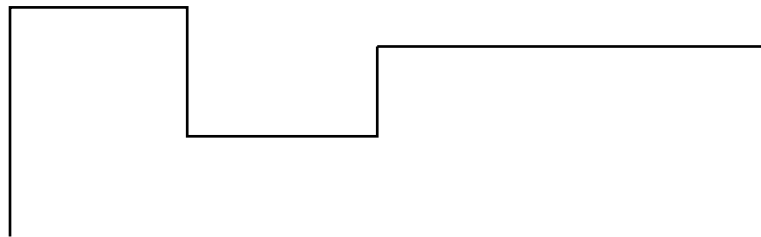
Give **three** different instructions other than PENUP and PENDOWN which the turtle graphics software could use in order to draw the shape. For each one, explain the meaning of the instruction.

Instruction 1 ....

Meaning ....

....

Instruction 2 ....

Meaning ....

....

Instruction 3 ....

Meaning ....

....

[6]

7 Students are investigating the behaviour of a colourless liquid in a beaker. As the colourless liquid heats up, it becomes cloudy.

(a) Name **two** sensors that would be connected to a computer in such an experiment.

1 ....

2 ....

[2]

(b) Describe how the student would set up the equipment in the experiment and how the computer would monitor and present the change in readings produced by the experiment.

....

....

....

....

....

....

....

....

....

.... [5]

8 Describe each of the following types of network.

LAN ....

....

....

....

WAN..

....

....

WLAN ....

....

....

....
[6]

9 Tick **three** benefits to **workers** of the introduction of robots into car manufacture.

	✓
Once bought robots do not have to be paid	
They have to do less hazardous jobs	
They don't need to lift heavy loads	
They can become deskilled	
It can lead to unemployment	
They work in a cleaner/healthier working environment	
They can work whenever they want	
They get a massive pay rise	

[3]

10 A bank customer wishes to withdraw cash from an ATM.

Describe the computer processing which takes place in the ATM device itself.

....

....

....

....

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....

....

.... [7]

11 Describe what is meant by a microblog.

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....

....

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....

.... [3]

12 The manager of a computer shop uses a database to store data about the computers he sells.

This is part of the database.

Makers_name	Computer_ type	Processor_type	RAM (Gb)	Hard disk (Tb)
Never-never	Laptop	G4000	4	0.5
Johnsang	PC	L5000	8	1.0
Rany	PC	E3000	6	1.0
Hello-John	PC	F3500	8	2.0
Never-never	PC	A1000	4	1.0
Johnsang	Laptop	C2000	4	0.5
Hello-John	Laptop	D2500	6	1.0
Rany	Laptop	B1500	6	0.5

(a) Write down the number of records shown in this part of the database.

.... [1]

(b) Write down the number of fields shown in this part of the database.

.... [1]

(c) The records shown are to be sorted in ascending order of Makers_name then ascending order of Processor_type.

Give the Processor_type of the last record in the database after it has been sorted.

.... [1]

(d) Give the field that could be amended to contain Boolean data.

.... [1]

(e) Name and describe the **most** appropriate validation check other than a length check which would be carried out on the Processor_type field.

....

....

....

....

....

.... [3]

(f) Data in RAM is accessed more quickly than from a fixed hard disk.

Give **two** reasons why fixed hard disks are still necessary.

1 ....

....

2 ....

....

[2]

13 A company has decided to introduce a new computer system. It has employed a systems analyst to oversee this. Her first task is to research the current system.

(a) Identify **three** methods of carrying out this research other than by observation. For each method, give an advantage compared to the other methods.

Method 1 ....

Advantage ....

....

Method 2 ....

Advantage ....

....

Method 3 ....

Advantage ....

....

[6]

(b) The new system will be designed after the current system is analysed.

Identify **three** items which will be part of the design.

1 ....

....

2 ....

....

3 ....

....

[3]

(c) Once the system is implemented, the systems analyst will provide documentation for the new system.

Explain why **two** types of documentation are needed.

....

....

....

....

....

....

....

....

....

.... [5]

14 Smart phones are used to send and receive emails with and without attachments.

Describe **four** other ways in which emails can be managed on a smart phone.

1 ....

....

2 ....

....

3 ....

....

4 ....

....

[4]

15 Identify **three** network devices, other than a router or modem, which are used to connect computers together in a network. For each one, describe how it uses the data it receives.

1 ....

Use ....

....

2 ....

Use ....

....

3 ....

Use ....

....
[6]

16 Discuss the advantages and disadvantages to a teacher of using a tablet computer instead of another type of computer.

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.... [6]

17 Describe the characteristics and uses of different types of DVD.

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.... [8]