



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS International General Certificate of Secondary Education

CANDIDATE NAME					
CENTRE NUMBER			CANDIDATE NUMBER		

* 5 9 4 4 0 8 3 0 4 9

INFORMATION AND COMMUNICATION TECHNOLOGY

0417/13

Paper 1 October/November 2011

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.

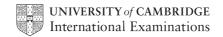
Answer all questions.

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

This document consists of 12 printed pages.



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

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A		B Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q	10 May 10
С		D	
Buzzer	Digital camera	Graphics tablet	Laser printer
Magnetic Stripe Reader	Pen drive	Remote control	Touch pad
A	E		[4]
Ring two items which are us	sed for data storage.		
CD RW	Plotter		Hard disc
Keyboard	Mouse		PIN

[2]

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2

3 Tick TRUE or FALSE next to each of these statements about methods of implementation.

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	TRUE	FALSE
Direct changeover needs two sets of workers to be employed		
Parallel running means that the original system is still available		
Phased implementation is implementing the system in parts		
Parallel running is the cheapest form of implementation		

[4]

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

	bar code reader	chip	DVD RW
	keyboard	laser printer	magnetic tape
(a)	The most suitable storage mediu data held on a network server is a	m for making backups of	
(b)	The part of a bank card that stores	data about the PIN is a	
(c)	An optical disc which can have da	ta updated is a	
(d)	Details of a product are scanned a	t a POS using a	
			[4]

5 Draw **five** lines on the diagram to match the software to how it could be used in a school.

Software Use

Word processing software finding specific web sites

Measuring program storing student records

Presentation software writing a letter to parents

Search engine monitoring temperature in a science experiment

Database producing a multimedia slide show

[5]

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Describe two uses of optical media and for each one give a reason why optical media are preferred to magnetic tapes for that use.
Use 1
Reason 1
Use 2
Reason 2
[4]
A student wishes to use a floor turtle to draw this shape:
Name and explain the meaning of three instructions that the turtle graphics software would need to contain in order to draw the shape.
Instruction 1
Meaning
Instruction 2
Instruction 2
Meaning
Instruction 3
Meaning
[6]

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•	her than	a phone call, list three uses of mobile telephones for commur	nicatio	n.	Exa
1					
2					
3				[3]	
A	hospital n	monitors each patient's condition using a computer.			
(a)) Tick th	ree physical variables that would be monitored.			
		Pulse rate	√		
		Room temperature			
		Humidity			
		Body temperature			
		Light			
		Blood pressure		[3]	
				[2]	
(c)) Give th condition	rree advantages of using a computer rather than a nurse to on.	monit	or a patient's	
			•••••		
			•••••		

10 The manageress of a supermarket uses a database to store data about the products she sells. This is part of the database.

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Product Id	Producer	Food type	Number in stock	Re-order level
0049179000794	Herbot	Frozen Carrots	112	50
0027200190653	Caeser	Baking Powder	125	70
0010029000016	Brutus	Margarine	78	75
0014569021017	Malin	Garlic paste	206	100
0010479001213	Holly	Chicken	113	70
0048168310121	Vitriol	Tinned peas	87	50
0035465710111	Almanac	Frozen sweetcorn	79	45

(a)	How many records are there in this part of the database?	
		[1]
(b)	How many fields are there in this part of the database?	
		[1]
(c)	The records shown are to be sorted in ascending order of number in stock. What be the Food type of the first record in the database after it has been sorted?	will
		[1]
(d)	Identity the field type of the Product Id field.	
		[1]

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	(e)	A customer comes to the POS with three cartons of Brutus margarine. The checkout operator scans the bar code of the first item and enters the quantity 3 using the number
		pad. Describe the computer processing which now takes place for stock control.
		[5]
11	mag use	e head teacher of a school has asked some pupils to convert the printed school gazine into a slide show. Describe two features of presentation software, including their e, which would not be present in a printed version.
	10	ature 1

	Fe	ature 2
	•••••	

For Examiner's Use

12		in and his family have three computers in their home. He wants to connect the inputers into a network which will also connect to the internet.	For Examiner's Use
	(a)	Give two advantages of doing this.	
		1	
		2 [2]	
	(b)	Give two disadvantages of doing this.	
		1	
		2	
		[2]	
13	con data	e use of computer networks can lead to problems of keeping data secure and indidential. Two methods of overcoming this are the use of authentication techniques and a encryption. Describe two authentication techniques.	
		1	
		2 [2]	
	(b)	Describe data encryption.	
		[2]	

© UCLES 2011 0417/13/O/N/11 Sarbjit owns a small company with little money to spare. He wishes to replace the existing computerised system with a new one. He has already made backups of the existing system. He has employed a systems analyst, Tom, to plan the new system.(a) Tom wishes to collect information about the existing system.

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	Give	four methods he could use and for each give a reason why it would be used.
	Meth	nod 1
	Rea	
	Meth	nod 2
	Rea	
	Meth	nod 3
	Rea	son
	Meth	nod 4
	Rea	son
		[8]
(b)		will need to design the file structure of the new system. List four items which deneed to be included in this design.
	1	
	2	
	3	
	4	[4]

	(c)	After the system is developed it will be implemented. Describe the most appropriate method Sarbjit should choose giving two reasons.	te
		Method	•••
		Reason 1	
		Reason 2	
		Reason 2	[3]
15	Ехр	plain the differences between a command line interface and a graphical user interface.	
			. . [4]
		l	. '1

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6 Mar	Marie has purchased a laptop computer. She wants to use it for internet shopping.				
(a)	Identify two additional item	ms she would need to purchase in order to do this.	Examiner Use		
	1				
	2				
		ro1			
		[2]			
(b)	Give four advantages to M	Marie of using internet shopping.			
	1				
	2				
	3				
	4				
		[4]			
(c)	Give four disadvantages to	to Marie of using internet shopping.			
	1				
	2				
	3				
	4				
		[4]			

17	Chip and pin systems are used at ATMs. A customer wishing to withdraw cash inserts their card. The ATM checks to see if the card is valid and, if so, asks the customer to type their PIN. Describe the computer processing which takes place from this point.	For Examiner's Use
	[4]	
18	Pilot training is often carried out using simulators. Give two reasons why these are used to train pilots.	
	1	
	2	
40	[2]	
19	Hackers try to defraud online banking customers by pretending to be their bank. Name and describe two methods by which they do this.	
	2	
	[4]	

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