



## UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS International General Certificate of Secondary Education

CANDIDATE NAME					
CENTRE NUMBER			ANDIDATE UMBER		

## INFORMATION AND COMMUNICATION TECHNOLOGY

0417/13

Paper 1

October/November 2010

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.

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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.

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		A		B		
		C		D		
	Chip reader	Digital camera		Joystick	Light pen	
	Microphone	Remote control		Scanner	Trackerball	
A C			B D			[4]

2 Ring two items which are storage media.

Flash memory card	Graph plotter	Magnetic disc
OCR	OMR	Touch pad

[2]

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

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	TRUE	FALSE
An internet browser is used to look at pages on the world wide web.		
Desktop computers don't have hard disk drives.		
DTP software can be used to produce magazines.		
Measurement software is used for environmental monitoring.		
Sensors are output devices.		

[5]

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

A bar code reader A dot matrix printer A graph plotter

A graphics tablet A microphone A multimedia projector

A pressure sensor A speaker A touch pad

A web cam

(a) is used in CAD applications to produce very large printouts.

(b) \_\_\_\_\_ is used to display data from a computer onto a very large screen.

(c) sends data to a microprocessor in a washing machine.

(d) is used to control the pointer on a laptop screen.

(e) is used to input sounds for use in presentation software.

[5]

5 A school teacher keeps records of her students' test scores on a computer. At the end of each term she prints out letters to parents showing these results. She also uses the computer to predict the students' future test scores. Tick **three** items of software which she could use.

	✓
Word processing software	
Measuring software	
Control software	
Spreadsheet software	
Animation software	
Database software	

[3]

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## **6** A floor turtle can use the following instructions:

INSTRUCTION	MEANING
FORWARD n	Move <i>n</i> 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
REPEAT n	Repeat the following instructions <i>n</i> times
END REPEAT	Finish the REPEAT loop

72°, 50 mm Start

Complete the set of instructions to draw this shape by filling in the blank lines.

PEN DOWN		
	90	
REPEAT		
FORWARD		
	72	

[5]

1				
2				
3				
				[3]
ick <b>TRUE</b> or <b>FALSE</b> ne	kt to each statement	<u>.</u>		
			TRUE	FALSE
Online processing requir	es a transaction file	to be created.		
		ting of records		
Batch processing results	s in immediate upda	ung or records.		
		sponse from a computer		
	quires immediate re	sponse from a computer	-	
Real time processing red	quires immediate re	sponse from a computer		[4]
Real time processing red	quires immediate re	sponse from a computer.		
Real time processing red	quires immediate releded for operating A	sponse from a computer		
Real time processing red Online processing is need the manager of a book	quires immediate releded for operating A	sponse from a computer.		she sells.
Real time processing red Online processing is need The manager of a booker	quires immediate reded for operating A	sponse from a computer. TMs.  ase to store data about	t the books	she sells.
Real time processing red Online processing is need The manager of a booker This is part of the database Title of book	eded for operating A shop uses a datab se.  Fiction	sponse from a computer TMs.  ase to store data about  Number in stock	t the books Next ord	she sells. er due /10
Real time processing red Online processing is need The manager of a booker This is part of the database Title of book Full Circle	shop uses a datab	sponse from a computer TMs.  ase to store data about  Number in stock  15	Next ord	she sells. er due /10 /10
Real time processing red Online processing is need The manager of a books This is part of the database Title of book Full Circle Sanditon	shop uses a databse.  Fiction  N	sponse from a computer.  TMs.  ase to store data about  Number in stock  15  15	Next ord 20/11 18/11	she sells.  er due /10 /10

**10** Multi-national companies often use video conferencing instead of face to face meetings.

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

	TRUE	FALSE
A large hall has to be hired for video conferences to take place.		
Documents can be shared amongst participants in a video conference.		
A microphone or headset is an essential item of equipment in video conferencing.		
A codec is needed to convert data for transmission during a video conference.		
		[4]

	conference.	
		[4]
11	Explain why the following are used with PCs.	
	Pen drives	 
	Blu-ray	 
	Fixed hard disc drives	 
		 [3]
12	An oil company is investigating whether they are likely to find oil at a cuse an expert system to help them. There are a number of inputs an such a system. List <b>four</b> examples of these.	
	1	 
	2	 
	3	 
	4	[4]

For

13	Draw <b>four</b> lines on the diagram to match the use to its most <b>appropriate</b> output device.	For Examiner's Use
	Use Output device	
	to produce high quality hard copy dot matrix printer	
	to print on multipart forms motor	
	to move objects in a computer controlled system speakers	
	to output voiceovers laser printer	
	[4]	
14	A small office has four standalone computers. The office manager wants to connect the computers together to form a LAN.	
	(a) Name a network device which would have to be present in each computer before they could be networked.	
	[1]	
	(b) Give two reasons why a WLAN would be preferable to a cabled LAN.	
	1	
	2	
	[2]	
	[2]	
	(c) Give two reasons why the manager should <b>not</b> use Bluetooth technology to create the network.	
	1	
	2	
	[2]	

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(d)	The company's workers are concerned that their payroll data may not be secure as a result of the computers being networked. Explain why the workers are concerned.
	[6]
(e)	Give three actions that the office manager could take to ensure data security.
	1
	2
	3
	[3]

15	Describe <b>two</b> health issues, other than RSI, caused by the prolonged use of computers. For each health issue give a method of prevention.	For Examiner's Use
	Health issue 1	
	Method of prevention	
	Health issue 2	
	Method of prevention	
	[4]	
16	Aysha wants to enter customer details into her company's database.	
	(a) In the box below, design a user friendly input screen which has appropriate spacing for each field as well as navigation aids. The fields to be included are:	
	Name	
	Address	
	Date of Birth	
	Customer Id	
	Gender	
	[5]	

After the new system is designed and before it is implemented, Aysha wants to test it with **(b)** Describe what is meant by live data and how it is used to test a system. 17 Identify **three** methods which could be used to implement a new system. 1 2 3

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18		en a new system is implemented, documentation is provided with it. Identify <b>four</b> items ich would be found in technical documentation but <b>not</b> in user documentation.	For Examiner's Use
	•••••		
		[4]	
19		leography teacher wants to use a computer to monitor the weather conditions using the lool weather station.	
	(a)	Name <b>three</b> sensors in the weather station.	
		1	
		2	
		3 [3]	
	(b)	Explain why computers are unable to read the data directly from these sensors.	
		[2]	
	(c)	What device is needed to enable the computer to read the data?	
		[1]	

A payroll office, which prints out large numbers of payslips every month, has decided to install a new printer. Discuss the advantages and disadvantages of using a laser printer, an inkjet printer or a dot matrix printer in this office.	For Examiner's Use
[6]	
Describe <b>four</b> advantages to businesses of using email to send messages to other businesses rather than using fax machines.	
1	
2	
3	
4	

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