



Cambridge International Examinations

Cambridge International General Certificate of Secondary Education

CANDIDATE NAME							
CENTRE NUMBER				CANDIDAT NUMBER	E		

INFORMATION AND COMMUNICATION TECHNOLOGY

0417/01

Paper 1 Theory For Examination from 2016

SPECIMEN PAPER

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 in the spaces at the top of this page and any additional pages you use.

Write in dark blue or black pen.

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.

The syllabus is accredited for use in England, Wales and Northern Ireland as a Cambridge International Level 1/Level 2 Certificate.



1	Several items of data are input to a computer using direct data e most appropriate input device to input each item of data.	entry methods	. Write down	the
	(a) data written in special ink at the bottom of bank cheques			
				[1]
	(b) information on the label of a supermarket product			
				[1]
	(c) shaded in boxes on a student's examination answer sheet			
				[1]
	(d) debit card details input at an ATM			
				[1]
2	Circle two items which are used as output devices.			
	bar code reader joystick laser printer mu	ıltimedia proj	ector	
	PIN pad scanner temperature sensor	touch pad		[2]
3	Tick true or false next to each of these statements.			
	tru	e false		
	Computer programs are examples of hardware.			
	A Command Line Interface is a form of operating system.			
	A tablet computer is larger than a desktop computer.			
	A compiler is an example of applications software.			
	<u> </u>			[2]

4 A new computer system storing examination results out of 20 is to be tested using a range of test data. Tick whether each of the marks is an example of **normal** data, **abnormal** data or **extreme** data.

	normal	abnormal	extreme
18			
21			
twenty			
20			

ı	1	1
ı		- 1
ı		ч

5	A desktop computer	์ is already เ	used in an	office which	does not hav	e an internet	connection
---	--------------------	----------------	------------	--------------	--------------	---------------	------------

(a)	Name two items of hardware which would enable the computer to be connected to a loarea network.	ocal
	1	
	2	[2]

(b)	Name one	item of	nardware	wnich v	would	enable 1	ne ne	etwork to	be co	onnected	to the	internet.
												[1]

(c) Tick whether these statements are true or false.

	true	false
Booking a theatre ticket is an example of online processing.		
Producing utility bills is an example of online processing.		
An internet browser is used by web designers to test web pages.		
An internet browser uses an inference engine.		

[2]

1		
2		
3		
Ŭ		
(a)	Explain what is meant by GPS.	
(b)	Give two examples of the use of GPS.	
	1	
	2	
) III

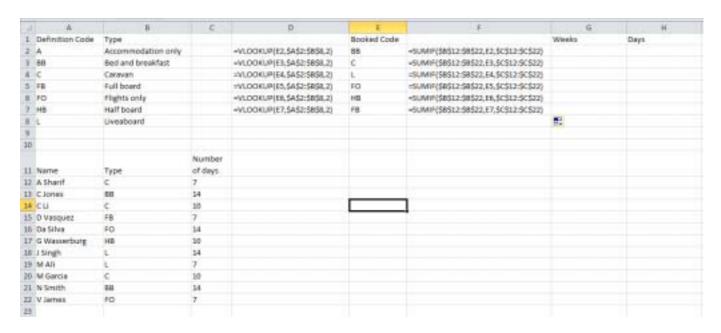
	mpare and contrast the use of magnetic tapes with removable magnetic disks to make network ver backups.

	[5
(a)	Describe what an RFID chip consists of.
	[2
(b)	Describe how RFID will be used as he passes through passport control.
	[3

10 A holiday company uses spreadsheets to organise the holidays they offer for scuba divers. In the first two columns, there is a list of holiday codes together with the accommodation offered.

Also in the spreadsheet, there are formulae to manipulate the data stored elsewhere in the spreadsheet.

There is also space to calculate the number of weeks and days each type of holiday has been booked for.



(a)	Explain what the formula in cell D2 does. (Do not refer to column headings.)	
		[3]
(b)	What type of holiday would you expect to see in D5?	
		[1]

(c)	Explain what the formula in cell F2 does. (Do not refer to column headings.)	
		[3]
(d)	What value would you expect to see in F5?	
		[1]
(e)	What formula would you expect to see in G2?	101
	=	[2]
(f)	What formula would you expect to see in H2?	
	=	[2]
(g)	Tick three appropriate features of spreadsheet software which make it suitable for creati and using computer models.	ng
	\checkmark	
	what ifs	

	>
what ifs	
queries	
automatic recalculation	
internet browsing	
animation	
data replication	
emails	
changing fonts	

1

1	Describe the differences between RAM and ROM.
	[4]
2	Paul employs Jane, a systems analyst, to create a new database system for his supermarket

12 Paul employs Jane, a systems analyst, to create a new database system for his supermarket business. He stocks a selection of foods.

Paul needs to know quickly when his stock is low so he can send for more products. He needs to record each product so it is unique. He also needs to know the date that each product was last ordered.

(a) Complete the data dictionary table, giving the field names which would be used in the database and describing the most suitable validation check which could be carried out on each field. Do **not** use spaces in the field name.

Field name	Validation check	
	None	
Last_ordered_date		

[6]

	(b)	Name and describe two methods of verification.	
		1 Name	
		Description	
		2 Name	
		Description	
			[4]
	(0)	After the system is developed it will be implemented.	
	(6)	Describe three methods by which a new system can be implemented.	
		1	
		2	
		3	
			[3]
13	Doo	ctors often use expert systems to diagnose illnesses of patients.	
		Describe how an expert system diagnoses illnesses.	
	(/		
			[4]
		***************************************	r.,

(b)	Give two other uses of expert systems.	
	1	
	2	[2]

14 A company uses robots to manufacture cars.

Tick **three** advantages for the company of using robots rather than humans to manufacture cars.

	✓
Robots produce the same standard every time.	
Robots don't cost very much to buy.	
Robots don't need programming to perform a task.	
Robots are more accurate.	
Workers are no longer employed.	
Robots don't take breaks.	
Robots can think for themselves.	
Robots never make mistakes.	-

[3]

15	Exp	chool has a cabled LAN. The head teacher of the school wants to replace it with a WL blain the differences between a cabled LAN and a WLAN, giving two advantages and advantages of having a WLAN.	
			[5]
16	(a)	Describe the differences between physical safety and e-safety when using computers.	
			[2]
	(b)	Describe three measures which should be taken in order to maintain e-safety.	
		1	
		2	
		3	•••••
		3	[3]
			[2]

7	There are many microprocessor controlled devices in the modern home. Discuss the effects these on people's lifestyles.	s of
		[6]

18	Multi-national comp disadvantages of ho	panies often use Iding video-conferen	video-conferencing. ces rather than face-to	Discuss the -face meetings.	advantages	and
						[8]
						را

BLANK PAGE

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

Cambridge International Examinations is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.