Cambridge IGCSE

CANDIDATE NAME	

CENTRE NUMBER							CANDIDATE NUMBER				

INFORMATION AND COMMUNICATION TECHNOLOGY 0417/11

Paper 1 Theory

October/November 2018

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.
Any businesses described in this paper are entirely fictitious.
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 **15** printed pages and **1** blank page.

CAMBRIDGE
International Examinations

[Turn over

1 There are many types of input device. Complete the following sentences, using the most appropriate item from the list below.

barcode reader **chip reader** **graphics tablet** **keyboard** **microphone**

mouse **numeric keypad** **scanner** **sensor** **touch pad**

(a) A device used to input sound is called a

.... [1]

(b) A device used to enter a four-digit code when paying by debit card in a shop is called a

.... [1]

(c) A pointing device commonly built into a laptop is called a

.... [1]

(d) A device, used by designers and artists, which has a stylus for drawing applications is called a

.... [1]

2 Tick whether the following activities relate to the use of **email**, **electronic fax** or **both**.

	email (✓)	electronic fax (✓)	both (✓)
Can be used as a legal document			
Allows video attachments to be added to the message			
Requires a telephone number			
Messages can be sent to a computer			

[4]

3 Tick whether the following is a method of **validation**, **verification** or **proof-reading**.

	validation (✓)	verification (✓)	proof-reading (✓)
Identifying spelling errors			
Using a range check			
Typing in data twice			
Visually comparing data on screen with the original source document			

[4]

4 **(a)** Identify the paragraph formatting shown below

> This is a compulsory paper consisting of multiple choice, short answer and structured questions. The questions are set on all sections of the syllabus content.

.... [1]

(b) Identify the paragraph formatting used for the second paragraph

> This is a compulsory paper consisting of multiple choice, short answer and structured questions.
>   The questions are set on all sections of the syllabus content.
> Each individual question is set within separate contexts of ICT applications in everyday life.

.... [1]

(c) Identify the alignment used in this paragraph

> This is a compulsory paper consisting of multiple choice, short answer and structured questions. The questions are set on all sections of the syllabus content. Each individual question is set within separate contexts of ICT applications in everyday life.

.... [1]

(d) Identify the alignment shown below

> This is a compulsory paper consisting of multiple choice, short answer and structured questions. The questions are set on all sections of the syllabus content.

.... [1]

5 A music festival is attended by very large crowds each year. Large amounts of data are collected by the organisers, who are planning to store it in the cloud.

(a) Give **four** advantages of storing the data in the cloud rather than using other storage methods.

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[4]

(b) The organisers are worried that there are drawbacks in storing data in the cloud.

Describe **three** disadvantages of using the cloud to store data rather than other storage methods.

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.... [3]

6 A soccer club uses ICT to help analyse its players' performance in a soccer game. The players use wearable technology with GPS tracking systems. The data collected from the GPS is analysed by a computer which then displays the results on the monitor at pitch side.

(a) Describe, in detail, how this system could work.

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.... [4]

(b) The wearable technology includes a number of sensors that continuously monitor the players.

Name **two** physical variables that could be monitored during the game.

1 ....

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2 ....

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[2]

(c) After the soccer game the data is printed.

Name a suitable type of printer the soccer club could use and give a reason for your choice.

Printer ....

Reason ....

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[2]

7 You have created a spreadsheet to display the Ultra Violet (UV) radiation level in Brazil, Argentina and France for 2016.

	A	B	C	D	E
1					
2					
3		Brazil	Argentina	France	
4	Jan	12	9	1	
5	Feb	11	9	1	
6	Mar	9	7	3	
7	Apr	7	4	4	
8	May	5	3	6	
9	Jun	5	2	7	
10	July	5	2	7	
11	Aug	7	4	6	
12	Sept	9	5	4	
13	Oct	10	7	2	
14	Nov	12	9	1	
15	Dec	12	10	0	
16	Average	8.67			
17					

The following graph was produced from some of the data.

(a) Describe how this graph was created.

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.... [4]

(b) You are going to show the graph to a group of students in a Geography lesson.
Explain **three** improvements you could make to the graph to help it match the needs of the
audience.

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[3]

(c) Write down the formula that should be entered into cell B16 to calculate the average UV level
for Brazil.

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.... [2]

(d) The spreadsheet has been updated to show the danger levels of UV radiation in Brazil.

	A	B	C	D	E	F
1						
2						
3		Brazil	Danger Levels in Brazil	Argentina	France	
4	Jan	12	Extreme	9	1	
5	Feb	11		9	1	
6	Mar	9		7	3	
7	Apr	7		4	4	
8	May	5		3	6	
9	Jun	5		2	7	
10	July	5		2	7	
11	Aug	7		4	6	
12	Sept	9		5	4	
13	Oct	10		7	2	
14	Nov	12		9	1	
15	Dec	12		10	0	
16	Average	8.67				
17						
18	UV Index					
19	1	Low				
20	3	Moderate				
21	6	High				
22	8	Very High				
23	11	Extreme				
24						

Using the table in cells A19 to B23, write down the formula entered in cell C4 to display the corresponding danger levels in Brazil. This formula will be replicated down to cell C15.

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.... [5]

(e) The formula that has been written in part **(d)** needs to be replicated down to cell C15. Describe how you could display the corresponding data for all the months for Brazil.

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.... [3]

8 Discuss the advantages and disadvantages of social networking rather than email as a means of communication.

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.... [8]

9 A health authority is planning to centralise its medical booking system. This will allow all medical bookings such as doctors' appointments and hospital appointments to be made online.

The health authority is considering whether to implement the system using Pilot Running or Direct Changeover.

(a) Discuss the advantages and disadvantages of implementing this system using these methods. Include in your answer the method you think the health authority should use, giving a reason for your choice.

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.... [7]

(b) The health authority has implemented the system and it is now in full use. Evaluation now needs to take place.

For each of the following, identify **two** questions that could be asked in order to evaluate the new system.

Efficiency ....

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Ease of use ....

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Appropriateness ....

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[6]

The ambulances used by the health authority are fitted with RFID chips. These are scanned when the ambulance approaches traffic signals. If the ambulance is on an emergency call the lights automatically change to green.

(c) Describe, in detail, what happens when the ambulance approaches the traffic signals prior to the computer instructing the traffic lights to change to green.

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.... [4]

(d) The traffic controller is considering changing to a number plate recognition system on all traffic lights.

State the advantages and disadvantages of using RFID technology rather than number plate recognition in this scenario.

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.... [4]

10 A company is setting up an online shopping website. Transactions using the website need to be secure.

(a) Explain what is meant by Secure Socket Layer (SSL).

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.... [2]

(b) Describe the features that you would look for in a browser to indicate it has a secure connection to a website.

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.... [2]

11 Tick whether the following activities relate to an intranet, the internet or both.

	intranet (✓)	internet (✓)	both (✓)
This is a restricted access system.			
This system can use email for communication.			
This is a public system.			

[3]

12 Robotic systems are now widely used in the production of cars.

Describe the effects this has had on job roles and working conditions in a car production factory.

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.... [6]

13 Modern supermarkets have automated stock control systems, which use data from the checkouts.

Describe how food items can be ordered by an automated stock control system so they are delivered before the stock in the supermarket runs out.

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.... [4]

14 An author is writing a new textbook about ICT. He has used a large number of images in the document and wishes to send the document as an email attachment to his publisher, but the file is currently too large.

Describe how he could reduce the size of the document without reducing the number of images.

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.... [4]

15 Web development layers are used when designing web pages. An example of one of the layers is the presentation layer.

Name the other **two** web development layers.

1 ....

2 ....

[2]

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