Cambridge Assessment International Education
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME	

CENTRE NUMBER		CANDIDATE NUMBER	

INFORMATION AND COMMUNICATION TECHNOLOGY   **0417/11**

Paper 1 Theory   **October/November 2019**

                                                            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.

Any businesses described in this paper are entirely fictitious.

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.

Cambridge Assessment
International Education

[Turn over

1 **(a)** Tick whether the following are examples of System software or Applications software.

	System (✓)	Applications (✓)
A linker		
A database		
An operating system		
An applet		

[2]

(b) Tick whether the following are examples of Internal hardware or External hardware.

	Internal (✓)	External (✓)
A monitor		
RAM		
Printer		
Mouse		

[2]

2 The introduction of computers into the workplace has had an effect on working patterns.

Name the most appropriate working pattern that matches the descriptions given below.

(a) Working fewer hours a week than full-time staff.

.... [1]

(b) Workers have some say in when they start and finish work but must work a full day.

.... [1]

(c) One full-time job is divided between two workers.

.... [1]

(d) A worker works the required hours but in a fewer number of days.

.... [1]

3 A manager of a company based in North America is planning a meeting with colleagues in Australia. He could hold a video-conference or a face-to-face meeting. A face-to-face meeting is when the colleagues attending the meeting are all together physically in one room.

(a) Give **three** advantages of holding a video-conference rather than a face-to-face meeting.

1 ....

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2 ....

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3 ....

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[3]

(b) Give **three** disadvantages of holding a video-conference rather than a face-to-face meeting.

1 ....

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2 ....

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3 ....

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[3]

4 A public garden in Canada has a computerised greenhouse to grow rare plants.

(a) Name **three** sensors which would be used in a computerised greenhouse.

1 ....

2 ....

3 ....
[3]

(b) To maintain the environment the sprinkler system sprays water on the plants for four hours each day.

Describe how a microprocessor uses the data from a timer to control the sprinklers in the computerised greenhouse.

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.... [6]

5 People are buying smartphones rather than desktop computers.

Describe the differences between using a smartphone compared to a desktop computer.

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.... [4]

6 Compare and contrast Bluetooth and WiFi.

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.... [6]

7 You have been asked by your teacher to use a word processor to create a brochure for a new intake of pupils. The brochure will consist of:

- Images of the school taken from a digital camera.
- Printed archive photographs.
- Information about the school already stored as text files.
- Information to be typed directly into the brochure.

(a) Describe the steps which you will need to take to create the brochure.

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.... [6]

(b) When the brochure is being created, the word processing software automatically checks the spelling of the text as it is typed in and may suggest alternative words.

Explain why the suggestions may not always be appropriate.

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.... [3]

The teacher wishes to send the brochure as an email attachment to all the head teachers of the local primary schools.

(c) Explain why she would create an email group to include all the email addresses of the head teachers.

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.... [3]

(d) The head teacher has purchased a computer with a large monitor and speakers to display information about the school. It is placed in the entrance of the school where visitors wait. You have been asked to produce a set of presentation slides to show features of the school.

The head teacher has recorded an audio message which is to be included in the presentation.

Describe the steps that you would take to set up the audio message so that it plays as the presentation runs.

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.... [6]

8 A company is planning to improve its computer system. They have employed a systems analyst who is recording and analysing information about the current system.

(a) Describe why he needs to identify the inputs, processing and outputs of the current system.

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....

....

.... [2]

The systems analyst recommends that new software is required. The analyst could either write the software or purchase it off the shelf.

(b) Give **two** advantages to the company of purchasing off the shelf software for the new system.

1 ....

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2 ....

....
[2]

9 Fabian runs a film club. He has created a spreadsheet to display information about the films he shows. Part of the spreadsheet is shown.

	A	B	C	D	
1	Searches	Year	2000	=COUNTIF(B6:B11,C1)	
2		Director			
3		Film Type			
4					
5	**Film_Title**	**Year_Released**	**Director**	**Film_Type**	
6	La Ba Land	2009	David Challe	Musical	
7	Wizard of Down under	1937	Stanley Leving	Musical	
8	The Turfs 6	2018	Jane Banbury	Childrens	
9	Illusion 5	2018	Jason Blair	Action/Animation	
10	How to Train your Cat 3	2019	Sean Bluel	Action	
11	Lost City of C	2000	Steven Red	Action	

(a) Using the example of COUNTIF(B6:B11,C1), explain how a COUNTIF function works.

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.... [4]

(b) There are more than 50 rows in the spreadsheet. Fabian needs to be able to see the top five rows at all times as he is scrolling down the spreadsheet.

State the steps he needs to take to ensure this happens.

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.... [2]

10 E-safety is very important when using the internet. It is very easy to accidentally reveal personal data to others when using social networking sites.

(a) Describe **three** strategies, giving reasons for each one, which you would take to avoid revealing personal information when using social networking sites.

Strategy 1 ....

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Reason 1 ....

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Strategy 2 ....

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Reason 2 ....

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Strategy 3 ....

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Reason 3 ....

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[6]

(b) Confidential personal data is sensitive data.

Name **three** items of personal data that could be sensitive data.

1 ....

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2 ....

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3 ....

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[3]

11 When a student has finished working on an existing file, the software gives her two options, Save and Save As.

(a) Explain **two** differences between Save and Save As.

1 ....

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2 ....

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[2]

When files are saved on a computer they can be saved in other formats that can reduce their file size.

(b) Give reasons why file sizes may need to be reduced.

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.... [2]

12 A company's employees can have access to the internet and the company intranet.

Describe the differences between an intranet and the internet.

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.... [6]

13 Tick whether the following statements refer to 3D printers, Laser printers or Dot matrix printers.

	3D (✓)	Laser (✓)	Dot matrix (✓)
This printer prints layer by layer			
This printer is an impact printer			
This printer is a form of ink jet printer			
This printer produces high quality output quickly			

[4]

14 Applications software can be installed on a computer's hard disk but companies are increasingly selling applications software that is stored in the cloud.

Discuss the advantages and disadvantages of using the cloud rather than a hard disk for applications software.

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.... [6]

15 State **two** benefits to a company of using robots on car production lines.

1 ....

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2 ....

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[2]

16 Expert systems are used to diagnose illness in patients.

Discuss the advantages and disadvantages of using an expert system to diagnose illness.

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.... [8]

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16

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