



Cambridge Assessment International Education
Cambridge International General Certificate of Secondary Education

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6265018240

INFORMATION AND COMMUNICATION TECHNOLOGY

0417/11

Paper 1 Theory

May/June 2019

2 hours

Candidates answer on the Question Paper.

No Additional Materials are required.

READ THESE INSTRUCTIONS FIRST

Write your name, centre number and candidate number 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.

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

This document consists of **16** printed pages.



- 1 Direct data entry is one method of entering data into a computer.
For each statement in the table below, write down the most appropriate input device from the list.

| | | | | |
|-----------------|-------------|----------|------------------------|--------------------|
| Bar code reader | Chip reader | Keyboard | Magnetic stripe reader | MICR |
| Microphone | Mouse | PIN pad | RFID reader | Temperature sensor |

| Statement | Input device |
|--|--------------|
| The device used to input the account number printed at the bottom of a cheque | |
| The device used to input the four-digit code when a debit card is used | |
| The device used to input the data made up of black lines and spaces on household goods | |
| The device used to input the data from a contactless credit card | |

[4]

- 2 Tick whether the following examples refer to **verification**, **validation** or **proofreading**.

| | verification (✓) | validation (✓) | proofreading (✓) |
|--|---------------------|-------------------|---------------------|
| Reading through the data without reference to the original copy | | | |
| A range check is an example of this | | | |
| Checks that data is reasonable | | | |
| A way of preventing error when data is copied from one medium to another | | | |

[4]

3 Circle **two** items which are used as internal hardware devices.

Keyboard

Linker

Mouse

Printer

Processor

Sound card

[2]

4 Tick whether the following examples refer to **dot matrix**, **laser** or **3D** printers.

| | dot matrix (✓) | laser (✓) | 3D (✓) |
|--|-------------------------------|----------------------|-------------------|
| This printer uses continuous stationery. | | | |
| This printer uses toner. | | | |
| This printer is most suitable for a quiet environment. | | | |
| This printer produces solid objects. | | | |

[4]

5 A virtual reality (VR) system is being used to train workers in a nuclear power station.

(a) Name **two** input devices that could be used with VR systems in this environment.

1.....

2.....

[2]

(b) Name **two** output devices that could be used with VR systems in this environment.

1.....

2.....

[2]

(c) Tick whether the following examples refer to **VR** or **Robotics**.

| | VR (✓) | Robotics (✓) |
|---|------------------|------------------------|
| Inserting a car engine into a real car. | | |
| Training a medical student to carry out an operation using a computer simulation. | | |
| Controlling a production line to manufacture pasta. | | |
| Taking a tour of a house before it has been built. | | |

[2]

6 IT technicians are setting up a new file server for a school.

Describe the benefits and drawbacks of using a command line interface (CLI) rather than a graphical user interface (GUI) to set up a new file server.

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[6]

7 Smartwatches can be used in remote regions of the world. These can have an in-built GPS system to help the wearer to locate their position and therefore help with navigation.

(a) Explain how GPS is used to display their location on the watch.

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(b) Describe the advantages of using a navigation system with GPS rather than printed maps in this scenario.

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[4]

- 8 Juan attends the University of Cambridge and is taking a trip to Central America to study ancient civilisations. He has taken a photograph of the Temple of the Giant Jaguar in Tikal. He plans to place the photograph in a report which he will send back to the university via email.

The original photograph Fig. 8.1 and the changed photograph Fig. 8.2 are shown.



Fig. 8.1

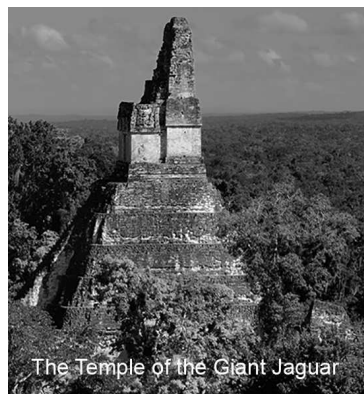


Fig. 8.2

- (a) Write down the **three** changes he has made to the photograph.

1.....

2.....

3.....

[3]

- (b) Juan tries to send the report as an attachment. He finds that the attachment, which requires editing, is taking a long time to send.

Describe **four** methods he could use to reduce the size of the report before sending it to the university.

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- 2.....
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- 3.....
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- 4.....
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[4]

(c) Juan wants to create his report whilst he is working in the jungle.

Compare the advantages and disadvantages of using a smartphone rather than a laptop computer for creating his report.

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[8]

9 Describe what is meant by the following file formats.

(a) .csv

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..... [2]

(b) .png

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..... [2]

(c) .zip

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..... [2]

- 10 Kaori is writing a school project about the history and origins of Dracula for her English Literature examination. Kaori has produced the text shown in Fig. 10.1. Her teacher has reviewed the project and thinks the layout of the document could be improved. Kaori has produced an improved version shown in Fig. 10.2.

THE BIRTH OF A LEGEND

In 1885 a Russian sailing ship called the Dmitry from Narva, was shipwrecked off the coast of Whitby in England. This ship was renamed the Demeter in the famous novel by Bram Stoker about Dracula. Bram Stoker was staying in Whitby in 1890 whilst planning his novel. The ship which was originally carrying silver sand would also carry Dracula in the novel.

Following his trip to Whitby Stoker spent six more years writing and researching the landscapes and customs of Transylvania and the name of his villain. Some of the novel's most dramatic scenes were inspired by his holiday in Whitby. The innocent tourists, the picturesque harbour, the abbey ruins, the windswept churchyard and the salty tales he heard from Whitby seafarers all became ingredients in the novel.

In 1897 *Dracula* was published. It had an unpromising start as a play called *The Undead*, in which Stoker hoped the leading actor of the day, Henry Irving would take the lead role. But after a test performance, Irving said he never wanted to see it again. For the character of Dracula, Stoker retained Irving's aristocratic bearing and histrionic acting style, but he redrafted the play as a novel told in the form of letters, diaries, newspapers cuttings and entries in the ship's log of the *Demeter*.

The log charts the gradual disappearance of the entire crew during the journey to Whitby, until only the captain is left tied to the wheel, as the ship runs aground below East Cliff on 8 August – the date that marked Stoker's discovery of the name 'Dracula' in Whitby library. A 'large dog' bounds from the wreck and runs up the 199 steps to the church, and from

Fig. 10.1

The Birth of a Legend

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Fig. 10.2

(a) Describe the steps that Kaori took to improve the layout of the body text.

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[4]

(b) Describe the steps that Kaori took to edit the heading.

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[4]

(c) When Kaori has completed the project, she notices that on one of the pages the last line of the paragraph has appeared on the next page.

Give the technical term for this.

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[1]

11 John has realised that his younger sister is using social media websites. During her use she may reveal personal data.

(a) Explain what is meant by personal data.

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[4]

(b) Describe the strategies that John would suggest to his sister so that she can minimise the potential dangers whilst using social media websites.

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[6]

12 The internet and intranets have many different uses.

(a) Explain what is meant by the internet.

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[3]

(b) Explain what is meant by an intranet.

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[3]

(c) Describe the advantages of using the internet to research information for a technical project.

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[6]

13 Many car parks are now fitted with CCTV that can read car number plates.

(a) Explain how number plate recognition systems work.

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[4]

(b) Describe **two** problems that could occur when the system reads a number plate .

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2.....
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[2]

14 Gabriel is planning a holiday. He is booking his flights through an online booking system.

Discuss the advantages and disadvantages of using online booking systems.

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[8]

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