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Cambridge Assessment International Education

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CANDIDATE NAME

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4435483318

INFORMATION AND COMMUNICATION TECHNOLOGY **0417/11**

Paper 1 Theory **October/November 2025**

1 hour 30 minutes

You must answer on the question paper.

No additional materials are needed.

INSTRUCTIONS

- Answer **all** questions.
- Use a black or dark blue pen.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen or correction fluid.
- Do **not** write on any bar codes.
- You may use an HB pencil for any diagrams, graphs or rough working.

INFORMATION

- The total mark for this paper is 80.
- The number of marks for each question or part question is shown in brackets [ ].
- No marks will be awarded for using brand names of software packages or hardware.

This document has **12** pages. Any blank pages are indicated.

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1 Circle **two** examples of internal memory.

Actuator	CD-ROM	Hard drive	Mouse
Pen drive	RAM	ROM	SD card

[2]

2 Data can be in two forms, analogue and digital.

(a) Complete the following sentences about the different types of data.

(i) The data read by a sensor is

..... [1]

(ii) The data read by a microprocessor is

..... [1]

(b) Contrast analogue data with digital data.

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3 A headteacher has decided that all pupil reports are to be typed into a computer. He has asked the computer technician to design a layout for a pupil report.

(a) Describe **five** features of a well-designed report layout.

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[5]

(b) The report will be linked to a database. One of the fields in the database is date of birth. An example of the data found in this field is 30/01/2010.

State **two** validation checks that could be used to validate the data in this field.

1.....

2.....

[2]

(c) One way of testing the data in this field is to use different types of test data. The first piece of test data used is acceptable data.

State which type of test data is acceptable.

..... [1]

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4 A design company is planning to buy either a laser printer or a plotter.

Compare and contrast a laser printer with a plotter.

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..... [6]

5 Instructions are entered into a computer and processed to produce an output.

Explain the role of the CPU in processing the instructions.

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6 A school is planning to create a computer suite in its library. The headteacher is considering using desktop computers or mobile computers.

(a) Discuss the benefits and drawbacks of the headteacher choosing desktop computers.

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(b) The headteacher is planning to use the computers for computer aided learning (CAL).

Explain what is meant by computer aided learning (CAL).

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..... [3]

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(c) Describe **three** features of CAL.

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..... [3]

7 Tawara is an online shopping company.

(a) Describe the characteristics of online shopping.

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(b) Discuss the impact of using Artificial Intelligence (AI) in online shopping.

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..... [4]

(c) The use of computer equipment can lead to many different health issues.

For each of the following health issues, describe **three** different ways of minimising the risk.

(i) eyestrain

1 .....

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2 .....

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[3]

(ii) back problems

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[3]

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8 A company uses the cloud to store data and software.

(a) Explain what is meant by the term cloud.

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(b) Access to the cloud is via the internet.

Describe the characteristics of the internet.

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9 An employee in an organisation has been working at home and has saved a file on his portable hard disk drive (HDD). He takes the portable HDD into the office.

(a) Describe the process of safely uploading the file onto the organisation's network. Include in your answer any issues that may occur and how they can be avoided.

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..... [4]

(b) State **one** example of each of the following types of storage media.

(i) optical

..... [1]

(ii) solid-state

..... [1]

(c) Data within the organisation needs to be protected. The organisation follows data protection legislation.

Explain why data protection legislation is required.

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..... [2]

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10 Phishing can be a threat to the data stored on computer systems.

(a) Describe what is meant by the term phishing.

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..... [4]

(b) State **three** ways in which a user can attempt to prevent phishing attacks.

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[3]

11 A student is creating a web page using HTML. She has coded the head section.

State the purpose of the head section. Include in your answer **one** element found in the head section.

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