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INFORMATION AND COMMUNICATION TECHNOLOGY

0417/13

Paper 1 Theory

May/June 2026

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. Do **not** use correction fluid or tape.
- 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.



1 Circle **two** direct data entry devices.

Actuator

DVD reader

Keyboard

Mouse

OMR

Printer

RFID

Sensor

[2]

2 Computers have internal memory and backing storage.

(a) ROM and RAM are examples of internal memory.

State **two** differences between ROM and RAM.

- 1.....
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2.....
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[2]

(b) State **three** differences between internal memory and backing storage.

- 1.....
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2.....
.....
3.....
.....

[3]

(c) State **three** examples of backing storage.

- 1.....
2.....
3.....

[3]



3 A computer may contain a NIC.

(a) Explain what a NIC is.

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[3]

(b) Explain the purpose of a NIC.

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[3]

4 A student has scanned a paper document into a computer. OCR software is used to allow the student to edit the text in the document.

Discuss the benefits and drawbacks of using OCR software.

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[4]





- 5 A teacher has purchased some educational software for use with his class. The software can be run on a tablet computer.

Evaluate the use of a tablet computer in this scenario.

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[6]

- 6 When data is transmitted over a network, it may need to be protected. One way of protecting data is to use encryption.

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

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[4]





- (b) When an email is sent, a digital certificate is attached. The digital certificate contains a public key.

Explain why a public key is contained in the digital certificate.

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[2]

- 7 A family is budgeting for a holiday. The family has used a spreadsheet to set up a computer model.

- (a) Explain what is meant by a computer model.

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[4]





(b) Discuss the benefits and drawbacks of the family using a spreadsheet to model its budget.

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[6]

8 A doctor has set up a computer database to store the data of her patients.

(a) Describe the benefits of using a computer database in this scenario.

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[3]

(b) One item of personal data stored in the database is a unique 6-digit patient number.

State **three** other items of personal data that could be found in this database.

1.....

2.....

3.....

[3]





(c) State, giving a reason for each, **two** validation checks that could be used on the patient number.

Check 1.....

Reason.....

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Check 2.....

Reason.....

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[4]

(d) Before the database can be used, it must be tested.

Explain why the database needs to be tested.

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[3]

(e) State the most appropriate method of implementation for the database.

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[1]

9 One of the characteristics of a web page is that it can contain a hyperlink.

(a) State **one** item on a web page to which a hyperlink could be attached.

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[1]

(b) Explain the function of a hyperlink.

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[1]





(c) A web page can be bookmarked.

Explain what is meant by a bookmark in the context of web pages.

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[2]

10 A web page uses a stylesheet.

(a) Explain the differences between attached stylesheets and inline style attributes.

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[4]

(b) (i) State the web development layer where HTML is used.

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[1]

(ii) State the web development layer where a stylesheet is used.

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[1]





11 Smart devices can monitor and control other devices in the home.

Describe the positive effects on lifestyle of using smart devices in the home.

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[6]

12 Blogs and forums are used on websites.

State the differences between a blog and a forum.

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[4]





13 State the characteristics of a flat file database.

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[4]



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