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INFORMATION AND COMMUNICATION TECHNOLOGY

0417/13

Paper 1 Theory

May/June 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.



1 Circle **two** optical storage devices.

Blu-ray disc
reader

DVD reader

Keyboard

Mouse

Pen drive

QR scanner

RFID reader

SD card

[2]

2 A computer system uses both applications software and system software.

(a) Audio editing software is an example of applications software.

Describe what is meant by audio editing software.

.....

.....

.....

.....

[2]

(b) State **two** examples of system software.

1.....

2.....

[2]





- 3** An architect is planning to buy a plotter.

Discuss the benefits and drawbacks of the architect using a plotter.

This image shows a full page of white paper with horizontal dashed lines, typical of primary school writing paper. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

- 4 A software developer is producing a new app. The app will need to be tested before it is implemented.

(a) State why the following elements need to be tested.

(i) Data structure

.....

(ii) Input format

.....



- (b) The computer app needs to be tested with normal, extreme and abnormal data before it can be implemented.

Explain what is meant by normal test data.

.....
..... [1]

- (c) The computer app allows inputs of examination grades from grade A to grade G.

State **one** example of extreme data used to test the input of the examination grades.

..... [1]

- 5 Following the development and testing of a new computer program, user documentation is produced.

- (a) Explain why user documentation is needed.

.....
..... [1]

- (b) The input format is one component in user documentation.

State **three** other components found in user documentation.

1.....
2.....
3..... [3]





- (c) User documentation can be produced as an e-publication rather than a printed booklet.

Describe **four** advantages of producing user documentation in this format rather than a printed booklet.

1.....

.....

2.....

.....

3.....

.....

4.....

..... [4]

- 6 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. Your answers must be different in each case.

- (a) Repetitive Strain Injury (RSI)

1.....

.....

2.....

.....

3.....

..... [3]

- (b) Headaches

1.....

.....

2.....

.....

3.....

..... [3]





7 Tawara Cars uses a private cloud to store data and software.

(a) Explain what is meant by a private cloud.

.....

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[3]

(b) Some of the programmers at Tawara Cars are working together on creating a new design package which is stored on the cloud.

Describe how data can be stored and managed using cloud computing.

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[4]





- 8 Weather forecasts are generated using computer models.

Discuss the benefits and drawbacks of using computer models in this way.

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[5]

- 9 A programmer has created a database for Tawara International Stores. One of the fields is Country_name which stores data as a three-letter code. For example, NZL is the code for New Zealand.

(a) Describe **three** benefits of using these codes.

1.....

.....

2.....

.....

3.....

.....

[3]





(b) The database needs to be evaluated. Part of the evaluation is to Identify any limitations.

Describe **four** other tasks carried out during the evaluation.

1.....

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2.....

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3.....

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4.....

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[4]

10 Some personal data can be sensitive data.

(a) Explain the difference between personal data and sensitive data.

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.....

.....

[2]

(b) State **two** examples of personal data.

1.....

2.....

[2]

(c) State **two** examples of sensitive data.

1.....

2.....

[2]





11 Alexander is considering buying a new smart TV and is carrying out research on the internet.

(a) Discuss how Alexander can evaluate the reliability of information found on the internet.

This image shows a full page of white paper with ten horizontal dashed lines, typical of primary school handwriting practice paper. The lines are evenly spaced and extend across the entire width of the page. There is no text or other markings on the paper.

[6]

(b) Alexander has written a report which includes images and text. He was planning to store this document on his pendrive and finds that the document is too large to store.

State **one** way in which he could reduce the size of the document so it can be stored without removing any of the text or images.

.....

[1]





(c) Alexander has added section breaks and a gutter margin to his report.

Explain the purpose of:

(i) a section break

.....

.....

.....

.....

[2]

(ii) a gutter margin

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.....

.....

.....

[2]

12 Describe the differences between a flat file database and a relational database.

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[4]





13 A spreadsheet uses both functions and formulas.

(a) Explain the differences between a function and a formula.

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.....

.....

[3]

(b) State **one** example of a:

(i) Function

.....

.....

[1]

(ii) Formula

.....

.....

[1]

(c) A spreadsheet uses relative cell referencing.

(i) Explain what is meant by relative cell referencing.

.....

.....

[1]

(ii) Describe a problem that could occur when a relative cell reference is used.

.....

.....

.....

.....

[2]





14 State **two** web development layers.

1

2 [2]

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