



# Cambridge IGCSE™

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## INFORMATION AND COMMUNICATION TECHNOLOGY

0417/13

Paper 1 Theory

May/June 2023

1 hour 30 minutes

You must answer on the question paper.

No additional materials are needed.

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### 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.

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This document has **16** pages. Any blank pages are indicated.



1 A book has an ISBN which is 0 330 24720 4

Tick (✓) the most appropriate validation check to test the validity of the ISBN.

- A character check
- B format check
- C length check
- D range check

[1]

2 Identify the most appropriate hardware from the descriptions given.

(a) An internal hardware component that connects a computer to a Local Area Network.

..... [1]

(b) An external device that retains a computer's data even after the computer is turned off.

..... [1]

(c) An input device that is attached to a monitor.

..... [1]



(b) The students have decided to use a smartphone. Data for the newsletter will be input, stored and output by the smartphone.

(i) Identify **two** devices that are part of the smartphone that could be used to input the data for the newsletter.

1 .....

2 .....

[2]

(ii) Identify **two** devices that are part of the smartphone that could be used to output data from the newsletter.

1 .....

2 .....

[2]

(iii) Identify **two** appropriate devices that could be used to store data for the newsletter.

1 .....

2 .....

[2]

(c) The newsletter is to be saved as a PDF and sent as an email attachment to parents.

Describe **two** benefits of saving the newsletter as a PDF.

1 .....

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2 .....

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[2]

(d) Describe the features that the students must include to make the newsletter appeal to the parents.

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[4]



6 Two-factor authentication can use a number of different forms of identification.

- (a) One form of identification is to use 'where the user is'.  
An example of this would be the user's GPS location.

State **two** other forms of identification. Give an appropriate example of each.

1 .....

Example .....

2 .....

Example .....

[4]

- (b) Explain the purpose of two-factor authentication.

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[2]

7 The retail industry uses point of sale (POS) systems.

(a) Discuss the benefits of using POS in the retail industry.

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[4]

(b) Describe the steps involved in automatic stock control when an item is sold at a POS terminal.

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[6]





(c) When the electronic mark book is complete it needs to be tested with live data.

Explain what is meant by live data.

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[2]

9 The manager of an organisation is planning a meeting of its directors. The manager plans to use audio-conferencing for the meeting.

(a) Explain what is meant by audio-conferencing.

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[3]

(b) The organisation could use video-conferencing for the meeting.

Describe **three** advantages of using audio-conferencing rather than video-conferencing in this scenario.

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[3]

(c) Identify the hardware and software required to join the audio-conference.

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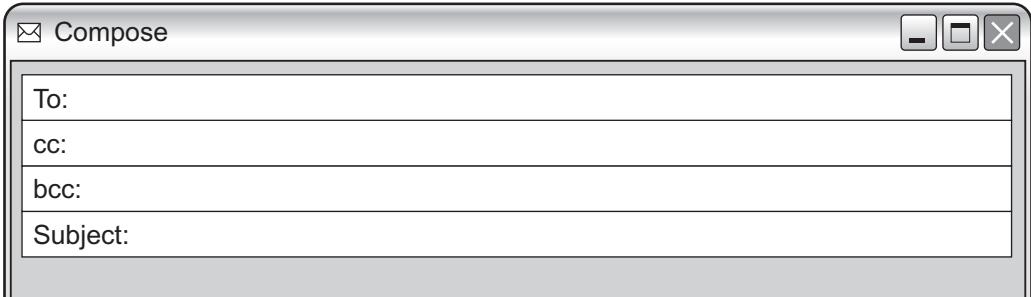
.....

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[4]

10 A school secretary is composing an email. She will send the email to a teacher and will copy the headteacher into the message. She can either copy the headteacher in as cc or bcc.



(a) Describe what is meant by cc and bcc.

cc .....

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bcc .....

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[4]



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