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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.

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 **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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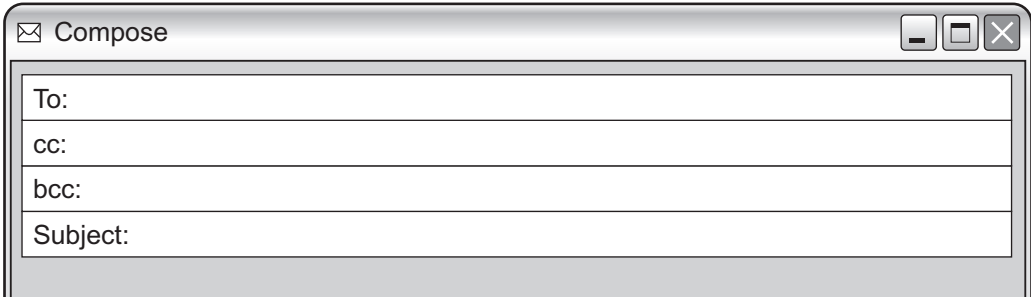
[3]

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

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[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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