



Cambridge IGCSE™

CANDIDATE
NAME

CENTRE
NUMBER

--	--	--	--	--

CANDIDATE
NUMBER

--	--	--	--

INFORMATION AND COMMUNICATION TECHNOLOGY

0417/13

Paper 1 Theory

May/June 2023

1 hour 30 minutes


1803529937

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]

3 A group of students are producing a class newsletter which they will email to parents of students in the class. They are deciding whether to use a laptop computer or a smartphone to type the newsletter.

(a) Discuss the advantages and disadvantages of using a laptop computer rather than a smartphone for this purpose.

[6]

(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

.....

2

.....

[2]

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

[4]

4 A company uses an intranet. They are considering using an extranet.

Compare an intranet with an extranet. Your answer must include similarities and differences.

[6]

5 Identify **two** appropriate IT-related causes for each of the health issues. Your answers must be different in each case.

(a) repetitive strain injury (RSI)

1

2

[2]

(b) eye strain

1

².....

[2]

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.

.....

.....

.....

[2]

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

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

[4]

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

[6]

8 A teacher is creating a spreadsheet as an electronic mark book. Part of the electronic mark book displays how well a student did on a piece of work. When a student completes a piece of work the teacher will enter the mark into the electronic mark book and a message will be displayed.

- If the student gains 60 or more marks then 'Merit' is displayed
- If the student gains 50 to 59 marks then 'Pass' is displayed
- If the student gains a mark below 50 marks then 'Not Pass' is displayed.

The formula the teacher has used is:

```
=IF(A1>=60,"Merit",IF(A1>50,"Pass","Not Pass"))
```

The formula will need to be tested. The teacher will do this by entering test data into cell A1.

(a) Explain the steps that need to be taken to test the formula. Include in your answer any test data used and the reasons why these were chosen.

[5]

(b) When the teacher enters a mark of 50 he expects 'Pass' to be displayed

State the changes he needs to make to the formula to ensure 'Pass' is displayed

.....

[1]

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

Explain what is meant by live data.

.....
.....
.....
.....

[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.

.....
.....
.....
.....
.....
.....
.....
.....

[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.

.....
.....
.....
.....
.....
.....
.....

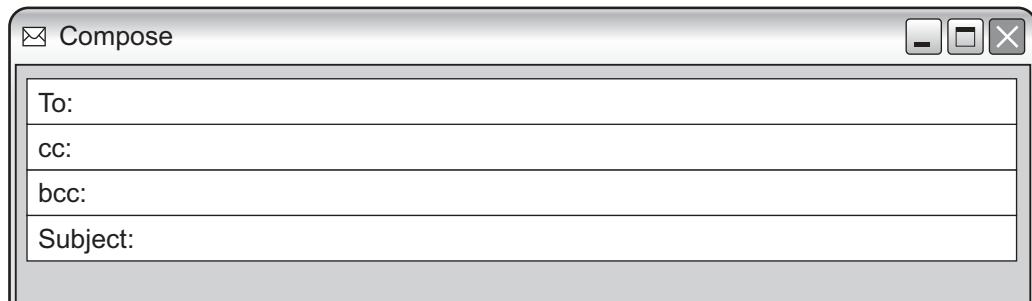
[3]

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

.....
.....
.....
.....
.....
.....
.....
.....

[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

.....
.....
.....
.....
.....

bcc

.....
.....
.....
.....
.....

[4]

(b) A teacher is considering setting up either a forum or a blog for his class to help his students with their studies.

Describe the benefits of using a forum rather than a blog.

[5]

11 Many books contain a gutter margin.

Explain what is meant by a gutter margin.

[3]

12 A web page has an attached stylesheet in the head section and also has an inline style attribute in the body section.

Explain why the inline style attribute is used.

.....
.....
.....

[2]

BLANK PAGE

BLANK PAGE

BLANK PAGE

BLANK PAGE

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge Assessment International Education Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cambridgeinternational.org after the live examination series.

Cambridge Assessment International Education is part of Cambridge Assessment. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate (UCLES), which is a department of the University of Cambridge.