GradeMax

* 0000800000001 * DFD

CAMBRIDGE
International Education

Cambridge IGCSE™

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

2608267255

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.

06_0417_13_2026_1.8
© Cambridge University Press & Assessment 2026

[Turn over

GradeMax

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.....

.....

2.....

.....

[2]

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

1.....

.....

2.....

.....

3.....

.....

[3]

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

1.....

2.....

3.....

[3]

DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN

© Cambridge University Press & Assessment 2026

GradeMax

3 A computer may contain a NIC.

(a) Explain what a NIC is.

.....

.....

.....

.....

.....

..... [3]

(b) Explain the purpose of a NIC.

.....

.....

.....

.....

.....

..... [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.

.....

.....

.....

.....

.....

.....

.....

..... [4]

DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN

© Cambridge University Press & Assessment 2026

GradeMax

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.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... [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.

.....

.....

.....

.....

.....

.....

.....

..... [4]

DO NOT WRITE IN THIS MARGIN

DO NOT WRITE IN THIS MARGIN

DO NOT WRITE IN THIS MARGIN

DO NOT WRITE IN THIS MARGIN

DO NOT WRITE IN THIS MARGIN

© Cambridge University Press & Assessment 2026

GradeMax

DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN

(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.

.....

.....

.....

..... [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.

.....

.....

.....

.....

.....

.....

.....

..... [4]

© Cambridge University Press & Assessment 2026

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

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... [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.

.....

.....

.....

.....

.....

..... [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]

DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN

© Cambridge University Press & Assessment 2026

GradeMax

DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN

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

Check 1.....

Reason.....

.....

Check 2.....

Reason.....

.....

[4]

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

Explain why the database needs to be tested.

.....

.....

.....

.....

.....

..... [3]

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

..... [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.

..... [1]

(b) Explain the function of a hyperlink.

.....

..... [1]

© Cambridge University Press & Assessment 2026

(c) A web page can be bookmarked.

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

.....

.....

.....

..... [2]

10 A web page uses a stylesheet.

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

.....

.....

.....

.....

.....

.....

.....

..... [4]

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

..... [1]

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

..... [1]

DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN

GradeMax

DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN

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.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... [6]

12 Blogs and forums are used on websites.

State the differences between a blog and a forum.

.....

.....

.....

.....

.....

.....

.....

..... [4]

© Cambridge University Press & Assessment 2026

GradeMax

13 State the characteristics of a flat file database.

.....

.....

.....

.....

.....

.....

.....

..... [4]

DO NOT WRITE IN THIS MARGIN

DO NOT WRITE IN THIS MARGIN

DO NOT WRITE IN THIS MARGIN

DO NOT WRITE IN THIS MARGIN

DO NOT WRITE IN THIS MARGIN

© Cambridge University Press & Assessment 2026

GradeMax

BLANK PAGE

DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN

© Cambridge University Press & Assessment 2026

GradeMax

BLANK PAGE

DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN
DO NOT WRITE IN THIS MARGIN

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 (Cambridge University Press & Assessment) 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 our 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 International Education is the name of our awarding body and a part of Cambridge University Press & Assessment, which is a department of the University of Cambridge.

© Cambridge University Press & Assessment 2026