GradeMax

Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER				

8329717149

INFORMATION AND COMMUNICATION TECHNOLOGY **0417/11**

Paper 1 Theory **October/November 2022**

2 hours

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 100.
- 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.

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[Turn over

1 Complete the following sentences using the most appropriate words from the list.

centre	double line space	footer	gutter	hanging
header	indented	justified	left	wrapping

(a) A margin between the main content of the page and the fold of a book is called a

..... [1]

(b) An area at the top of a page is called a

..... [1]

(c) Feature of word processing that causes text to flow around an image is called

..... [1]

(d) When text is aligned along both the left and right margins this is called

..... [1]

2 Smartphones and smartwatches can be used in everyday life. A smartwatch is a wearable computer in the form of a wrist-watch.

(a) Apart from accessing the internet, give **three** other uses of a smartphone.

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2 .....

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3 .....

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[3]

(b) Give **two** advantages of using a smartwatch rather than a smartphone.

1 .....

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2 .....

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[2]

(c) Give **two** disadvantages of using a smartwatch rather than a smartphone.

1 .....

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2 .....

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[2]

3 According to research carried out on passwords the top three most used passwords are 12345, qwerty and sunshine.

Describe, using other examples, the difference between a weak password and a strong password.

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..... [4]

4 A teacher is setting up a database which she will use to record her student's exam marks.

(a) The teacher is planning to test the mark range using different types of test data. The range of marks that the teacher can award is 0 to 100.

(i) Write down **one** example of extreme test data that the teacher can use to check the range.

..... [1]

(ii) Extreme test data is one type of test data. The teacher uses two other pieces of test data.

Write down the type of test data for each of the examples.

TEN .....

55 .....

[2]

(b) Part of the database is shown.

Student_name	Date_of_birth	Gender	Exam_mark	Average_mark
Seth	25/02/2007	M	22	43.4
Adom	17/07/2007	M	67	73.1
Maria	02/05/2007	F	78	67.9
Lesedi	15/12/2006	F	45	50.0

Write down the field name which is the most appropriate for the data type, based on the data shown in the table. Your answers must be different in each case.

Boolean .....

Numeric: integer .....

Numeric: decimal .....

Alphanumeric .....

[4]

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5 A student is carrying out a scientific experiment to measure the temperature of a liquid as it cools down. The student uses a sensor connected to a computer to read the temperature.

(a) Give **three** advantages of using computers and sensors rather than the student taking the temperature readings herself.

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[3]

(b) Describe how the readings taken by the sensor are displayed on a graph using the computer.

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(c) Explain the differences between measurement systems and control systems.

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6 There have been major issues regarding the accuracy of facial recognition systems for identifying suspects by the police.

Tawara Airport has installed biometric security including facial recognition systems to help the police recognise known criminals entering and leaving the country. Previously video was taken of all passengers and then checked manually.

(a) Discuss the effectiveness of using facial recognition systems rather than the manual video system to increase security in this way.

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(b) Give **three** examples of biometric data.

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[3]

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7 Instant messaging involves users sending text messages to each other.

Evaluate how you would use eSafety strategies in your own use of instant messaging.

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8 Discuss the moral implications which need to be considered when creating an ICT solution.

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9 Use of smartphones to access the internet has increased by over 200% in the past five years.

Compare the use of smartphones to access the internet with the use of desktop computers to access the internet. Your answer must include similarities and differences.

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10 A group of students in a school are planning to publicise a school concert. They can either produce a web page which will be sent to the company that runs the school website or create a multimedia presentation and show this to students and visitors.

(a) Give **two** types of content which could be used in a multimedia presentation that cannot be used in a printed leaflet.

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[2]

(b) Describe the advantages and disadvantages of using a multimedia presentation rather than a web page on the school website.

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The students need to test their multimedia presentation before it can be used.

(c) Name **two** output devices they can use and for each one, write down a reason for its use.

Output device 1 .....

Reason .....

.....

Output device 2 .....

Reason .....

.....

[4]

11 A receptionist in a medical centre is going to send out emails to patients about medical results. The receptionist will use the data from patients' medical and personal records and mail merge these. One of the disadvantages of this system is that the receptionist will have access to personal data.

(a) Describe **four** other disadvantages of using mail merge.

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[4]

Due to data protection laws, personal data should be kept confidential and secure.

(b) Explain why personal data should be kept confidential and secure.

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12 Many students prefer to store data on external storage devices like pen drives or portable hard disk drives.

Describe **four** advantages of using a pen drive rather than a portable hard disk drive.

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[4]

13 Hyperlinks, bookmarks and anchors are software tools used in web pages and web browsers.

(a) Describe the function of a hyperlink.

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(b) Describe the term bookmark.

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(c) Describe the function of an anchor.

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14 A research student is undertaking a study of endangered animals in the Amazon rainforest. She is using a drone to replace surveys carried out on foot. A drone is a remote-controlled flying vehicle.

Describe the benefits and drawbacks of using a drone to monitor the animals in the rainforest.

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