Types and components of computer systems – 2023 ICT IGCSE 0417

1. March/2023/Paper_0417/12/No.1
   (a) Explain what is meant by the term software.

   ....

   .... [1]

   (b) State the **two** types of software used by computers.

   1 ....

   2 ....
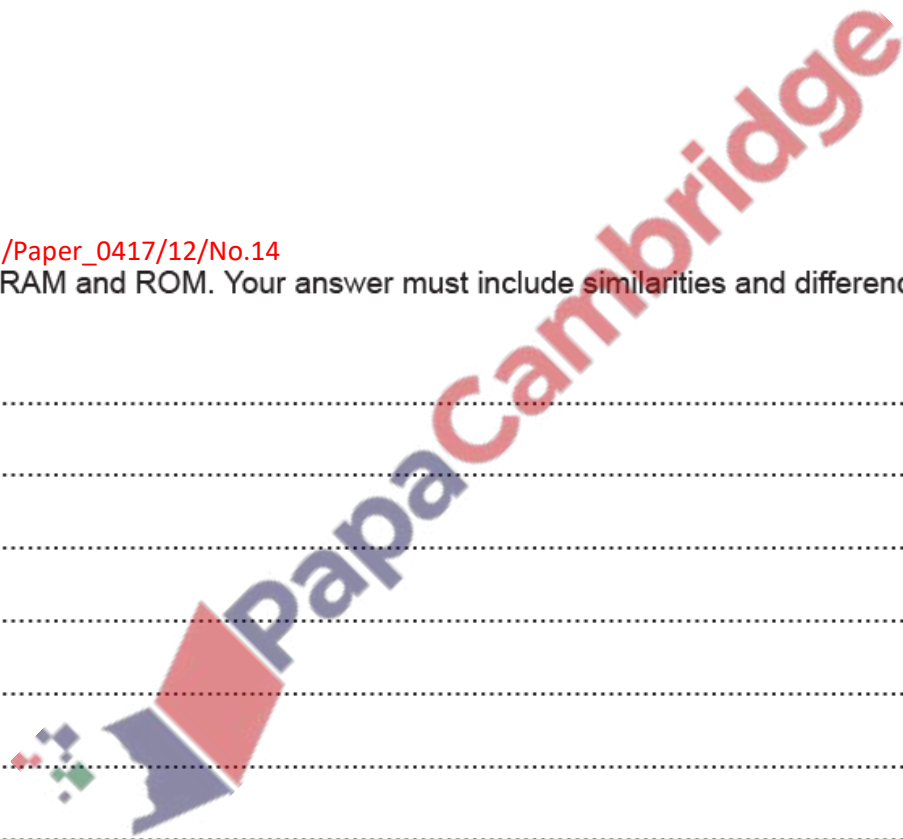
   [2]

2. March/2023/Paper_0417/12/No.14
   Compare RAM and ROM. Your answer must include similarities and differences.

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   .... [4]

3. June/2023/Paper_0417/11/No.2

Identify the hardware from the descriptions given.

(a) A volatile internal memory that stores the current instruction.

.... [1]

(b) A printed circuit board containing the CPU and other components of a computer.

.... [1]

(c) A printed circuit board that controls the output to a monitor.

.... [1]

(d) A printed circuit board that is installed in a computer so that the computer can be connected to a network.

.... [1]

4. June/2023/Paper_0417/11/No.10

Some people use dialogue-based user interfaces to operate their car audio system.

(a) Describe what is meant by a dialogue-based user interface.

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....

....

.... [2]

(b) Describe the benefits and drawbacks of using a dialogue-based user interface in this way.

....

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.... [4]

Movies can be stored on Blu-ray discs or an internal hard disk.

(a) Describe why Blu-ray discs are preferred to an internal hard disk for storing movies.

....

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....

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....

.... [4]

(b) Hard disks and Blu-ray discs are examples of backing storage.

    (i) State **two** characteristics of backing storage.

       1 ....

       ....

       2 ....

       ....

                                                                                       [2]

    (ii) Identify **two** other types of backing storage.

       1 ....

       2 ....

                                                                                     [2]

Rowena's laptop computer contains a small capacity Solid State Drive (SSD) of 32Gb and a large capacity Hard Disk Drive (HDD) of 1024Gb.

(a) State, giving a reason for your choice, a use for the SSD and a use for the HDD in the laptop computer. Your answers must be different in each case.

(i) SSD

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....

.... [2]

(ii) HDD

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.... [2]

(b) The laptop computer also contains internal memory.

Give **two** examples of internal memory.

1 ....

2 ....

[2]

A computer system uses both analogue and digital data.

(a) Explain what is meant by these types of data.

(i) analogue data

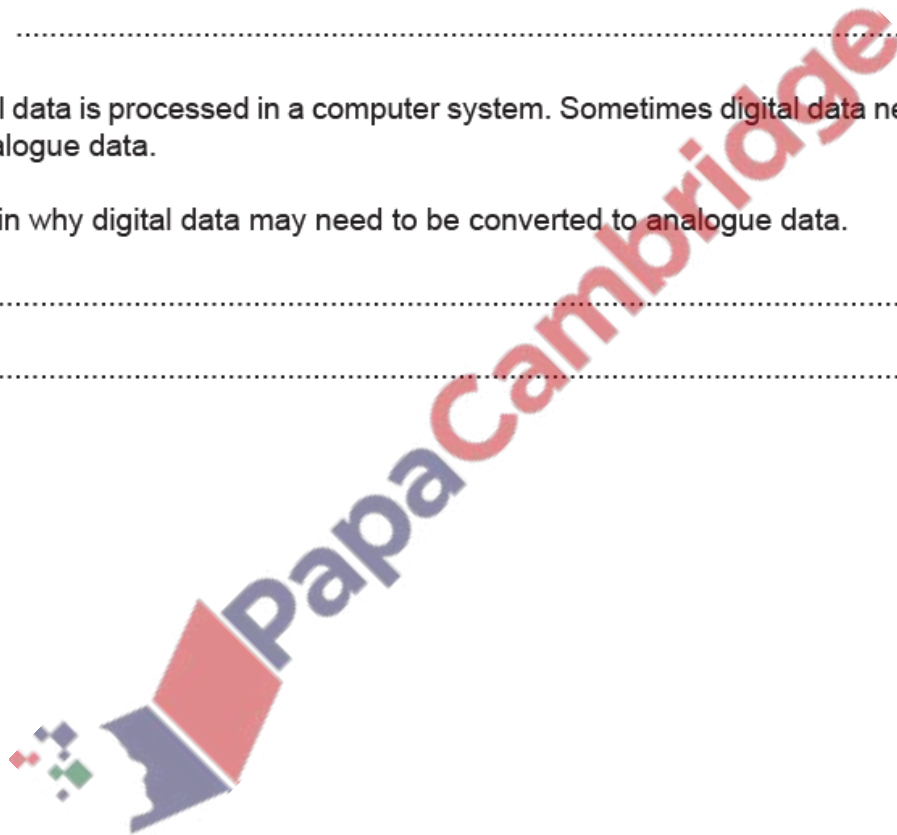..

.... [1]

(ii) digital data

....

.... [1]

(b) Digital data is processed in a computer system. Sometimes digital data needs to be converted to analogue data.

Explain why digital data may need to be converted to analogue data.

....

.... [1]

5

(c) Use the most appropriate phrase from the list to complete the sentences. Your answer must be different in each case.

analogue data

digital data

display a graph on a monitor

input the maximum safe water level for a river

measure acidity levels in a river

control humidity levels

open the windows in a greenhouse

(i) A motor is used to

....

.... [1]

(ii) A DAC outputs

....

.... [1]

(iii) A sensor is used to

....

.... [1]
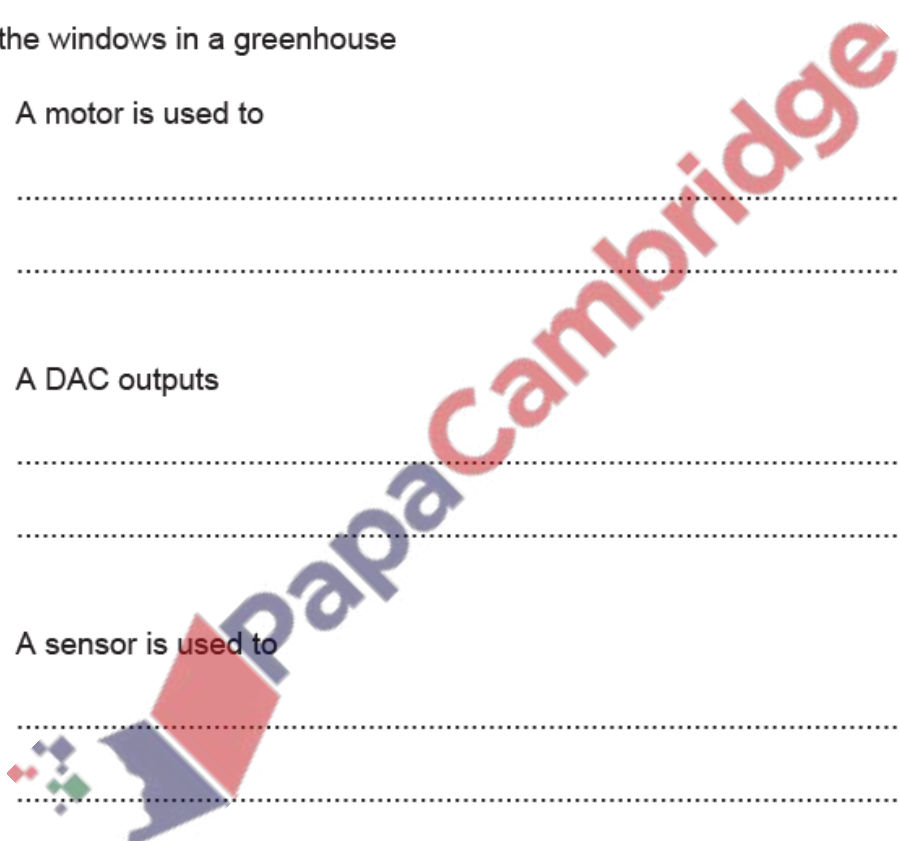
8.
A group of pupils is planning to create a newsletter for a history project. The group can either use a smartphone or a phablet computer.

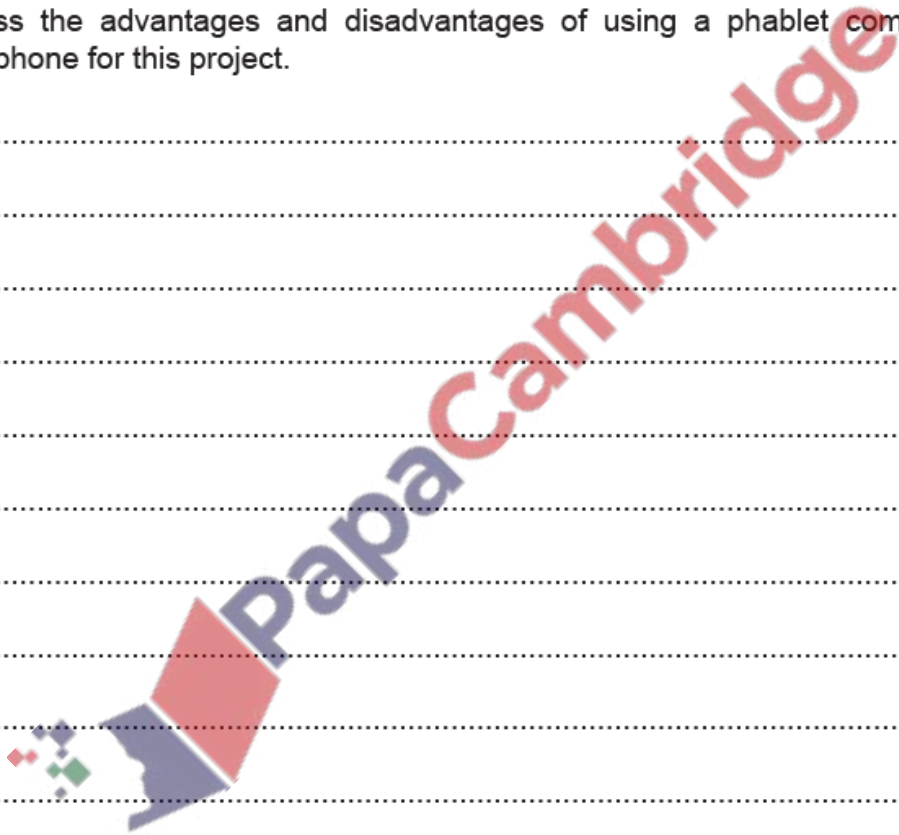(a) Explain what is meant by a phablet computer.

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.... [2]

(b) Discuss the advantages and disadvantages of using a phablet computer rather than a smartphone for this project.

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.... [6]

9.
Many teachers use multimedia projectors in their lessons.

(a) State **two** health issues associated with the use of multimedia projectors.

1 ....

2 ....

[2]

(b) State **two** safety issues associated with the use of multimedia projectors.

1 ....

2 ....

[2]

10.
Rockit Aircraft manufactures and flies aeroplanes.

(a) The pilots at Rockit Aircraft are trained using extended reality.

Describe what is meant by extended reality.

....

....

....

.... [2]

11.

A computer system consists of both hardware and software.

(a) Explain what the following types of software provide in the computer system.

Applications ....

....

System ....

....

[2]

(b) Give **two** examples of each type of software.

(i) Applications

1 ....

2 ....

[2]

(ii) System

1 ....

2 ....

[2]

12.

There are two forms of data: analogue and digital.

Contrast analogue and digital data.

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....

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....

.... [4]

13.

Computers contain a Central Processing Unit (CPU).

Describe the role of the CPU in processing instructions to produce an output.
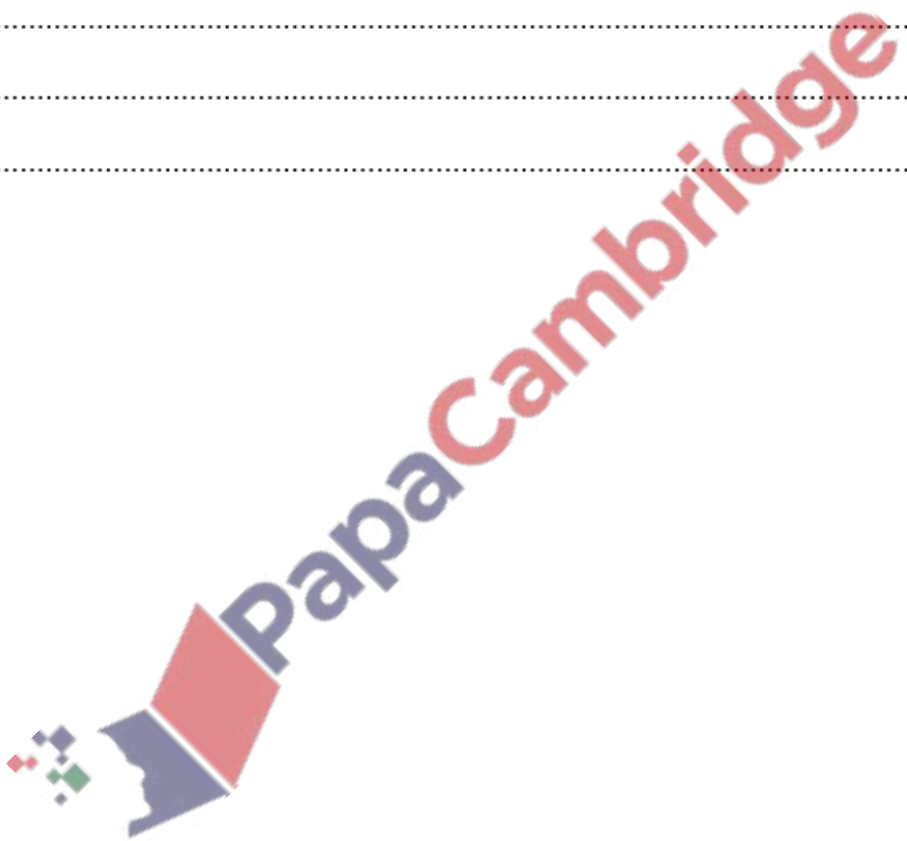
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.... [4]

14.

A doctor uses a gesture-based user interface.

State **two** other types of user interface.

1 ....

2 ....

[2]

Augmented Reality can be used with a Global Positioning System (GPS) device.

(a) State **two** other uses of Augmented Reality.

1 ....

2 ....

[2]

(b) Describe the differences between Augmented Reality and Virtual Reality.

....

....

....

.... [2]