

ICT applications – 2022 ICT IGCSE 0417

1. March/2022/Paper_12/No.4

Tick (✓) whether the following statements refer to control, measurement or modelling systems.

Only tick (✓) **one** answer for each statement.

	control (✓)	measurement (✓)	modelling (✓)
Maintaining the growing conditions in a glasshouse			
Aircraft flight simulation			
Monitoring the pollution in a river			
Using what-ifs			

[4]

2. March/2022/Paper_12/No.6

Global Positioning Systems (GPS) are used for many different applications.

(a) Describe how GPS is used by a smartphone to pinpoint its location.

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(b) Give **three** other examples of the use of GPS.

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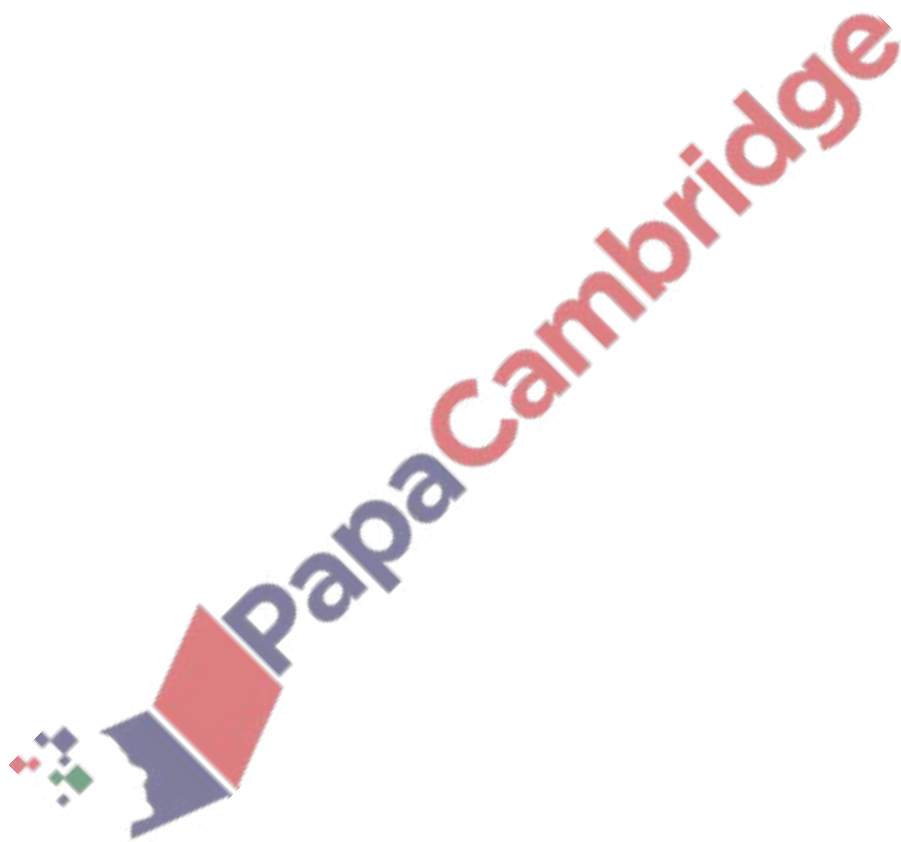
2

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[3]



5. June/2022/Paper_11/No.15(b)

(b) Describe the processing carried out by the theatre's computer when making a booking.

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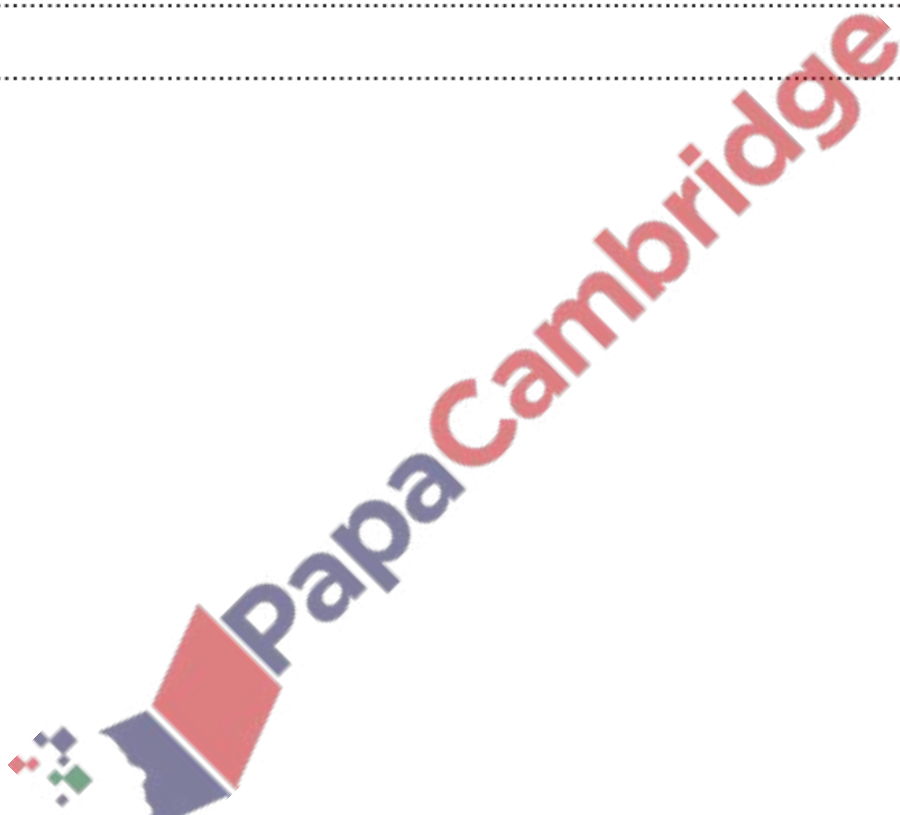
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6. June/2022/Paper_12/No.2

A computer-controlled glasshouse is used to grow plants.

Identify two output devices used in this glasshouse.

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

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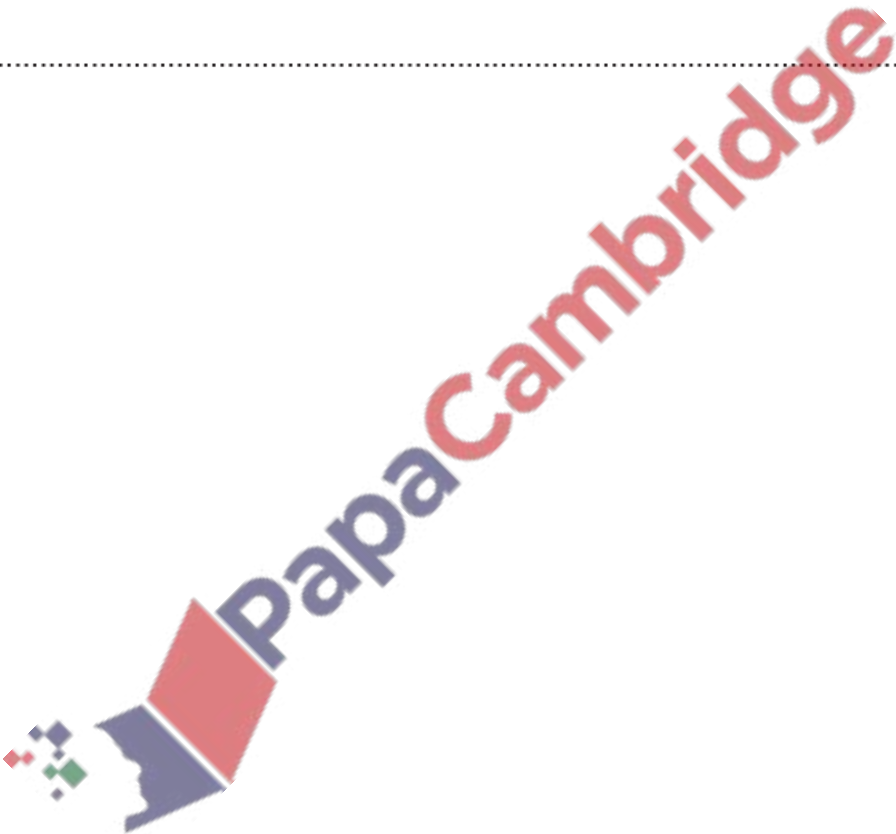
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[4]



13. Nov/2022/Paper_12/No.6

In June 2000 the London Millennium Bridge opened to the public but closed shortly afterwards for repairs. The bridge was swaying as people walked across it. Before bridges are built, computer models are produced and the models are tested.

Explain why computer models are used before building a bridge.

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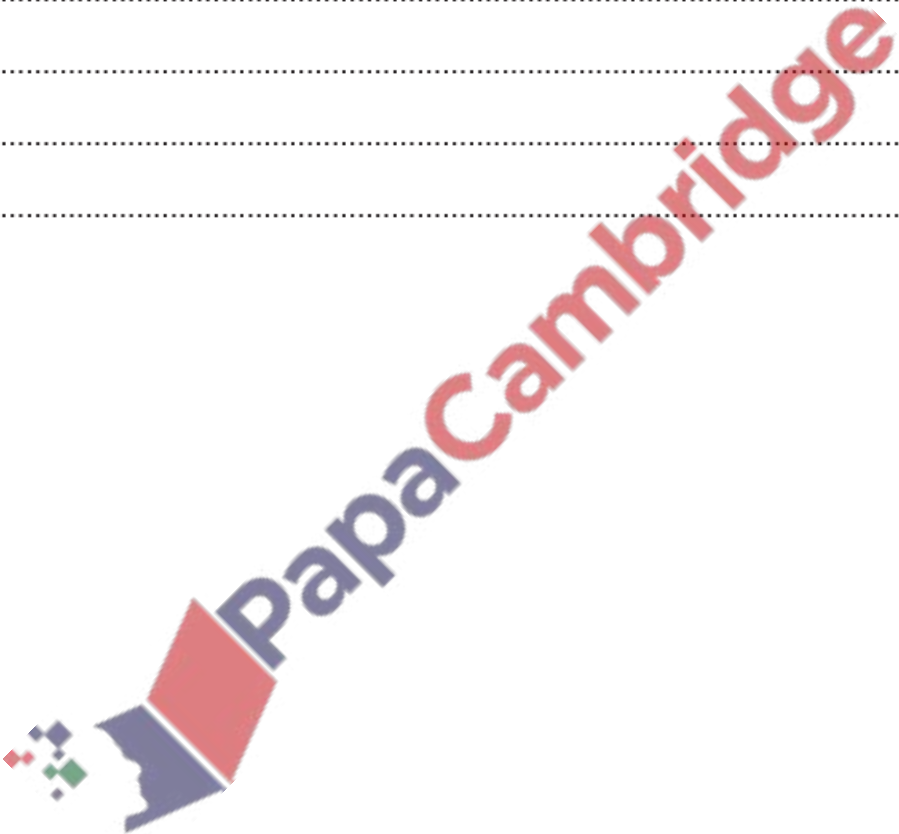
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15. Nov/2022/Paper_12/No.11(b, c)

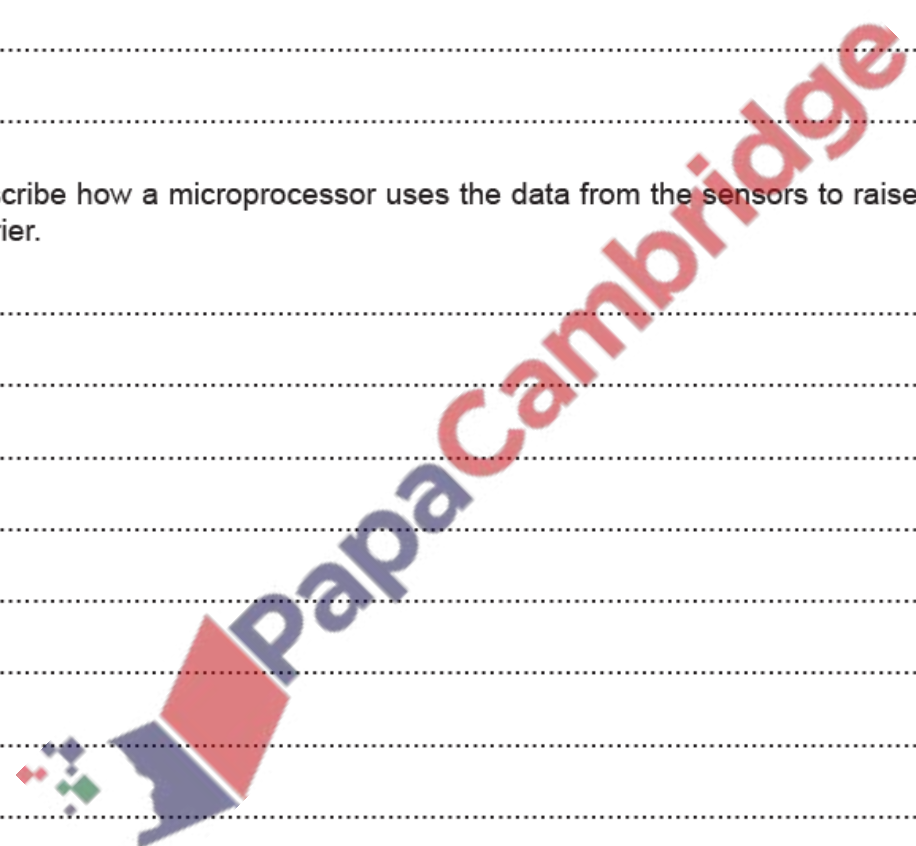
Sensors are placed in the river to check the water level. If the water level in the river rises more than 5m above normal river levels, a flood barrier is raised to safeguard the village. The flood barrier remains raised until the water level drops to normal levels.

(b) Explain why the data from the sensors cannot be read directly by the computer and name the device that needs to be used so that the computer can read the data.

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(c) Describe how a microprocessor uses the data from the sensors to raise and lower the flood barrier.

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17. Nov/2022/Paper_13/No.5(a)

A restaurant uses a number of different types of software. These include control, measurement, spreadsheet and word processing software.

(a) Tick (✓) the most appropriate piece of software to carry out the tasks shown.

	Control (✓)	Measurement (✓)	Spreadsheet (✓)	Word processing (✓)
Producing menus for the restaurant				
Calculating the cost of each of the meals				
Automatically turning on the fans when the room gets too hot				
Monitoring the temperature in the restaurant				

[4]

