

Homeostasis and control systems

Q1. (2019)

0 1

Conditions inside the human body are controlled.

0 1 . 1

What is the control of conditions inside the body called?

[1 mark]

Tick (✓) **one** box.

Excretion

☐

Fertilisation

☐

Homeostasis

☐

Osmosis

☐

Q2. (2019)

0 1 . 2

What are the **two** ways information is sent to control body conditions?

[2 marks]

Tick (✓) **two** boxes.

By antigens

☐

By hormones

☐

By muscles

☐

By nerve impulses

☐

By red blood cells

☐

Q3. (2019)

0 1 . 3

One condition in the body that needs to be controlled is the level of water.

Give **one** other condition in the human body that needs to be controlled.

[1 mark]

Q4. (2020)

0 4

Homeostasis regulates the internal conditions of the human body.

0 4 . 1

Which **two** processes are regulated by homeostasis?

[2 marks]

Tick (✓) **two** boxes.

Controlling water output in urine

☐

Defending the body against pathogens

☐

How quickly you walk

☐

Keeping cool on a hot day

☐

Waking up in the morning

☐

Q5. (2023)

0 5

Homeostasis is the control of internal body conditions.

Control of body temperature is an example of homeostasis.

0 5 . 1

Draw **one** line from each part involved in temperature control to the function of that part.

[3 marks]

Part involved in
temperature control

Function

Brain

Changes air temperature
outside the body

Muscle

Contracts to increase
body temperature

Receptor

Coordinates information
about body temperatureDetects changes in skin
temperature

Q6. (2023)

0 5 . 2

Why is homeostasis important?

[2 marks]

Tick (✓) **two** boxes.

To allow cells to function properly

☐

To change body temperature to match air temperature

☐

To decrease water levels in the body throughout the day

☐

To maintain the optimum conditions for enzymes

☐

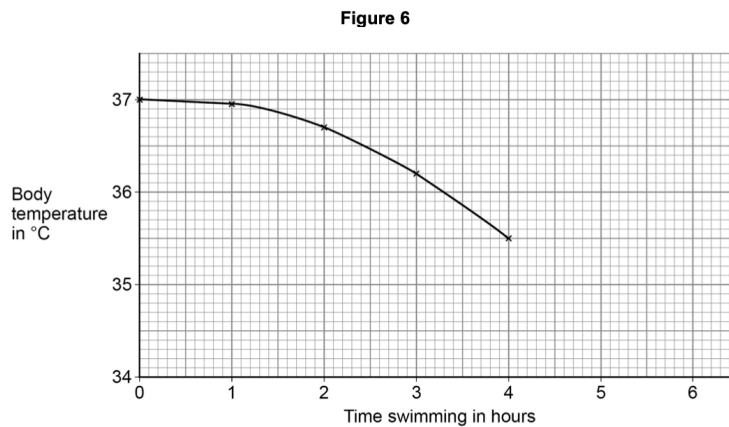
To prevent reactions inside cells

☐

Q7. (2023)

The body temperature of a long-distance swimmer can change with the length of time swimming in cold water.

Figure 6 shows how the body temperature of one swimmer changed in the first 4 hours of a 6-hour swim.



A)

0 5 . 3 Describe the trend shown in **Figure 6**.

[1 mark]

B)

0 5 . 4 Determine the change in body temperature in the first 4 hours of the swim.

[2 marks]

Change in body temperature = _____ °C

C)

0 5 . 5 Hypothermia is a dangerously low body temperature of 35 °C or colder.

Predict when the swimmer was **first** at risk of hypothermia.

You should extend the line on **Figure 6**.

[2 marks]

Prediction = _____ hours