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Level: SL IB in Biology
Subject: Biology
Topic: IB SL Biology
Type: Topic Question

2002



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All International Baccalaureate IB Topic Questions SL Biology

BIOLOGY

SL - IB

Key skills

****Question 1.****

Which of the following best defines homeostasis?

- A. The maintenance of a constant internal environment.
- B. The process of cellular respiration.
- C. The increase in body temperature during exercise.
- D. The adaptation of organisms to environmental changes.

[1 mark]

****Question 2.****

Which organ system primarily regulates temperature in humans?

- A. Digestive system
- B. Muscular system
- C. Respiratory system
- D. Integumentary system

[1 mark]

****Question 3.****

What role do effectors play in the homeostatic control system?

- A. They detect changes in the internal environment.
- B. They transmit information to the brain.
- C. They carry out responses to restore equilibrium.
- D. They monitor the output of the control center.

[1 mark]

****Question 4.****

Which of the following is an example of a negative feedback mechanism in humans?

- A. Release of insulin to lower blood glucose levels.
- B. The process of blood clotting.
- C. The release of adrenaline during stress.
- D. The production of milk during lactation.

[1 mark]

****Question 5.****

In the regulation of blood glucose levels, which organ is primarily responsible for detecting changes in glucose concentration?

- A. Liver
- B. Pancreas
- C. Kidneys
- D. Heart

[1 mark]

****Question 6.****

What is the function of the hypothalamus in thermoregulation?

- A. It increases the rate of sweating to cool the body.
- B. It acts as the control center for temperature regulation.
- C. It directly causes shivering to generate heat.
- D. It secretes hormones to regulate metabolism.

[1 mark]

****Question 7.****

Which type of feedback mechanism enhances or amplifies changes in the body's internal environment?

- A. Negative feedback
- B. Positive feedback
- C. Neutral feedback
- D. Reversible feedback

[1 mark]

****Question 8.****

Which structure in the skin is primarily responsible for detecting changes in temperature?

- A. Sweat glands
- B. Hair follicles
- C. Thermoreceptors
- D. Sebaceous glands

[1 mark]

****Question 9.****

Which hormone is involved in increasing blood glucose levels during times of stress?

- A. Insulin
- B. Glucagon
- C. Cortisol
- D. Adrenaline

[1 mark]

****Question 10.****

How does the body respond to dehydration in terms of homeostasis?

- A. By increasing urine output.
- B. By decreasing sweat production.
- C. By increasing blood glucose levels.
- D. By decreasing respiratory rate.

[1 mark]