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Homeostasis

Subject Outline
terms and
phrases

stimulus, response, stimulus-response model, sensory receptor, effector, homeostasis, internal environment, negative feedback, nervous system, endocrine system

1. (a) What is meant by the term stimulus?

(b) State four examples of a stimulus.

2. (a) List the five main types of sensory receptor that are found in humans.

(b) State five examples of changes in the external environment that humans detect, and to which they respond.

(c) State two examples of changes in the external environment that humans do not detect, and to which they do not respond.

(d) Explain why it is important that humans selectively detect and respond to changes in the external environment.

3. Choose one type of sensory receptor found in humans, and explain how the loss of this type of receptor would affect an individual.

4. (a) Describe the role of effectors.

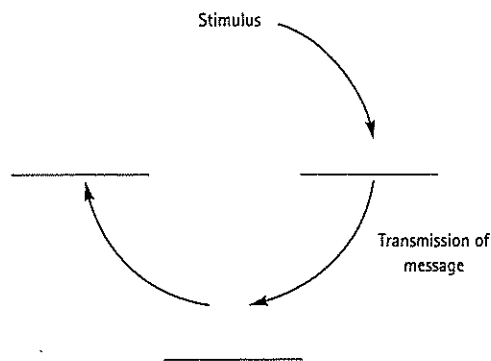
(b) List two types of effector.

5. Define the following terms. .

homeostasis: _____

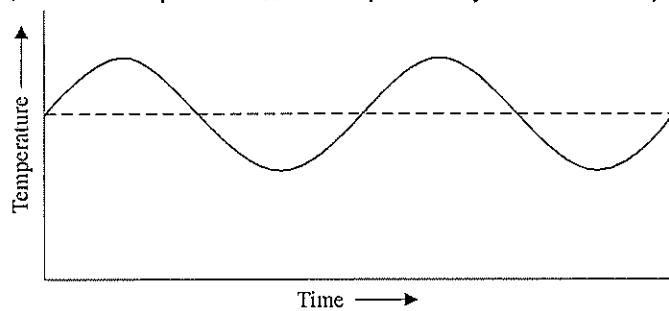
negative feedback: _____

6. (a) Fill in the missing words to show the five elements of a stimulus-response model in the correct sequence.



(b) On the diagram use an arrow of a different colour to indicate negative feedback.

7. By referring to the graph below, explain how a homeostatic control mechanism works by responding to a change in a factor (such as temperature), and explain why it cannot keep the factor constant.



8. State two organ systems that are involved in coordination and control in humans.

(1) _____

(2) _____