1.21 The Nervous System and Reflexes: 10-minute Pack

AQA 8464 · Calculator allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 The nervous system allows the body to detect changes (stimuli) in its surroundings and to coordinate a rapid response.

(a) Name the two organs that together make up the central nervous system (CNS). **(2)**

(b) State the general function of the peripheral nervous system (PNS). **(1)**

(c) An effector is a muscle or a gland. Give one example of an effector, other than a muscle. **(1)**

(Total for Question 1 is 4 marks)

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2 Homeostasis keeps the internal conditions of the body within narrow limits, despite changes inside and outside the body.

(a) Define the term 'homeostasis'. **(1)**

(b) Negative feedback is the general mechanism that keeps a condition close to its normal level. Describe, in general terms, what happens when a condition rises above its normal level in a system controlled by negative feedback. **(2)**

(Total for Question 2 is 3 marks)

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Mark scheme · 1.21 The Nervous System and Reflexes: 10-minute Pack

Question 1

(a) brain **B1**

(a) spinal cord **B1**

(a) Answer: Brain and spinal cord.

(b) carries (electrical) nerve impulses between the CNS and the rest of the body (receptors and effectors), oe **B1**

(b) Answer: It carries nerve impulses between the CNS and the receptors and effectors in the rest of the body.

(c) any named gland, e.g. a salivary gland, sweat gland or the pancreas (accept any gland that secretes a substance) **B1**

(c) Answer: A gland, e.g. a salivary gland or a sweat gland.

Question 2

(a) the regulation/maintenance of a stable internal environment in the body, despite changes inside and outside the body, oe (e.g. to maintain the conditions needed for enzymes and cells to function normally) **B1**

(a) Answer: The maintenance of a stable internal environment in the body, despite internal and external changes.

(b) the rise is detected (by receptors), which triggers a response that counteracts the change and brings the condition back down towards normal, oe **B1**

(b) once the condition returns to its normal level, the corrective response is reduced/switched off, keeping the condition within narrow limits around a set point, oe **B1**

(b) Answer: The rise is detected and a response is triggered to counteract it, lowering the condition back towards normal; once normal, the response is switched off.

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