1.22 Hormonal Coordination and Homeostasis: 10-minute Pack

AQA 8464 · Calculator allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 If blood glucose concentration falls below its normal level, for example between meals, a different pancreatic hormone is released to raise it again.

(a) Name this hormone. **(1)**

(b) Explain the effect that this hormone has on the liver. **(2)**

(c) State the general term used to describe a control system, such as blood glucose regulation, that keeps a level in the body close to a normal range. **(1)**

(Total for Question 1 is 4 marks)

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2 The endocrine system is made up of glands that release chemical messages, called hormones, straight into the bloodstream.

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

(b) Name the gland that produces insulin. **(1)**

(c) Name the pair of glands, found just above the kidneys, that produce adrenaline. **(1)**

(d) State one way in which the speed of a hormonal response is different from the speed of a nervous response. **(1)**

(Total for Question 2 is 4 marks)

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Mark scheme · 1.22 Hormonal Coordination and Homeostasis: 10-minute Pack

Question 1

(a) glucagon **B1**

(a) Answer: Glucagon.

(b) it stimulates the liver to break down its stores of glycogen, oe **B1**

(b) converting it into glucose, which is released into the blood, raising blood glucose concentration, oe **B1**

(b) Answer: Glucagon stimulates the liver to break down its stores of glycogen and convert it into glucose, which is released into the blood, raising blood glucose concentration.

(c) negative feedback **B1**

(c) Answer: Negative feedback.

Question 2

(a) a chemical messenger, produced in a gland and carried in the blood, that alters the activity of one or more target organs, oe **B1**

(a) Answer: A hormone is a chemical messenger, produced in a gland, that is carried in the blood to a target organ where it alters activity (oe).

(b) pancreas **B1**

(b) Answer: The pancreas.

(c) adrenal glands **B1**

(c) Answer: The adrenal glands.

(d) hormonal responses are slower to start (but tend to last longer) than nervous responses, oe **B1**

(d) Answer: Hormonal responses are generally slower to start than nervous responses, though they tend to last longer.

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