

Hormones and the endocrine system: practice questions

4 questions • 11 marks • mark scheme at the back

For Edexcel GCSE Biology 1BI0 and Combined Science 1SC0. **Triple only** is not in Combined Science. **Higher tier** is only on the Higher paper.

Name

Total / 11

1 Which row correctly matches a gland with a hormone it produces? [1 mark]

- A. ☐ Testes and insulin
- B. ☐ Ovaries and oestrogen
- C. ☐ Pituitary gland and thyroxine
- D. ☐ Thyroid gland and adrenalin

2 Describe how a hormone gets from an endocrine gland to its target organ. [2 marks]

3 **Higher tier** [4 marks]

A person is startled by a loud noise and the adrenal glands release adrenalin. Explain how adrenalin prepares the body for fight or flight.

4

Higher tier

[4 marks]

The level of thyroxine in a person's blood falls below normal. Explain how the body returns the level of thyroxine to normal.

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Mark scheme

One mark for each point unless a maximum is given. Words in brackets are not needed for the mark.

1. [1]

B B (1)

2. [2]

- the gland secretes / releases the hormone into the blood (1) allow bloodstream
- the blood (plasma) carries the hormone to the target organ (1) do not accept nerves

3. [4] **Higher tier**

- increases heart rate (1)
- increases blood pressure (1)
- increases blood flow to the muscles (1)
- so more oxygen and glucose are delivered for respiration (1)
- stimulates the liver to change glycogen into glucose (1)
- raising blood sugar (glucose) level (1)
- Max 4

4. [4] **Higher tier**

- low thyroxine stimulates the hypothalamus to produce TRH (1)
- TRH causes the pituitary gland to release TSH (1)
- TSH acts on the thyroid gland to produce thyroxine (1)
- when thyroxine is back to normal it inhibits the release of TRH and the production of TSH (1) allow negative feedback