

Hormones: practice questions

5 questions • 14 marks • mark scheme at the back

For Cambridge IGCSE Biology 0610 (and 0970, which has the same content). **Supplement** is Extended content, only examined on Papers 2 and 4.

Name

Total / 14

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

- A. ☐ Pancreas and adrenaline
- B. ☐ Ovaries and testosterone
- C. ☐ Testes and testosterone
- D. ☐ Adrenal glands and insulin

2 Define the term hormone. [3 marks]

3 Compare nervous control and hormonal control of the body. Refer to speed of action and duration of effect. [4 marks]

4 A student is suddenly frightened by a loud noise. The hormone adrenaline is secreted. State three effects of adrenaline on the student. [3 marks]

5

Supplement

[3 marks]

Explain how the effects of adrenaline on blood glucose concentration and heart rate help the body in a ‘fight or flight’ situation.

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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]

C C (1)

2. [3]

- a chemical substance (1)
- produced by a gland (1)
- carried by the blood (1)
- alters the activity of one or more specific target organs (1)
- Max 3

3. [4]

- nervous control is fast / acts very quickly (1)
- hormonal control is slower / acts more slowly (1)
- effect of nervous control is short-lived / does not last long (1)
- effect of hormonal control lasts longer (1)

4. [3]

- increased breathing rate (1)
- increased heart rate (1)
- increased pupil diameter / pupils dilate (1)
- ignore sweating, 'more energy'

5. [3] **Supplement**

- adrenaline increases blood glucose concentration (1) allow glycogen converted to glucose (in the liver)
- faster heart rate delivers glucose and oxygen to muscles more quickly (1)
- glucose used in (aerobic) respiration (1)
- to release energy for muscle contraction / running (1)
- Max 3