

Plant hormones: practice questions

5 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 **Triple only** [1 mark]

Which describes the response of a root to gravity?

- A. ☐ Positive phototropism
- B. ☐ Negative gravitropism
- C. ☐ Positive gravitropism
- D. ☐ Negative phototropism

2 **Triple only** [3 marks]

A shoot is lit from one side. Explain how auxin makes the shoot bend towards the light. (3)

3 **Triple only** [2 marks]

A seedling root is placed on its side. Describe how the root responds to gravity. (2)

4 **Triple only** **Higher tier** [3 marks]

Give one commercial use of each of the following plant hormones. (a) Auxins (1) (b) Gibberellins (1) (c) Ethene (1)

5

Triple only

Higher tier

[2 marks]

Bananas are picked while green and transported in cool containers. Explain why growers expose them to ethene before they are sold. (2)

Mark scheme

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

1. [1] **Triple only**

C C

2. [3] **Triple only**

- auxin moves to the shaded side (1)
- auxin makes the cells on the shaded side elongate / grow faster (1)
- so the shoot bends towards the light (1)

3. [2] **Triple only**

- root grows downwards / bends towards gravity (1)
- auxin collects on the lower side and slows the growth of cells there (1)

4. [3] **Triple only** **Higher tier**

- auxins: weedkiller / rooting powder (1)
- gibberellins: any one of germination of seeds / fruit and flower formation / production of seedless fruit (1)
- ethene: ripening of fruit (1)

5. [2] **Triple only** **Higher tier**

- ethene makes the fruit ripen (1)
- so all the fruit is ripe at the same time / ripens when it is needed in the shops (1) allow so it does not spoil during transport