

Plant Responses

Question 1

10. (a) (i) State a location in plants where growth regulators are produced.

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- (ii) How are growth regulators transported around a plant?

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- (b) Answer the following questions based on an investigation you carried out into the effect of IAA growth regulator on a plant tissue.

- (i) Name a suitable plant tissue you used in this investigation.

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- (ii) Describe how you set up the investigation.

- (iii) Describe how you measured the effect of IAA on the plant tissue.

- (iv) Describe any **one** result of your investigation.

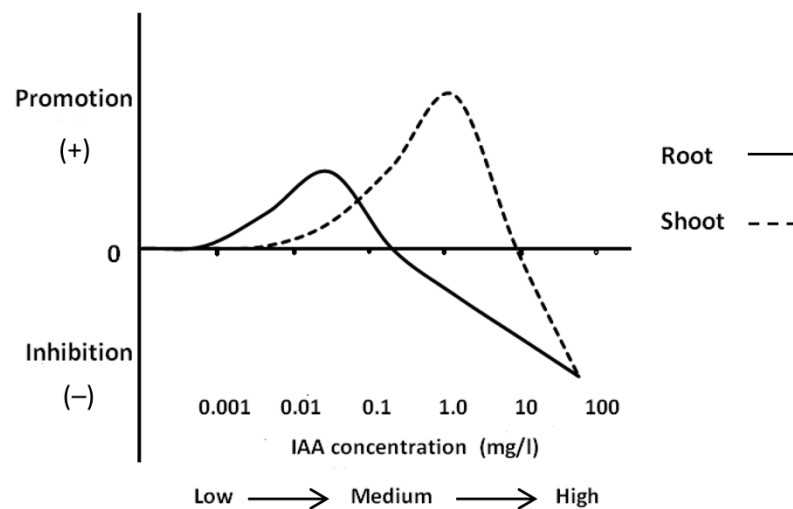
- (v) Describe **one** safety precaution you took in carrying out this investigation.

Question 2

(a) Plants produce chemicals called growth regulators such as auxin to regulate tropisms.

- (i) What is a tropism?
- (ii) Where precisely in plants are auxins produced?
- (iii) What is the precise benefit to the plant that the shoot is positively phototropic?
- (iv) Give **two** uses in agriculture or horticulture of plant growth regulators.
- (v) The graph below shows the result of a student's investigation on the effect of different concentrations of IAA on the growth of plant roots and shoots.

Compare the effects the different concentrations of IAA have on the growth of the roots and the shoots.



- (vi) State **two** reasons why the action of an auxin is considered to be similar to the action of a hormone in the human body.