

**GCSE Biology B (Twenty First Century Science)**  
**J257/03 Breadth in Biology (Higher)**

**Question Set 26**

1 Onion plants are grown for food.

(a) Onion plants can reproduce sexually or asexually.

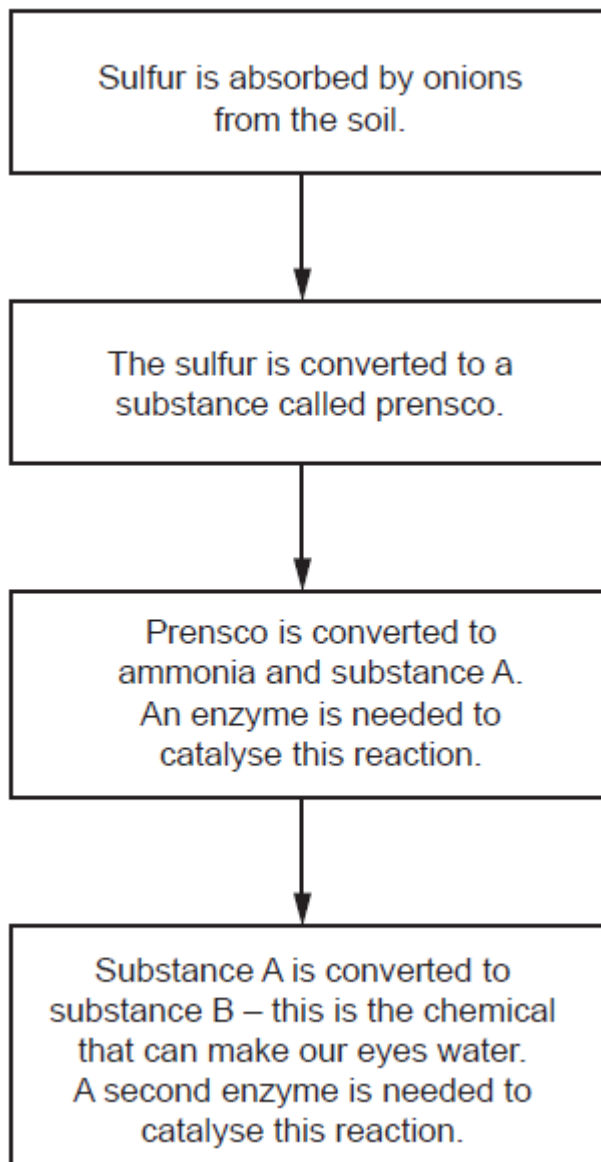
Give **one** advantage of using each type of reproduction for growing onions.

[2]

(b) When an onion is cut during food preparation, it can cause our eyes to water.

Research suggests that this is a result of a chemical that is made by the onion.

The diagram shows how the onion produces this chemical.



(i) Suggest which type of cell absorbs sulfate mineral ions from the soil. [1]

(ii) It has been suggested that if you put the onions in freezing cold water or hot water before cutting the onion, it may reduce the quantity of substance B that causes our eyes to water.

Use the information in the diagram and your knowledge of enzymes to suggest why this may work.

[3]

(c) Suggest how scientists could produce onions that make our eyes water less.

[1]

**Total Marks for Question Set 26: 7**

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