



















(b) The leaves of plants have stomata.

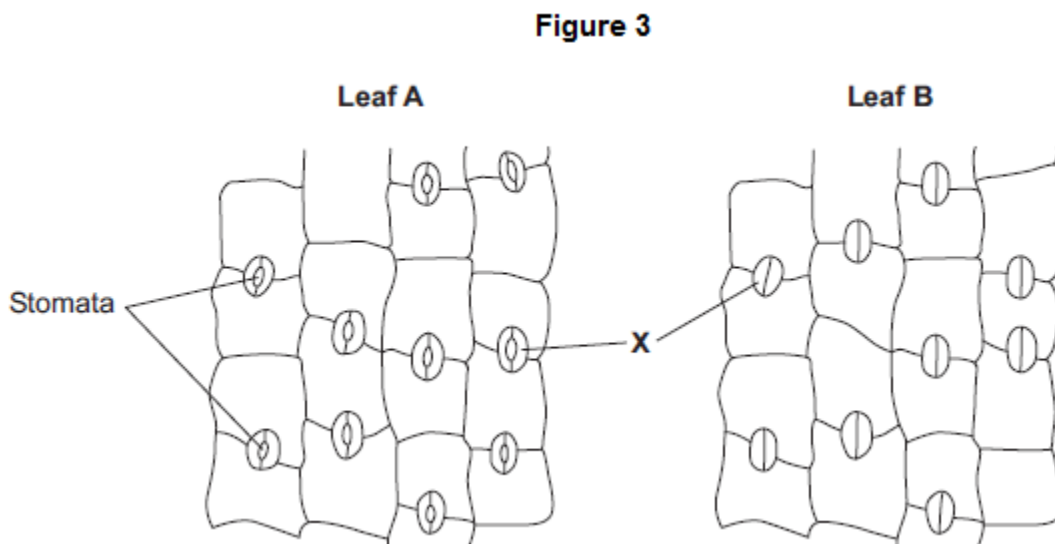
What is the function of the stomata?

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(1)

(c) **Figure 3** shows the underside of two leaves, **A** and **B**, taken from a plant in a man's house.



(i) In **Figure 3**, the cells labelled **X** control the size of the stomata.

What is the name of the cells labelled **X**?

Tick (✓) **one** box.

Guard cells

Phloem cells

Xylem cells

(1)

(ii) Describe how the appearance of the stomata in leaf **B** is different from the appearance of the stomata in leaf **A**.

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(1)

(iii) The man forgets to water the plant.

What might happen to the plant in the next few days if the stomata stay the same as shown in leaf **A** in **Figure 3**?

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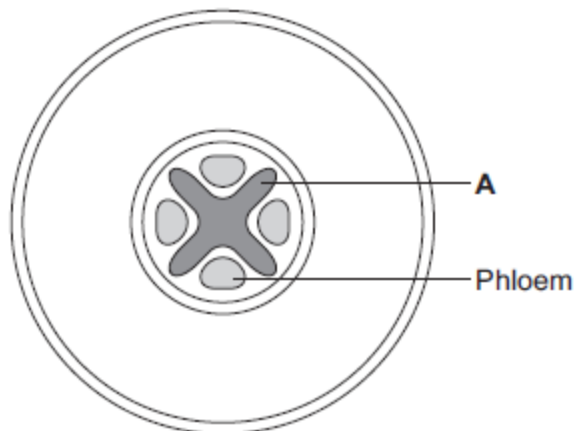
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(1)

(Total 9 marks)

4.

The diagram below shows a cross-section of a plant root. The transport tissues are labelled.



(a) (i) What is tissue **A**?

Draw a ring around the correct answer.

cuticle          epidermis          xylem

(1)

(ii) Name **two** substances transported by tissue **A**.

1. \_\_\_\_\_

2. \_\_\_\_\_

(2)

(b) Phloem is involved in a process called translocation.

(i) What is translocation?

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(1)

(ii) Explain why translocation is important to plants.

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(2)

(c) Plants must use active transport to move some substances from the soil into root hair cells.

(i) Active transport needs energy.

Which part of the cell releases most of this energy?

Tick (✓) **one** box.

mitochondria

nucleus

ribosome

(1)

(ii) Explain why active transport is necessary in root hair cells.

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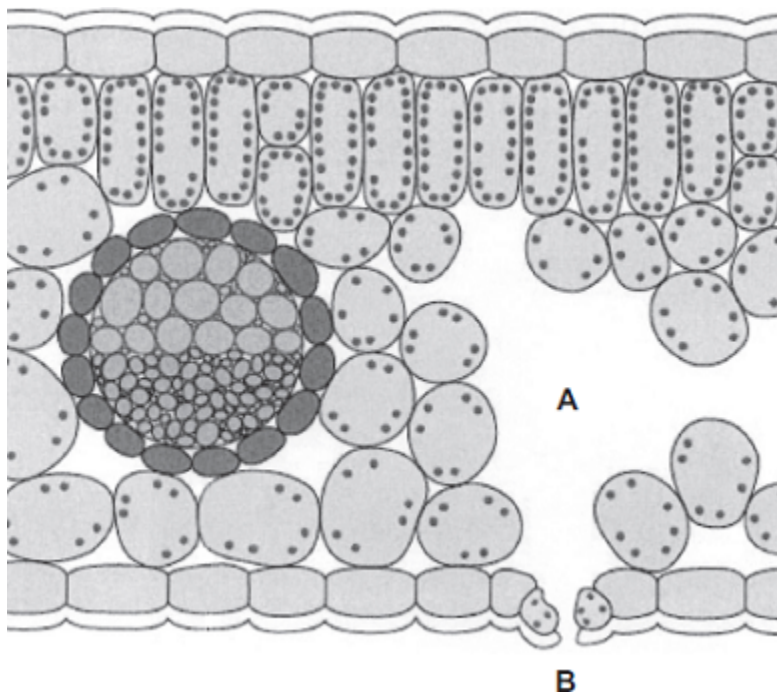
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(2)

**(Total 9 marks)**

5. The diagram shows a section through a plant leaf.



(a) Use words from the box to name **two** tissues in the leaf that transport substances around the plant.

epidermis	mesophyll	phloem	xylem
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\_\_\_\_\_ and \_\_\_\_\_

(1)

(b) Gases *diffuse* between the leaf and the surrounding air.

(i) What is *diffusion*?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(2)

(ii) Name **one** gas that will diffuse from point **A** to point **B** on the diagram on a sunny day.

\_\_\_\_\_

(1)

(Total 4 marks)