Revision Sheet

IGCSE Biology · Unit 8 Transport in plants

6 vocabulary items · 25 marks of exam questions (6 questions)

Part 1 · Vocabulary review (6 items). The terms this unit is examined on most. Mark it yourself from the answer key.

Section A · Chinese to English

Write the English word.

1. _____ [1]

2. _____ [1]

3. _____ [1]

4. _____ [1]

5. _____ [1]

6. _____ [1]

Part 2 · Exam questions (25 marks, 6 questions) begins on the next page. They are ordered easy to difficult and none of them has been set before.

7 When is the transpiration rate of a well-watered plant highest?

- **A** on a cool, dry, windy day
- **B** on a cool, wet, windy day
- **C** on a hot, dry, windy day
- **D** on a hot, wet, windy day

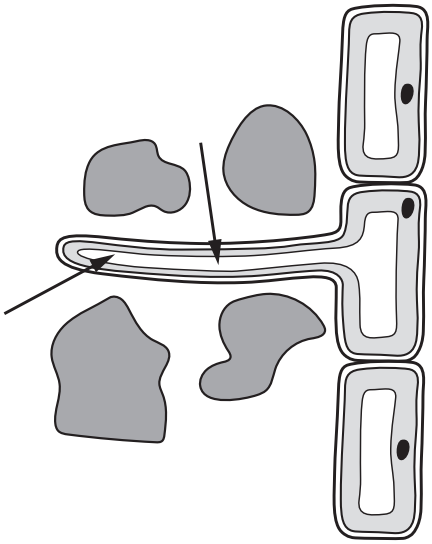
8 Which statement is correct for a flowering plant during photosynthesis?

- **A** The flowers, fruits, leaves and roots are all sources of sucrose.
- **B** The fruits are a source of sucrose and the flowers are a sink.
- **C** The leaves are a source of sucrose and the fruits are a sink.
- **D** The roots are a source of sucrose and the leaves are a sink.

9 Which feature of xylem vessels provides support to plants?

- **A** cells are joined end to end
- **B** no cell contents
- **C** no cross-walls
- **D** lignin present

10 The arrows show the movement of substances from the soil into a root hair cell.



Which substances move from the soil into the root hair cell?

A carbon dioxide and oxygen

B glucose and water

C mineral ions and glucose

D water and mineral ions

11 **(a)** Fig. 4.1 is a diagram of a cross-section of a root.

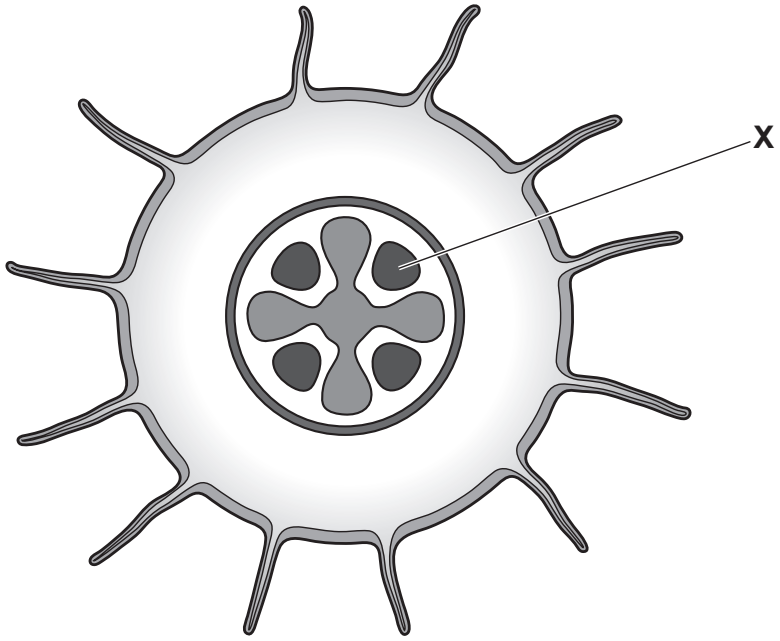


Fig. 4.1

(i) (Circle) **two** substances transported by the part labelled **X** in Fig. 4.1.

amino acids **cellulose** **fatty acids** **glucose**

glycogen **starch** **sucrose**

[2]

(ii) Label the part of the root in Fig. 4.1 that absorbs mineral ions from the soil with a label line and the correct name. [2]

(b) Mineral ions are absorbed by active transport and are transported with water in the xylem.

(i) Describe what is meant by the term active transport.

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..... [3]

(ii) State **one** function of xylem other than transport.

..... [1]

(c) Transpiration is the loss of water vapour from leaves.

State **two** environmental factors that affect the rate of transpiration.

1 .....

2 .....

[2]

[Total: 10]

12 **(a)** Fig. 4.1 is a photograph of a tree that has been girdled.

Girdling involves removing a complete circle of bark and phloem from around the tree.

Fig. 4.1

(i) Explain why the area above the girdle in Fig. 4.1 will become swollen.

Use the terms source and sink in your answer.

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..... [4]

(ii) Explain why the leaves in girdled trees are still able to receive mineral ions from the roots.

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..... [2]

(b) Explain why glucose made during photosynthesis is required for the absorption of mineral ions by the roots.

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..... [3]

(c) State the balanced symbol equation for photosynthesis.

..... [2]

[Total: 11]