

8. Transport in Plants

Question Paper

Course	CIE IGCSE Biology
Section	8. Transport in Plants
Topic	N/A
Difficulty	Medium

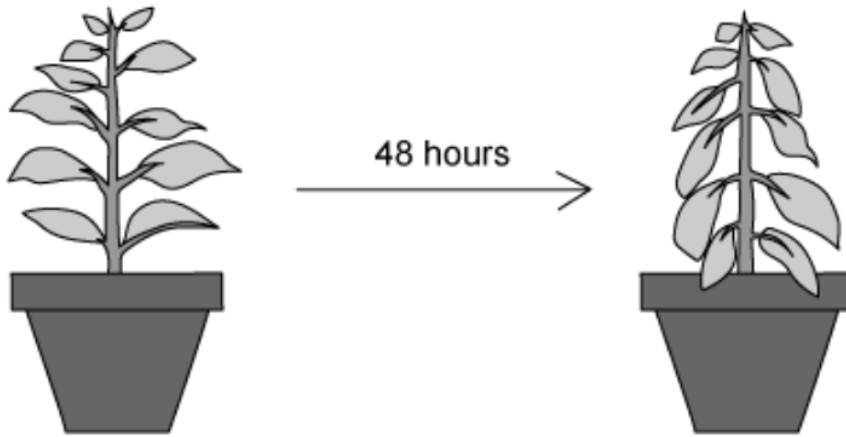
Time allowed: 10

Score: /9

Percentage: /100

Question 1

The diagram below shows a potted plant and the same plant 48 hours later.



What has caused the plant's appearance to change?

Which process causes this change?

- A Water loss by translocation is greater than water uptake
- B Water evaporating from the leaves by translocation
- C Water loss by transpiration is greater than water uptake
- D Water loss from the leaves by osmosis

[1 mark]

Question 2

Which order below is correct in describing the pathway of water as it travels from the roots through a plant?

- A Root hair cell → xylem → mesophyll cells → air space → stomata
- B Root hair cell → xylem → air spaces → mesophyll cells → stomata
- C Root hair cell → mesophyll cells → phloem → stomata
- D Root hair cell → cortex cells → mesophyll cells → xylem → stomata

[1 mark]

Question 3

Which of the following is a correct explanation of the process of translocation?

- A The movement of mineral ions through the xylem of a plant
- B The movement of sucrose and amino acids through the phloem from a source to a sink
- C The unidirectional movement of sucrose and amino acids through the phloem.
- D The movement of sucrose and amino acids through the phloem from a sink to a source

[1 mark]

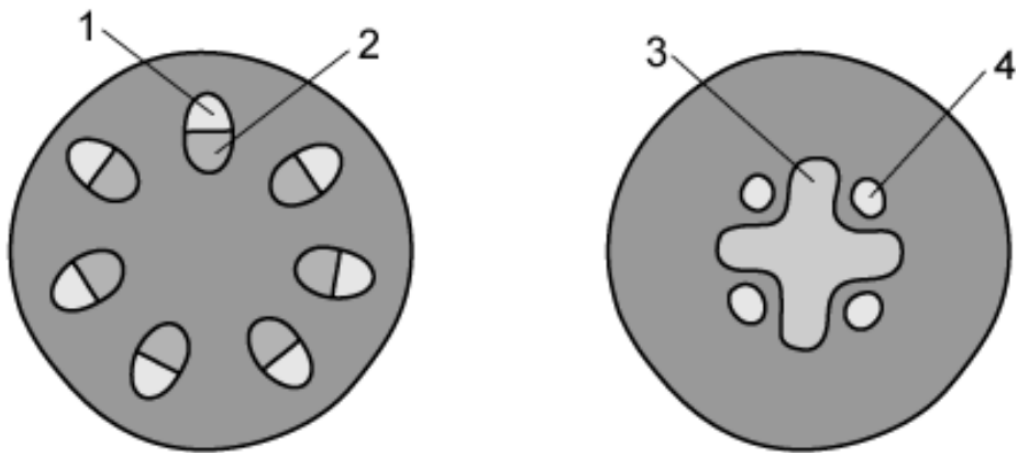
Question 4

A dicot plant is placed into a bowl of water coloured with red dye.

After 1 hour, a cross section of one of the roots is cut.

After 4 hours, a cross section is cut from the stem.

Which labelled regions would be stained red in each case?



A 1 and 3

B 1 and 4

C 2 and 4

D 2 and 3

[1 mark]

Question 5

Which of the following is a correct explanation of the effect of root hairs on absorption?

- A** Provide a large surface area, maximising the rate of absorption of water and ions by osmosis
- B** Provide a large surface area, maximising the rate of absorption of water by osmosis and ions by active transport
- C** Increase the surface area, maximising the uptake of water by osmosis and ions by diffusion
- D** Provide a surface area, increasing the rate of absorption of water and ions by active transport.

[1 mark]

Question 6

Which of the following processes are involved in the loss of water from the leaves of plants?

- 1 diffusion
- 2 osmosis
- 3 condensation
- 4 evaporation

- A** 1 and 3 **B** 1 only **C** 4 only **D** 1 and 4

[1 mark]

Question 7

A student collects some of the solution from the phloem in the stem of a plant.

Which of the following would be present in the liquid?

- A** Glucose
- B** Starch
- C** Amino acids
- D** Cellulose

[1 mark]

Question 8

A decrease in which of the following factors would normally cause the transpiration rate to increase?

- A Stomatal density
- B Light intensity
- C Temperature
- D Humidity

[1 mark]

Question 9

Which environmental factor is most likely to be responsible for a plant to wilt?

- A A decrease in light intensity
- B An increase in humidity
- C A decrease in the amount of available water
- D A decrease in wind speed

[1 mark]