

Water uptake: practice questions

4 questions • 9 marks • mark scheme at the back

For Cambridge IGCSE Combined Science 0653. **Supplement** is Extended content, only examined on Papers 2 and 4.

Name

Total / 9

1 **Supplement** [1 mark]

Why do root hair cells have long extensions?

- A. ☐ to increase the surface area for absorption
- B. ☐ to store water
- C. ☐ to carry out photosynthesis
- D. ☐ to transport sucrose

2 State two functions of root hair cells and explain how the root hair is adapted to carry them out. [3 marks]

3 Outline the pathway taken by water from the soil to the mesophyll cells of a leaf. [4 marks]

4 Which list shows the pathway of water through a plant in the correct order? [1 mark]

- A. ☐ xylem, root hair cell, root cortex, mesophyll
- B. ☐ root hair cell, root cortex, xylem, mesophyll
- C. ☐ root cortex, root hair cell, mesophyll, xylem
- D. ☐ mesophyll, xylem, root cortex, root hair cell

Mark scheme

One mark for each point unless a maximum is given. Words in brackets are not needed for the mark.

1. [1] **Supplement**

A A (1)

2. [3]

- absorb water (1)
- absorb mineral ions (1)
- long extension / root hair gives a large surface area (1)

3. [4]

- enters root hair cells (from soil) (1)
- moves through root cortex cells (1)
- enters and moves up the xylem (1)
- (from xylem in the leaf) to mesophyll cells (1)

4. [1]

B B (1)