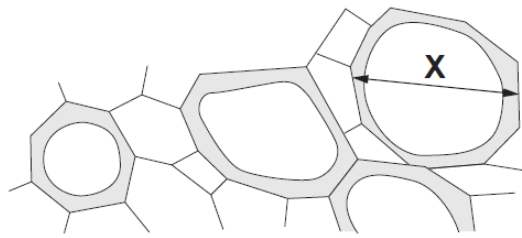


**GCSE Biology A (Gateway)**

**J247/01 B1-B3 and B7 Foundation (Foundation Tier)**

**Question Set 18**

1 The diagram shows cells that are important in the process of **transpiration** in plants.



(a) The diameter of cell **X** has been magnified 500 $\times$ .

Calculate the actual diameter of cell **X**.

Use the equation: actual diameter = measured size  $\div$  magnification

Diameter = .....mm

[2]

(b) What is the name of plant cell **X**?

Tick ( $\checkmark$ ) **one** box.

Phloem cell

Root hair cell

Xylem cell

[1]

(c) State **two** ways that cell **X** is adapted to its function in a plant.

1.....

2.....

[2]

(d) Light microscopes let us see objects as small as 0.2 micrometres.

The diameter of cells similar to cell **X**, can vary between 0.008mm and 0.5 mm.(1 mm = 1000 micrometres)

Is it possible to see all these types of cells using a light microscope?

Explain your answer

[2]

(e) State why electron microscopy has increased our knowledge of sub-cellular structures.

[1]

**Total Marks for Question Set 18: 8**

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