

8. Transport in plants

8.1 Xylem and phloem

Paper 3 and 4

Question Paper

Paper 3

Questions are applicable for both core and extended candidates unless indicated in the question

1 (c) Complete the sentences about transport in plants.

Leaves contain bundles.

The xylem in the bundles provides plants with support and transports water and from the to the leaves.

Phloem in the bundles transports and amino acids.

[4]

2 (d) Xylem tissue is used for transport and support in plants.

Describe how the structure of xylem tissue is adapted for these functions. **(extended only)**

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[3]

3 (d) State the name of the vessels that transport water through a plant.

..... [1]

4 (c) (i) State the name of the tissue that transports water up the stem and into a leaf in a plant.

..... [1]

(ii) Fig. 4.3 shows drawings of sections through a root, a stem and part of a leaf in a dicotyledonous plant.

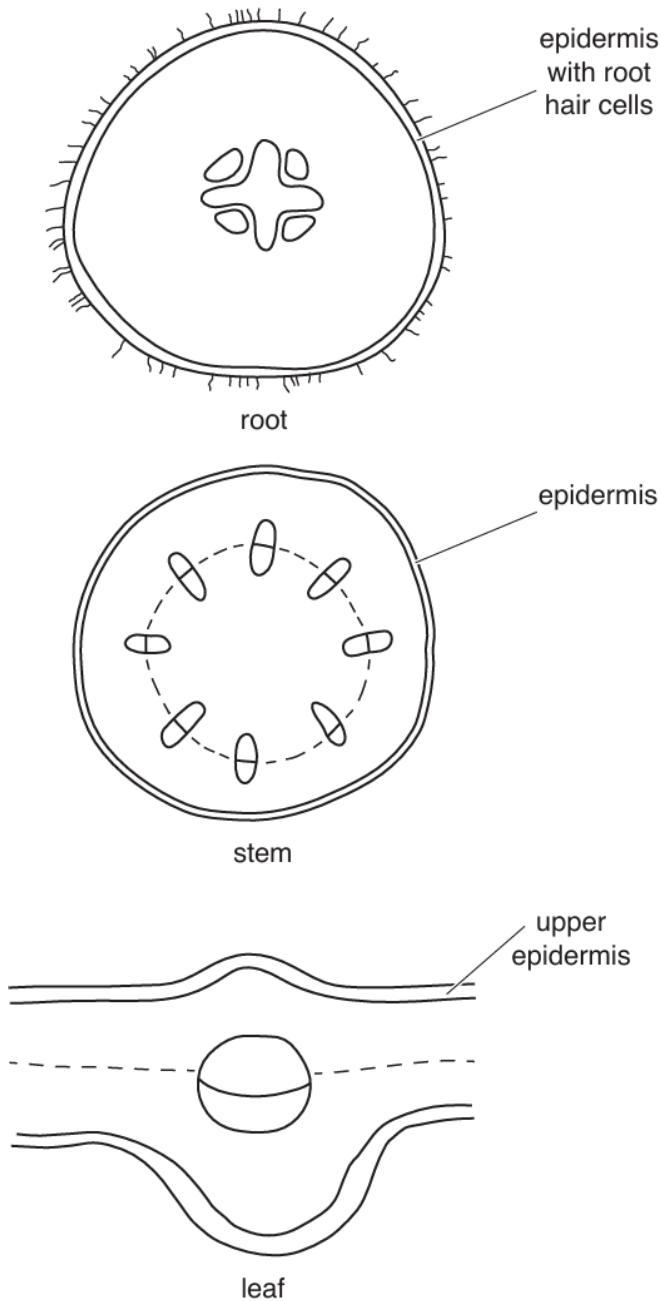


Fig. 4.3

Identify and label with the letter **W**, the position of the water transport tissue in each of the root, the stem and the leaf, on Fig. 4.3. [3]

5 (a) Fig. 3.1 is a drawing of a cross-section of a root.

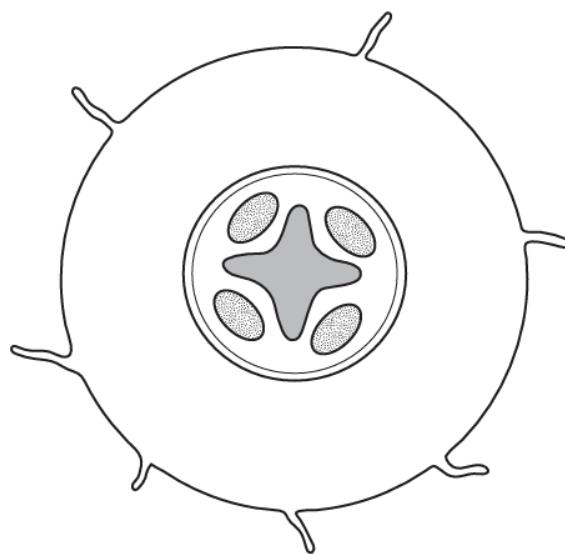


Fig. 3.1

Identify **and** label the structures on Fig. 3.1 using label lines and the labels:

- root hair
- phloem
- xylem.

[3]

Paper 4

Questions are applicable for both core and extended candidates unless indicated in the question

6 (b) Explain how xylem vessels are adapted for their functions. (extended only)

[3]

7 A student cut a section of a root and made an outline drawing of the distribution of tissues as shown in Fig. 3.1.

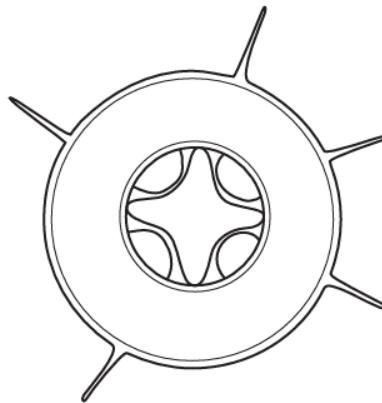


Fig. 3.1

(a) (i) Identify the position of the xylem tissue by drawing a label line and the letter **X** on Fig. 3.1. [1]

(ii) State why xylem is a tissue. **(extended only)**

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..... [2]