Transport in plants – 2022 June IGCSE 0610

1. June/2022/Paper_ 11/No.13

Which tissues are found in vascular bundles?

A palisade mesophyll and phloem

B palisade mesophyll and spongy mesophyll

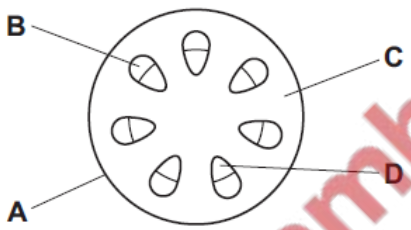
C phloem and xylem

D spongy mesophyll and xylem

2. June/2022/Paper_ 11/No.17

A non-woody plant stem is placed in water containing a red dye. It is left for one day and then a section of the stem is examined using a microscope.

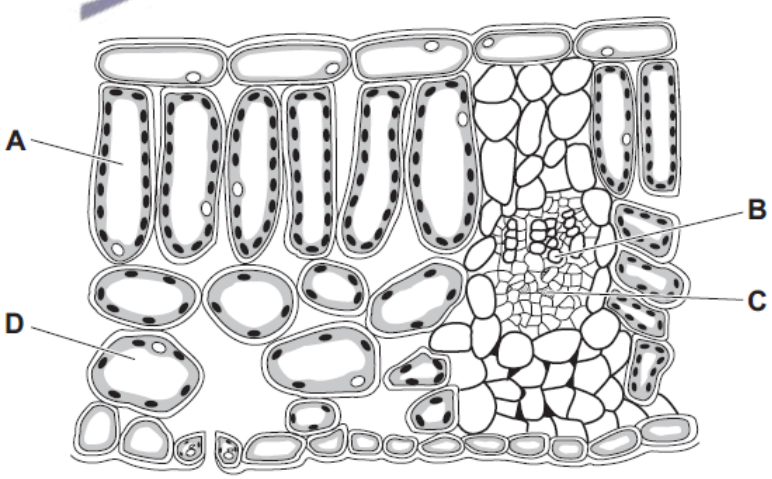
Which tissue is stained red?



3. June/2022/Paper_ 11/No.18

The diagram shows a cross-section through a leaf.

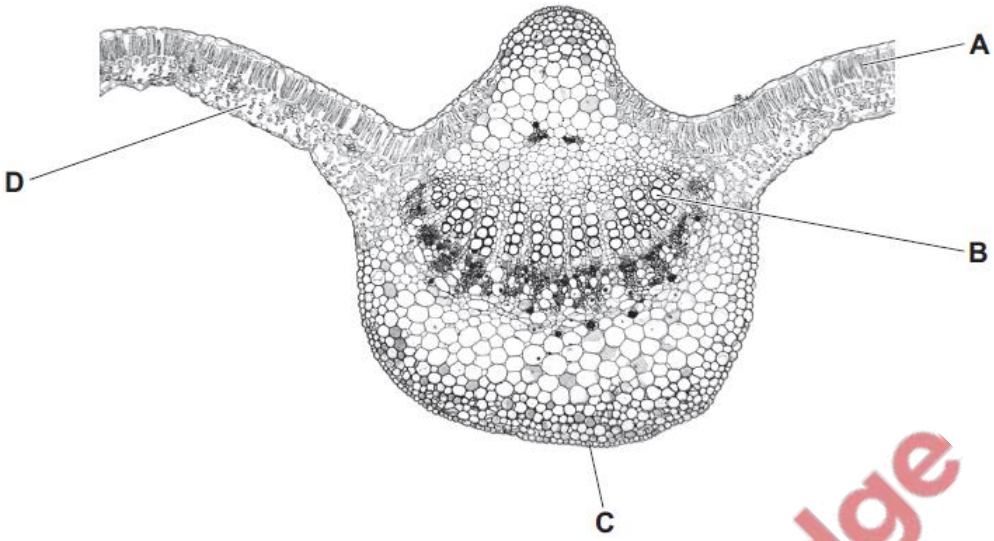
From which cell will most water evaporate during transpiration?



4. June/2022/Paper_ 13/No.17

The image shows a cross-section of part of a leaf.

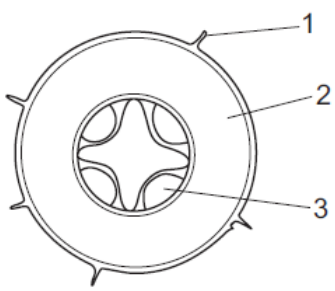
Which labelled structure is the xylem?



5. June/2022/Paper_ 13/No.18

The diagram shows a cross-section of a root.

Three regions of the root are numbered.

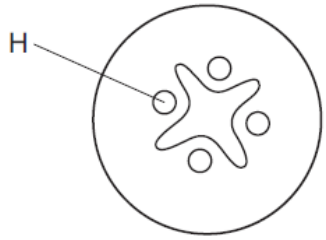


Which regions contain cells through which water must pass to reach the xylem?

A 1, 2 and 3 **B** 1 and 2 only **C** 2 and 3 only **D** 2 only

6. June/2022/Paper_ 12/No.17

The diagram shows a cross-section of part of a plant.

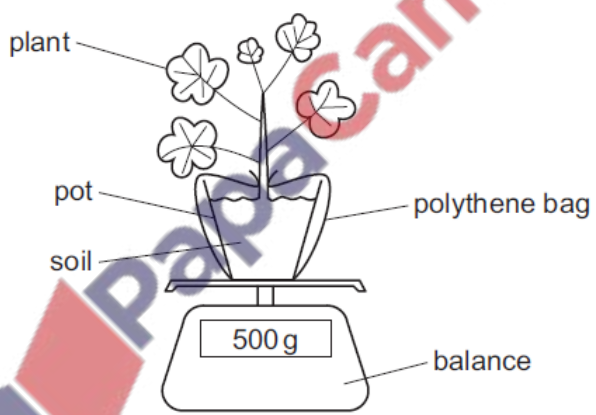


Which part of the plant is shown and what is the tissue labelled H?

	plant part	tissue H
A	root	phloem
B	root	xylem
C	stem	phloem
D	stem	xylem

7. June/2022/Paper_ 12/No.18

The apparatus shown can be used to investigate the effect of temperature and humidity on the rate of transpiration.



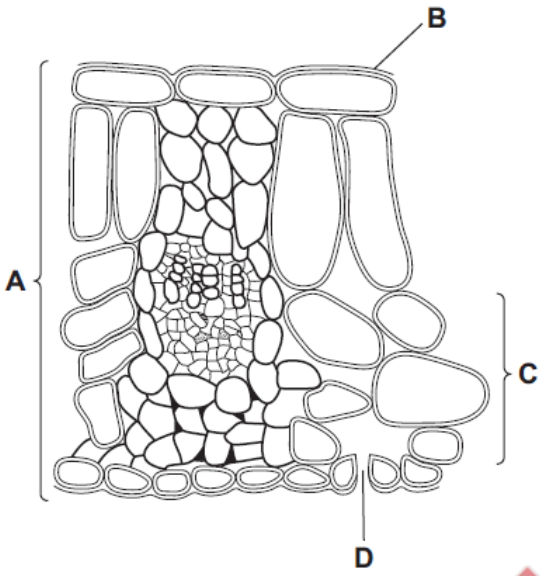
Which set of conditions would give the highest rate of transpiration and the greatest decrease in mass?

	temperature	humidity
A	cool	high
B	cool	low
C	warm	high
D	warm	low

8. June/2022/Paper_ 21/No.4

The diagram shows a cross-section through a leaf.

Which label shows a tissue?



9. June/2022/Paper_ 21/No.5

Which statement describes the net movement of particles during diffusion?

A from higher to lower concentration down a concentration gradient

B from higher to lower concentration against a concentration gradient

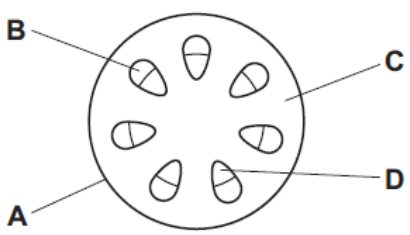
C from lower to higher concentration down a concentration gradient

D from lower to higher concentration against a concentration gradient

10. June/2022/Paper_ 21/No.15

A non-woody plant stem is placed in water containing a red dye. It is left for one day and then a section of the stem is examined using a microscope.

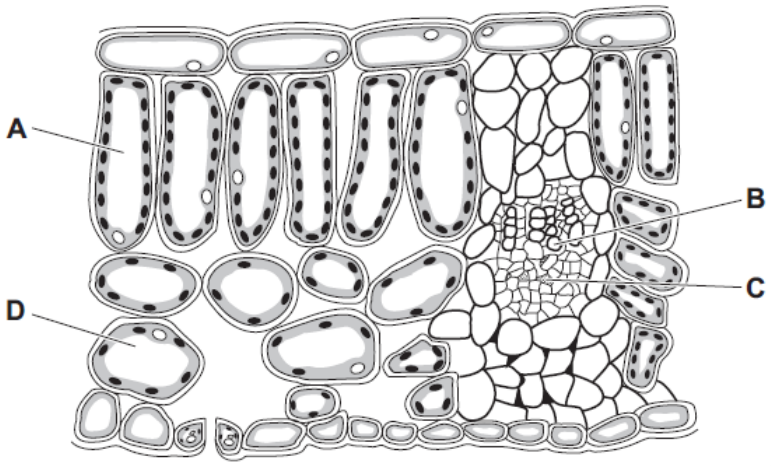
Which tissue is stained red?



11. June/2022/Paper_ 21/No.16

The diagram shows a cross-section through a leaf.

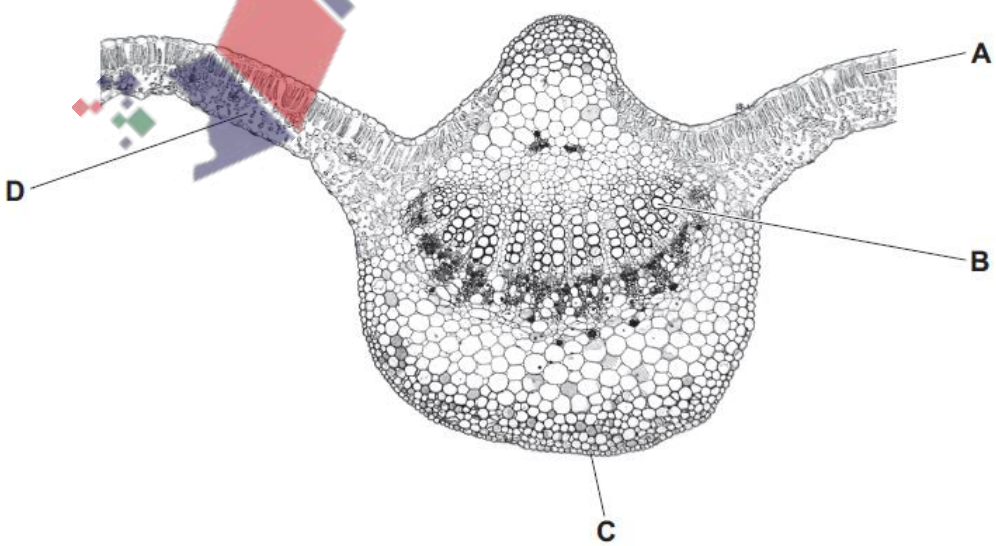
From which cell will most water evaporate during transpiration?



12. June/2022/Paper_ 23/No.15

The image shows a cross-section of part of a leaf.

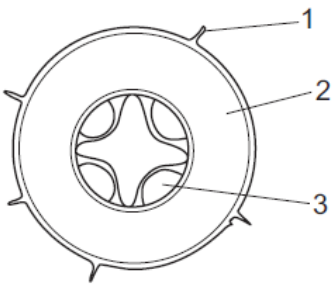
Which labelled structure is the xylem?



13. June/2022/Paper_ 23/No.16

The diagram shows a cross-section of a root.

Three regions of the root are numbered.



Which regions contain cells through which water must pass to reach the xylem?

A 1, 2 and 3 **B** 1 and 2 only **C** 2 and 3 only **D** 2 only

14. June/2022/Paper_ 32/No.1(a_ c)

Fig. 1.1 is a photograph of a plant.

Fig. 1.1

(a) (i) Draw **two** arrows on Fig. 1.1 to show the direction of movement of water into and out of the plant. [2]

(ii) State the name of the type of tissue that transports water in a plant.

..... [1]

(b) (i) Complete the definition of the term transpiration.

Transpiration is the loss of water vapour from plant leaves by

..... of water at the surfaces of .....

cells, followed by diffusion of water vapour through the ..... .

[3]

(ii) Fig. 1.2 is a graph showing the effect of temperature on the rate of transpiration from the upper and lower surfaces of leaves.

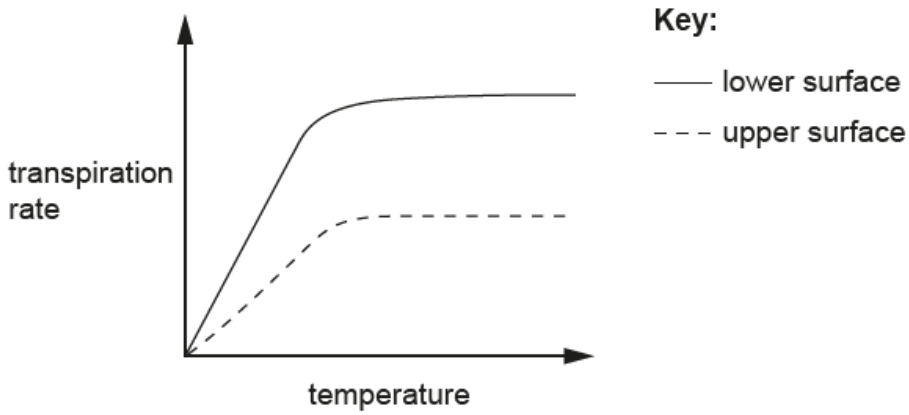


Fig. 1.2

State **two** conclusions for the data shown in Fig. 1.2.

1 .....

.....

.....

2 .....

.....

..... [2]

(c) State the effect of increasing humidity on the rate of transpiration.

.....

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..... [1]