

2 (a) Dicotyledons and monocotyledons belong to the plant kingdom.

(i) State **two** main features of plants.

- 1
- 2 [2]

(ii) State the names of **two** other kingdoms.

- 1
- 2 [2]

(b) Fig. 2.1 is a diagram of a cross-section of a monocotyledonous stem.

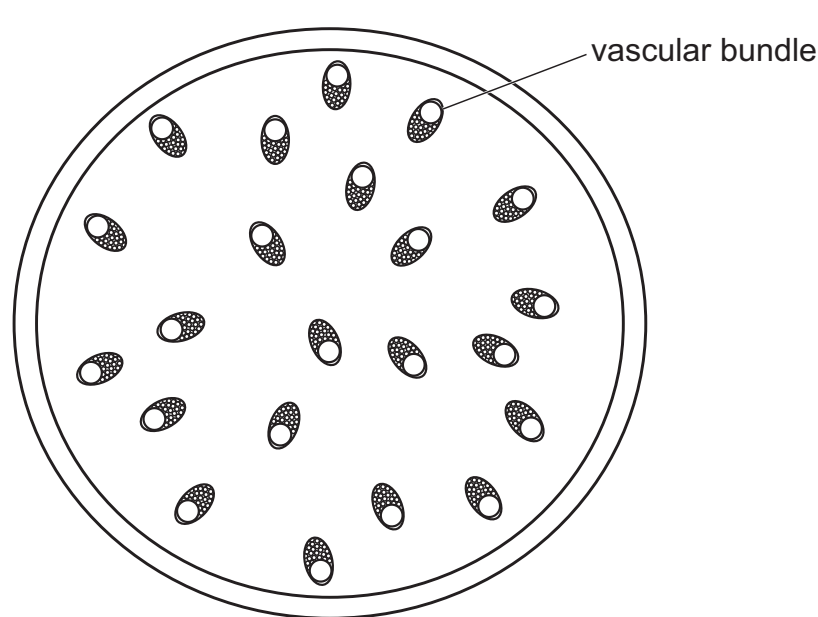


Fig. 2.1

Describe how the distribution of vascular bundles in a dicotyledonous stem would differ from the monocotyledonous stem shown in Fig. 2.1.

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..... [1]

(c) Fig. 2.2 is an incomplete drawing of a cross-section of a dicotyledonous root.

Complete Fig. 2.2 by:

- sketching the distribution of phloem and xylem
- labelling the phloem, xylem and a root hair.

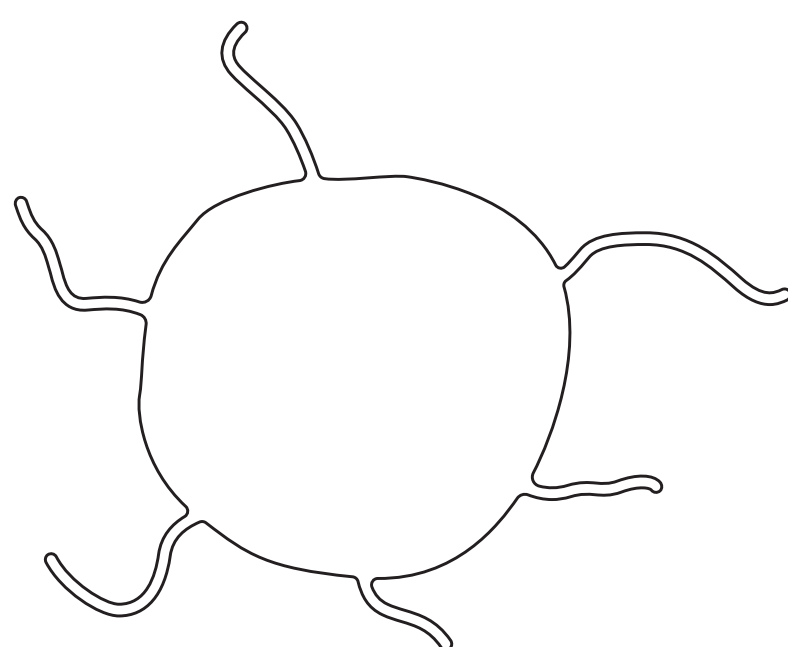


Fig. 2.2

(d) State **two** functions of xylem.

- 1
- 2 [2]

(e) A farmer investigated the effect of girdling on the mass of apple fruit produced by apple trees.

The farmer removed a 3 mm strip of bark and phloem tissue from the branches that produce the fruit, as shown in Fig. 2.3.

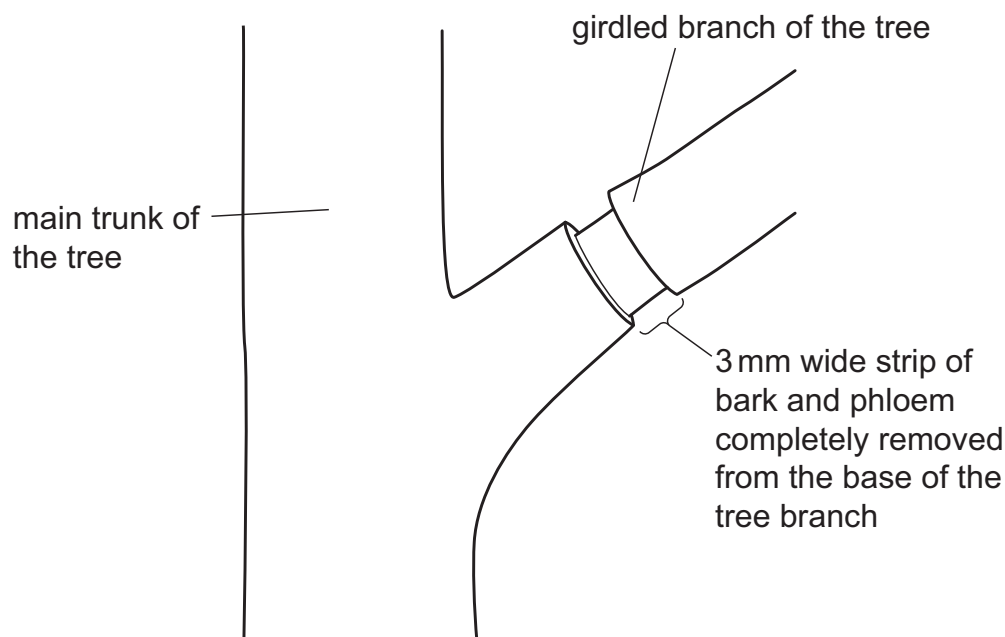


Fig. 2.3

The farmer girdled nine apple trees and left nine apple trees ungirdled.

The mass of ten fruits from the girdled trees and the mass of ten fruits from the ungirdled trees were compared.

Table 2.1 shows the results.

Table 2.1

treatment of trees	mass of ten fruits/g
girdled	1796
ungirdled	958

Describe the results shown in Table 2.1 **and** suggest an explanation for them.

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(f) Apples are used to make apple juice.

State **one** enzyme used in fruit juice production.

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