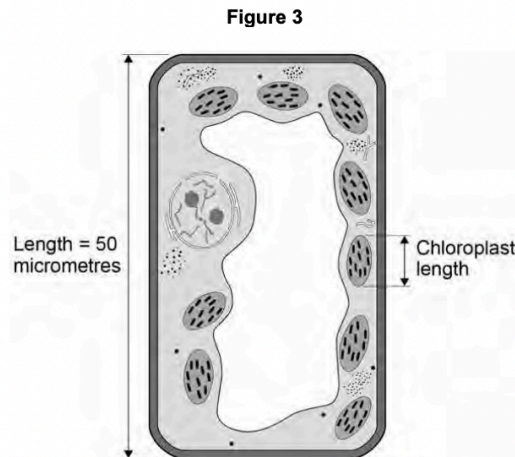


(Plant tissues and organs (xylem, phloem, stomata))

Q1.(2018)

Figure 3 shows a plant cell drawn to scale.



Where in a plant would the cell in **Figure 3** be found?

[1 mark]

Tick **one** box.

Epidermis

☐

Palisade mesophyll

☐

Phloem

☐

Xylem

☐

Q1.b)(2018)

Calculate the length of the chloroplast labelled in **Figure 3**.

[2 marks]

Length = _____ micrometres

Q1.c)(2018)

Cells in plant roots do **not** photosynthesise.

Give **one** reason why.

[1 mark]

Q2.a)(2019)

This question is about leaves.

Complete the sentences.

Choose answers from the box.

[3 marks]

epidermis	phloem	palisade mesophyll
waxy cuticle	xylem	

The layer of cells lining the upper surface and lower surface of a leaf is the _____.

The part of the leaf where most photosynthesis occurs is the _____.

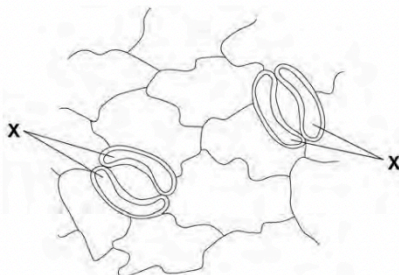
Water is transported to the leaf in the _____.

Water is lost through small openings on the lower surface of plant leaves.

These small openings are called stomata.

Figure 5 shows two stomata on the lower surface of a leaf.

Figure 5



Q2.b)(2019)

Organisation

<http://www.pcfgstudy.com>

The cells labelled **X** control the width of the stomata.

What are the cells labelled **X**?

[1 mark]

Tick (✓) **one** box.

Guard cells

☐

Mesophyll cells

☐

Root hair cells

☐

Stem cells

☐

Q2.c)(2019)

What is the function of the stomata?

[1 mark]

Tick (✓) **one** box.

To allow light into the leaf

☐

To let carbon dioxide into the leaf

☐

To let sugars out of the leaf

☐

To protect the leaf from pathogens

☐

Q2.d)(2019)

How is water lost from a leaf?

[1 mark]

Tick (✓) **one** box.

By evaporation

☐

By respiration

☐

By translocation

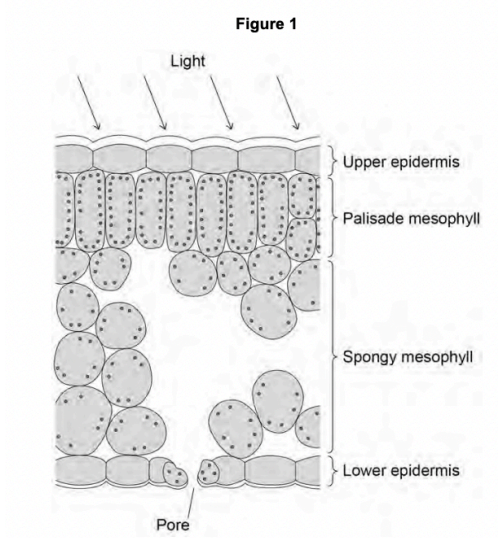
☐

Q3.a)(2024)

Organisation

<http://www.pcfgstudy.com>

Figure 1 shows the tissues in a leaf.



Draw **one** line from each leaf tissue to an important feature of the tissue.

[2 marks]

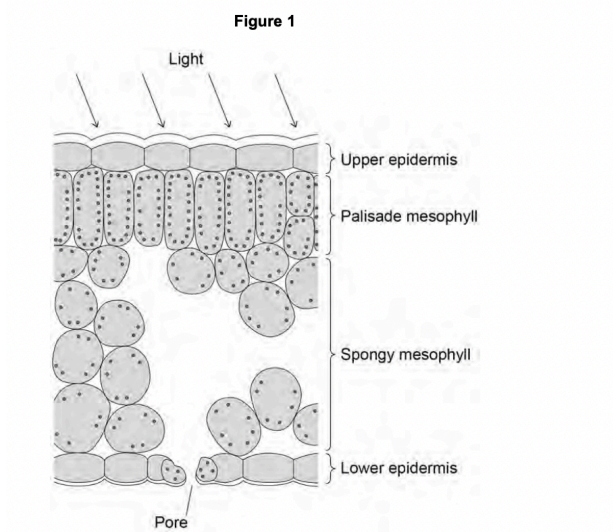
Leaf tissue	Feature
Palisade mesophyll	Contains many air spaces
Spongy mesophyll	Contains the most chloroplasts
	Made of dead cells

Q3.b)(2024)

Organisation

<http://www.pcfgstudy.com>

Figure 1 is repeated below.



The upper epidermis is transparent.

Explain why the upper epidermis needs to be transparent.

Use **Figure 1**.

[2 marks]

Q3.c)(2024)

Complete the sentences.

Choose answers from the box.

[2 marks]

chloroplasts	guard cells	meristems	stomata
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The pores in the lower epidermis of a leaf are called _____.

The opening and closing of the pores in the lower epidermis is controlled

by _____.