

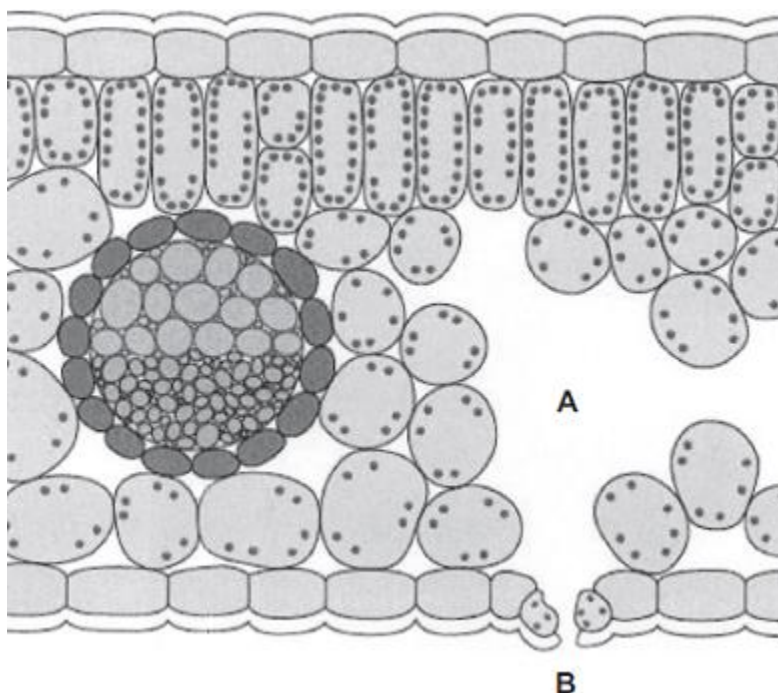
Name of the Student: _____

Max. Marks : 18 Marks

Time : 18 Minutes

Q1.

The diagram shows a section through a plant leaf.



- (a) Use words from the box to name **two** tissues in the leaf that transport substances around the plant.

epidermis	mesophyll	phloem	xylem
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_____ and _____

(1)

- (b) Gases *diffuse* between the leaf and the surrounding air.

- (i) What is *diffusion*?

(2)

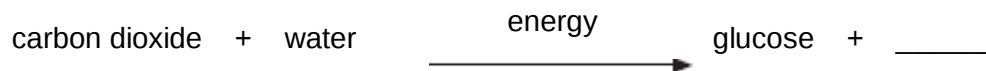
- (ii) Name **one** gas that will diffuse from point **A** to point **B** on the diagram on a sunny day.

(1)

(Total 4 marks)

Q2.

- (a) Complete the word equation for photosynthesis.



(1)

- (b) Draw a ring around the correct answer to complete each sentence.

- (i) The energy needed for photosynthesis comes from

light.
osmosis.
respiration.

(1)

- (ii) Energy is absorbed by a green pigment called

chloride.
chloroplast.
chlorophyll.

(1)

- (iii) If the temperature is decreased the rate of photosynthesis will

decrease.
increase.
stay the same.

(1)

- (c) Give **three** ways in which plants use the glucose made in photosynthesis.

1. _____

2. _____

3. _____

(3)

(Total 7 marks)

Q3.

- (a) Complete the word equation for photosynthesis.

Use words from the box.

chlorophyll	minerals	oxygen	water
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carbon dioxide + _____ → glucose + _____

(2)

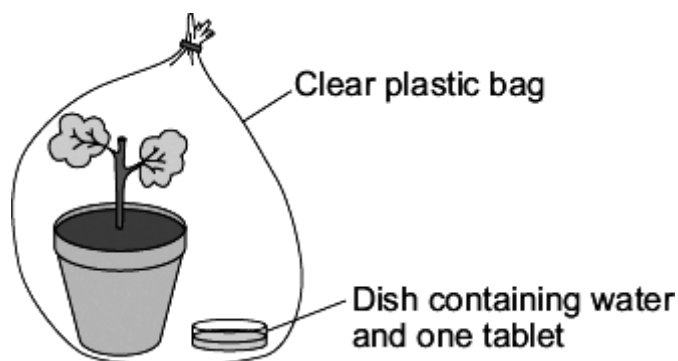
- (b) Plants may grow faster if they have more carbon dioxide.

Indigestion tablets dissolve in water to form a solution.
This solution slowly gives off carbon dioxide.

A student set up an investigation to see what concentration of carbon dioxide is best for increasing the growth of geranium plants.

The student:

- put a geranium plant in a clear plastic bag
- put a dish containing water and one tablet in the bag
- sealed the top of the bag.



The student:

- set up 5 more experiments each with water and a different number of tablets
- left all the plants in a well-lit place for four weeks.

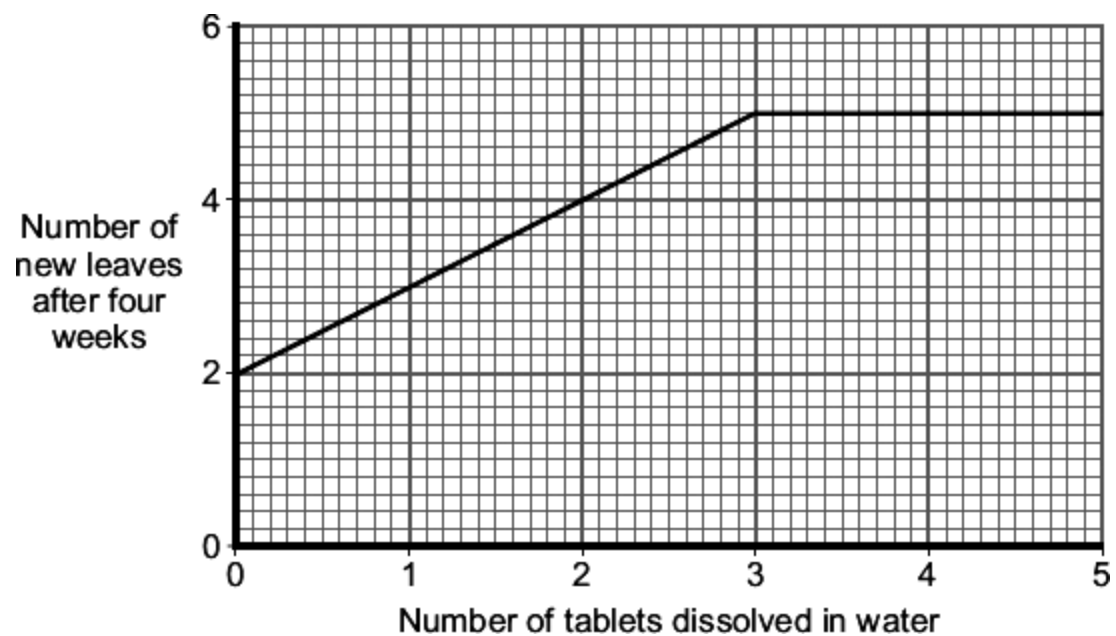
The student used a clear plastic bag, not a black plastic bag.

Explain why.

(2)

- (c) After four weeks, the student counted the number of new leaves on each plant.

The graph shows his results.



Describe the effect of increasing the number of tablets dissolved in water on the number of new leaves that grew in four weeks.

(3)

(Total 7 marks)