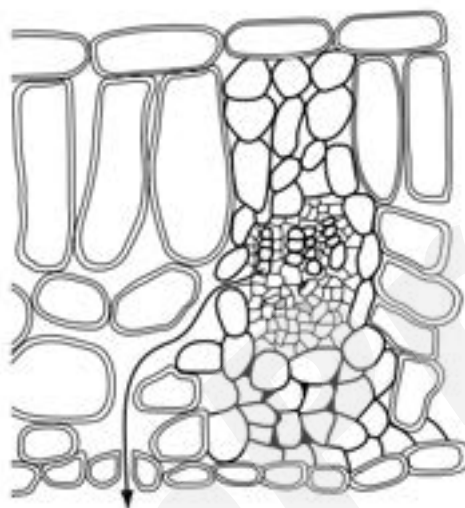


6. Plant Nutrition

(Past Year Topical Questions 2010-2015)

May/June 2010 (11)

34 The diagram shows part of a section through a leaf.



The arrow represents part of the

- A carbon cycle only.
- B flow of energy.
- C water and carbon cycles.
- D water cycle only.

May/June 2011 (11)

8 Which structures are adapted for supporting a plant?

- A phloem tissues
- B root hair cells
- C stomata
- D xylem vessels

15 What does photosynthesis form in a leaf first?

- A cellulose
- B protein
- C starch
- D sugar

Oct/Nov 2011 (11)

15 The roots of plants take up nitrates from the soil.

What are the nitrates used to make?

- A fat
- B glucose
- C protein
- D starch

18 The diagram shows a plant shoot and the same shoot six hours later.



plant shoot



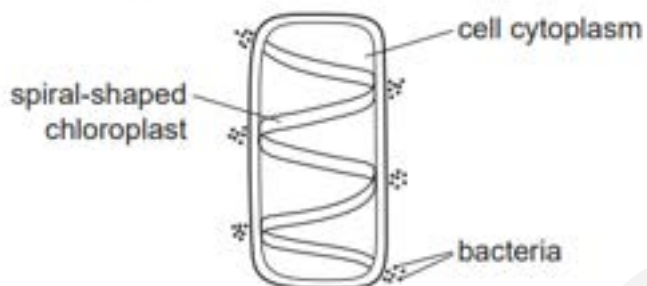
same shoot six hours later

Which change in environmental conditions could cause this change in the appearance of the shoot?

- A a decrease in available water
- B a decrease in light intensity
- C a decrease in wind speed
- D an increase in humidity

May/June 2012 (11)

15 The diagram shows a cell with groups of bacteria around its edge.



The bacteria move to areas of high oxygen concentration.

Which process in the cell causes the bacteria to form these groups?

- A** digestion
- B** photosynthesis
- C** reproduction
- D** respiration

Oct/Nov 2012 (13)

2 The table shows some features of the leaves of four plants.

Which plant is a monocotyledon?

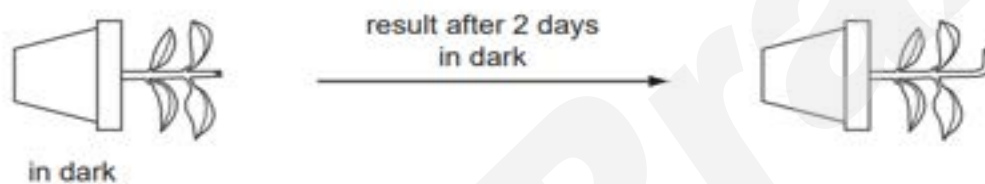
	has broad leaves	has parallel veins
A	✓	✓
B	✓	x
C	x	✓
D	x	x

Oct/Nov 2012 (13)

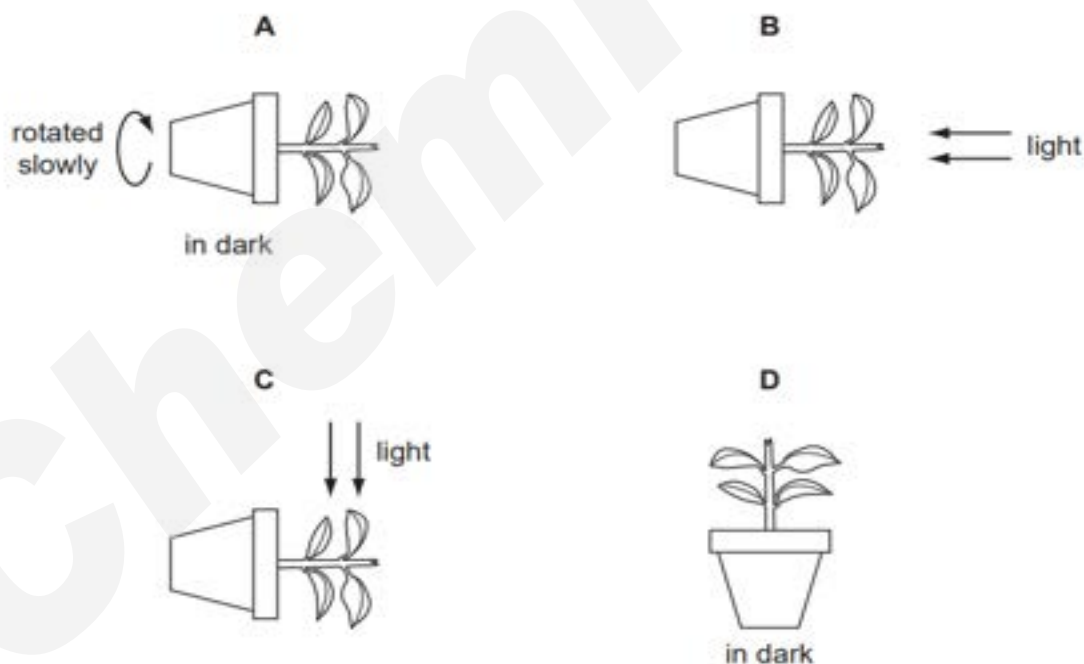
15 Which form of energy is stored within glucose molecules made during photosynthesis?

- A chemical
- B heat
- C light
- D mechanical

24 The diagram shows an experiment set up to investigate the response of plant stems to gravity.



What is a suitable control for this experiment?

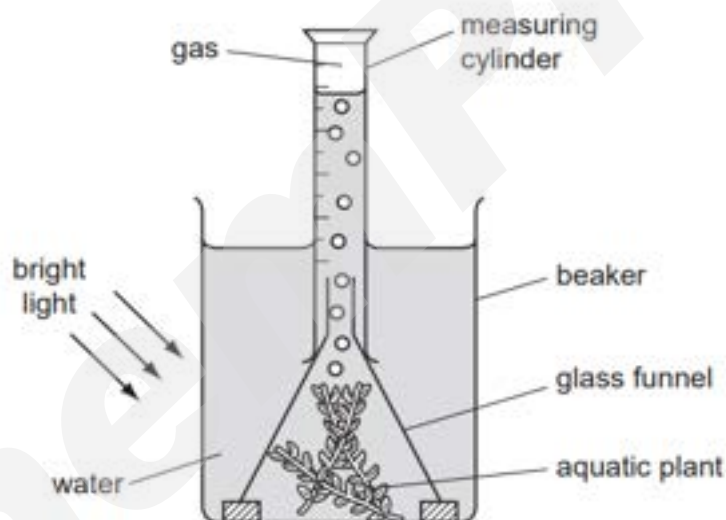


May/June 2013 (11)

- 5 Which statement about xylem is correct?
- A It carries sucrose.
 - B It converts light energy to chemical energy.
 - C It divides actively to help the plant to grow.
 - D It is no longer living.

May/June 2013 (11)

- 14 The diagram shows the apparatus used in an investigation to measure the rate of oxygen production during photosynthesis.



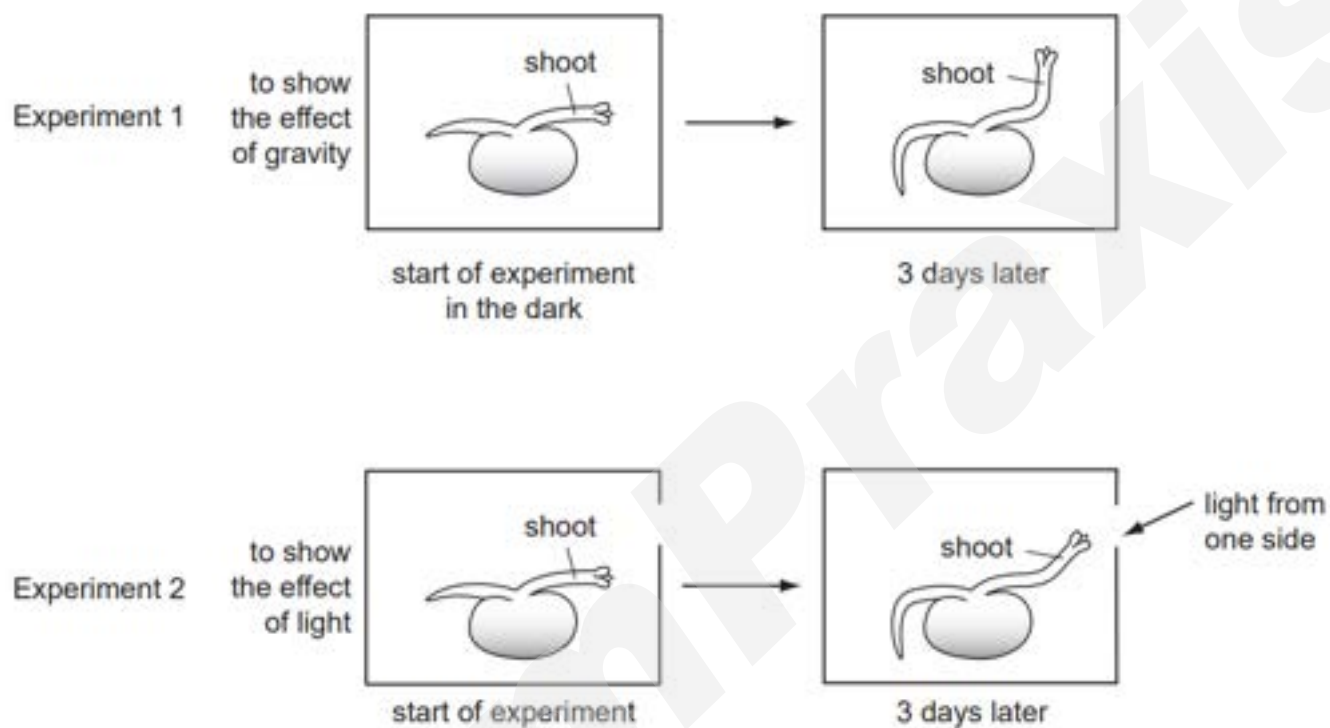
The investigation was repeated several times and the average amount of gas collected was calculated.

Which **two** factors must be kept constant during this investigation?

- A the amount of water in the beaker and the height of the measuring cylinder
- B the size of aquatic plant and the amount of gas in the measuring cylinder
- C the size of aquatic plant and the duration of exposure to light
- D the size of the beaker and the funnel

Oct/Nov 2013 (11)

25 The diagram shows seedlings in two experiments on the tropic response of seedlings to gravity and light.



How have the seedlings responded?

	to gravity	to light
A	✓	✓
B	✓	x
C	x	✓
D	x	x

key

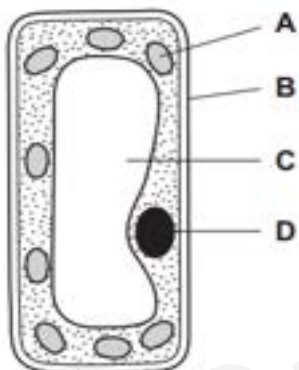
✓ = tropic response shown

x = no tropic response shown

May/June 2014 (12)

15 The diagram shows a palisade cell.

In which region is starch stored?



Oct/Nov 2014 (11)

14 Some liquid is collected from the xylem in the stem of a plant.

What is present in the liquid?

- A cellulose
- B inorganic ions
- C starch
- D sugar

15 What is a function of phloem?

- A translocation
- B transpiration
- C storage of food
- D support

Oct/Nov 2014 (13)

13 Which two substances are needed for photosynthesis?

- A carbon dioxide and glucose
- B carbon dioxide and water
- C oxygen and glucose
- D oxygen and water

Oct/Nov 2014 (13)

35 Which process does **not** release water?

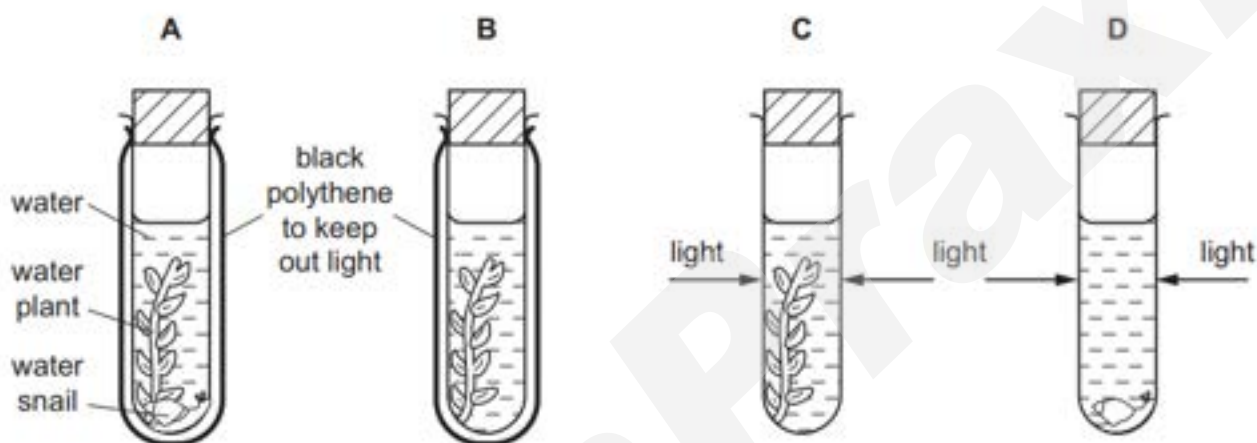
- A excretion
- B photosynthesis
- C respiration
- D transpiration

Oct/Nov 2015 (12)

13 An experiment was done using the apparatus shown in the diagram.

The carbon dioxide content of the water in each tube was measured at the start and again three hours later.

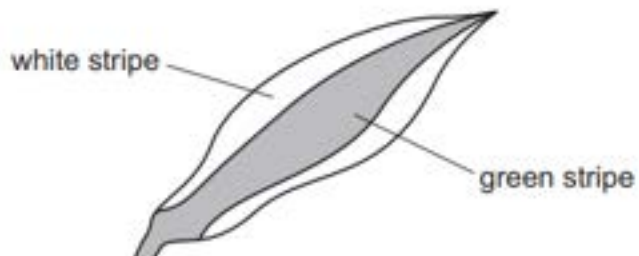
In which tube would there be a **decrease** in carbon dioxide content?



14 What is formed first in a leaf as a result of photosynthesis?

- A chlorophyll
- B glucose
- C starch
- D water

15 A plant with striped leaves similar to the one below was kept in bright light for six hours.



A leaf was taken from the plant and the chlorophyll removed. The leaf was then tested for starch using iodine solution.

Which diagram shows the result of the test?

