Ai Tong School
Primary 5 Science
2023 Term 3 Topical Review

30

Name: _____ ( ) Date: _____

Class: P5 _____ Duration: 40 minutes

Section A (14 marks)

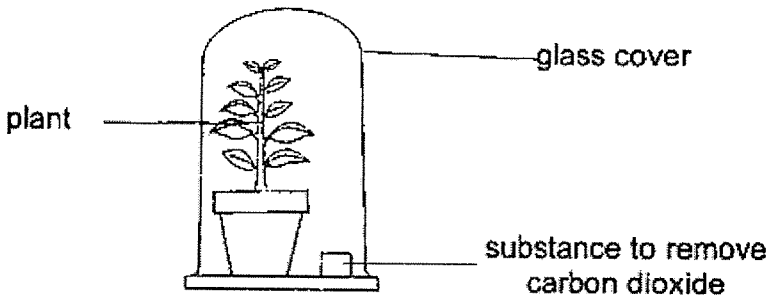
For each question from 1 to 7, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and write your answer in the bracket provided.

1 Which of the following is not required for photosynthesis to take place?

(1) Sugar
(2) Water
(3) Sunlight
(4) Chlorophyll

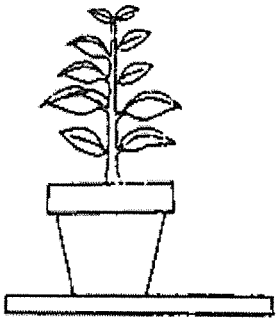
( )

2 Sally conducted an experiment to find out whether carbon dioxide is needed for photosynthesis. She set the set-up below.

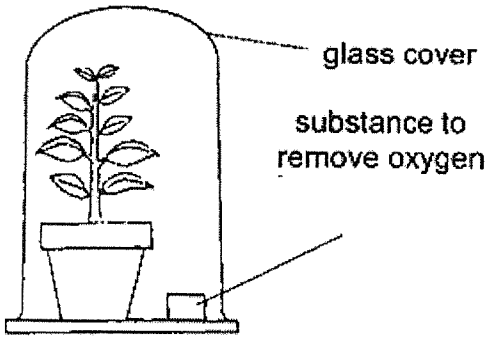


Which one of the following should Sally use as a control for her experiment?

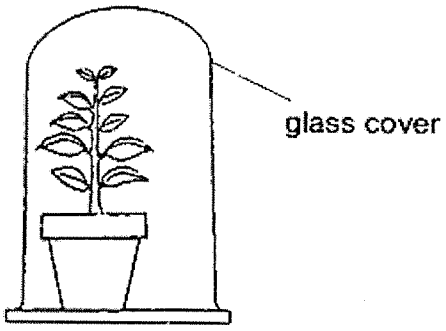
(1)



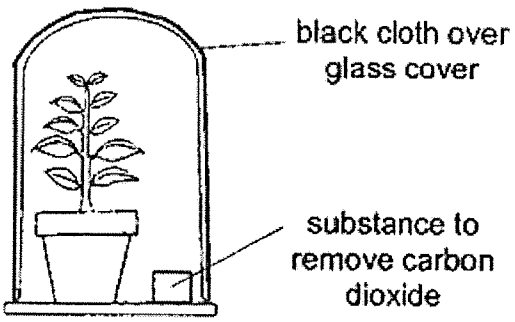
(2)



(3)



(4)



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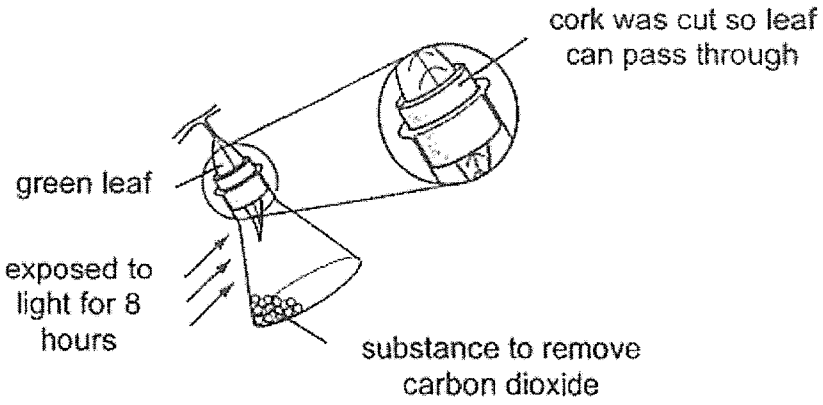
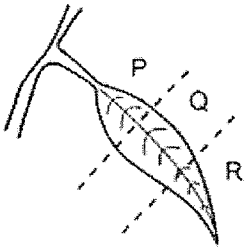
3 A plant was kept in the dark for two days. A leaf from the plant was then used in an experiment to investigate the effect of two factors on photosynthesis, as shown in the diagram.



After 8 hours, the leaf was removed, and a starch test was carried out on it using iodine solution. If starch is present, iodine solution turns from yellowish brown to dark blue.

What were the colours of P, Q and R, when the leaf was tested for starch using iodine solution?



	P	Q	R
(1)	dark blue	yellowish brown	dark blue
(2)	dark blue	yellowish brown	yellowish brown
(3)	yellowish brown	dark blue	dark blue
(4)	yellowish brown	dark blue	yellowish brown

( )

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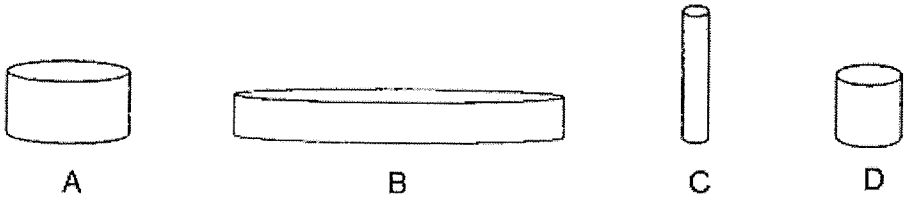
4 What is the melting point of ice?

(1) 0°C
(2) 1°C
(3) 30°C
(4) 100°C

( )

5 Xiao Ming poured 150 ml of boiling water into containers A, B, C and D, made of the same material, as shown below. All four containers were placed in the classroom.



He measured the temperature of water in each container after an hour.
What is the aim of the experiment?

(1) To find out if water takes the shape of the container.
(2) To find out if the location affects the rate of heat transfer.
(3) To find out if the size of exposed surface area affects the rate of evaporation.
(4) To find out if the size of exposed surface area affects the rate of heat transfer.

( )

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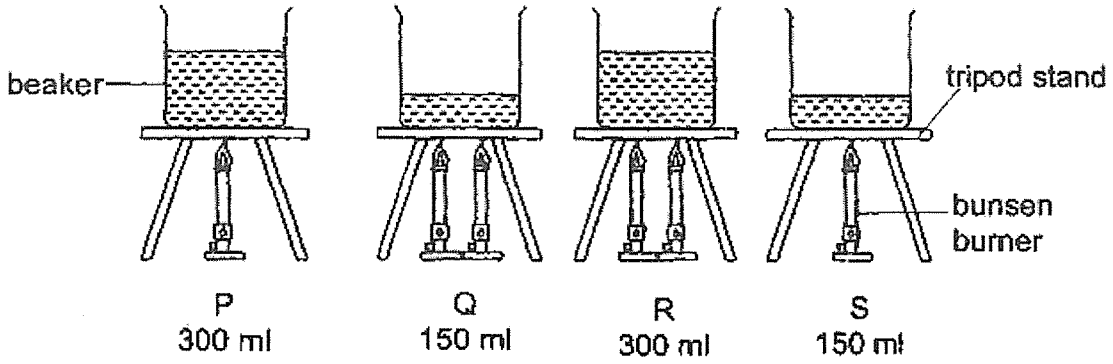
6 Jim conducted an experiment using four set-ups P, Q, R and S as shown below. The water in all the beakers were at room temperature at first.



In which set-up would the water in the beaker boil first?

(1) P
(2) Q
(3) R
(4) S

( )

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7 Sam switched on the air conditioner in his bedroom. When he looked out of his bedroom window, he observed that there were water droplets found on the inner surface of his window as shown in Diagram 1.

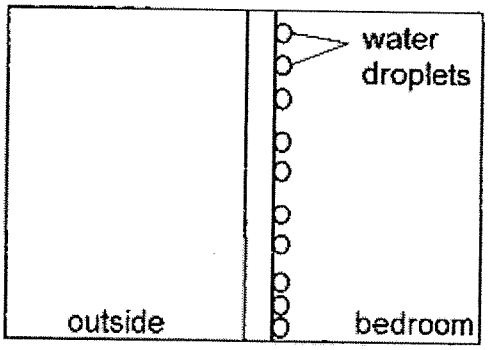

Diagram 1: Side view of window

Day 1

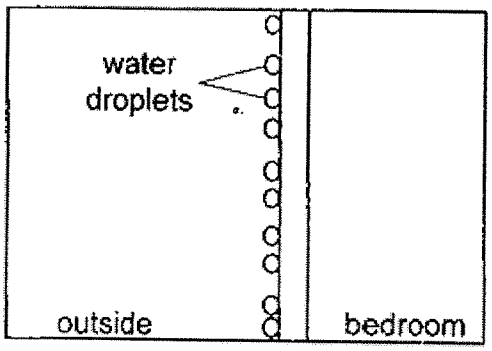

Diagram 2: Side view of window

Day 2

The next day he observed that the water droplets were formed on the outer surface of the window as shown in Diagram 2.

Which one of the following shows the possible temperature of the air outside and inside his bedroom during the two days?

	Day 1		Day 2	
	Temperature of air outside bedroom (°C)	**Temperature of air inside bedroom (°C)**	**Temperature of air outside bedroom (°C)**	**Temperature of air inside bedroom (°C)**
(1)	25	25	35	30
(2)	15	30	30	20
(3)	30	25	35	20
(4)	15	30	25	30

( )

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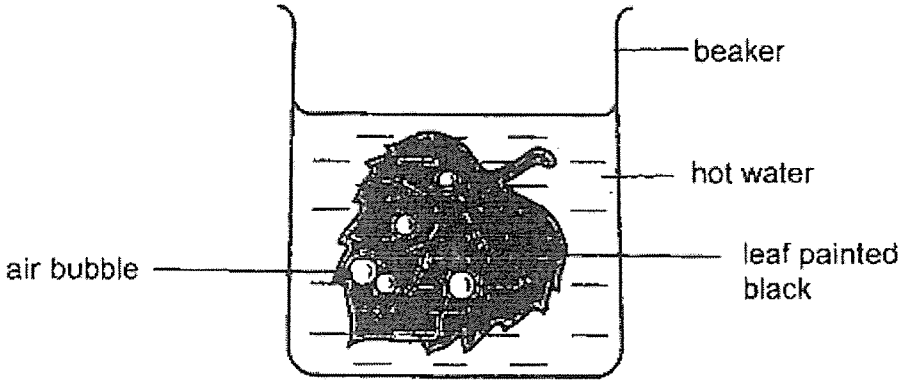
Section B (16 marks)

For questions 8 to 12, write your answers in the spaces provided.

The number of marks available is shown in brackets [ ] at the end of each question.

8 Siti carried out an experiment to compare the number of tiny openings found on the upper and lower surfaces of a leaf plucked from the garden. She used two similar leaves plucked from the same plant and set up the experiment as shown below.



Siti painted on different leaf surfaces with black paint and observed the number of air bubbles in the beaker. She recorded her results in the table below.

Leaf	X	Y
Surface painted	Upper surface	Lower surface
Amount of bubbles observed	many	some

(a) Based on the results of leaves X and Y, where are most of the tiny openings found in this plant? [1]

_____

(b) State the function of the tiny openings in the leaf. [1]

_____

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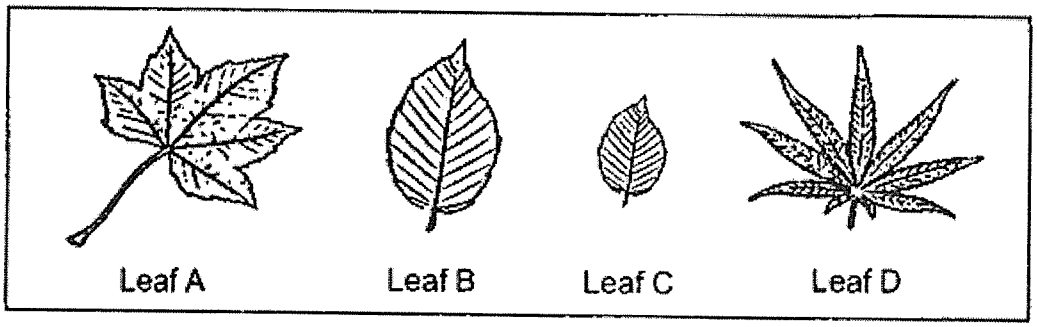
2

9 Denise wanted to find out if the size of a leaf would affect the number of tiny openings found on the leaf. She collected four leaves from three different plants from the garden as shown below.



(a) Which leaves should Denise choose to carry out a fair test? [1]

_____

(b) Explain your answer in (a). [1]

_____

_____

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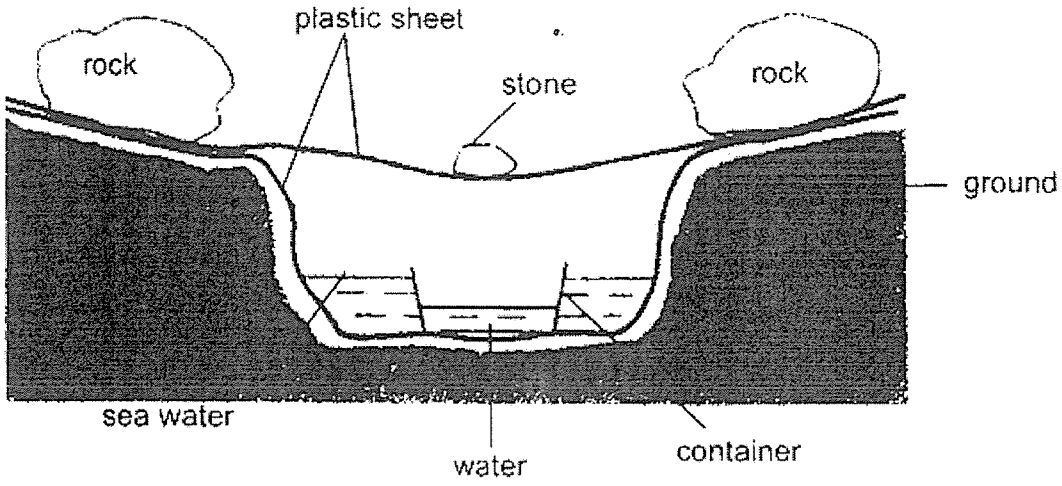
2

10 While camping at a beach on a hot day, a group of students wanted to collect water from sea water. They dug a hole in the ground and lined it with a plastic sheet. Sea water was poured into the hole and a container was placed in the middle. Another plastic sheet was used to cover the set-up. Some rocks and stones were placed as shown.



(a) After a few hours, water was found in the container. Describe how water was collected in the container. [2]

_____

_____

_____

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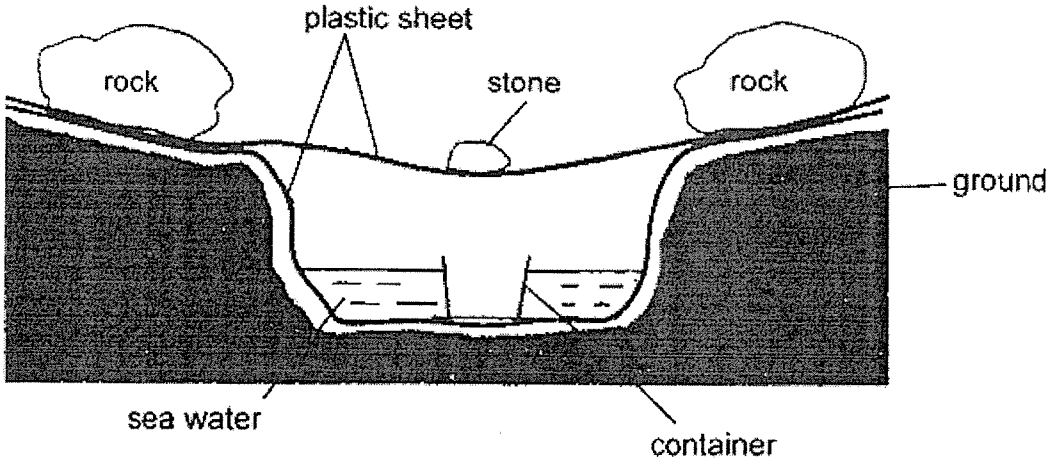
2

(b) Another group of students did a similar experiment with the same amount of sea water in the hole. They used a smaller container to collect water as shown below.



Was the water collected *less than, the same or more than* the previous group in the same period of time? Explain your answer. [2]

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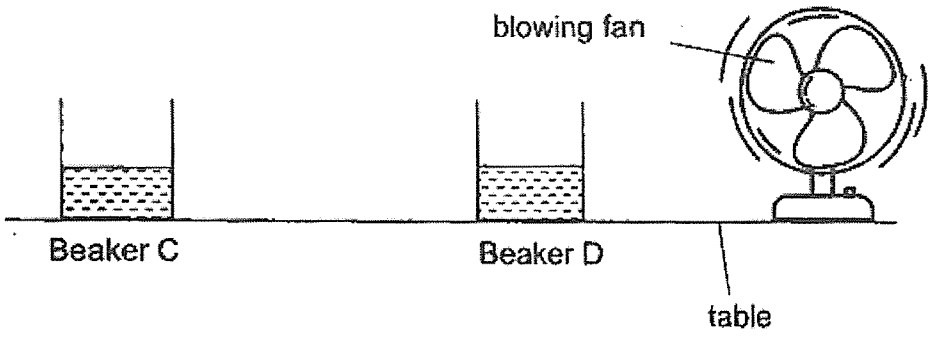
2

11 Ming Fa carried out an experiment as shown below. He filled two identical beakers, C and D, with equal amounts of water. He then left the beakers on a long table with each beaker placed at a different distance from a blowing fan. After four hours, he checked the volume of the water left in the two beakers.



(a) Which beaker, C or D, would have less water left in the beaker at the end of the experiment? Explain your answer. [2]

(c) State two other factors that affect the rate of evaporation of water. [2]

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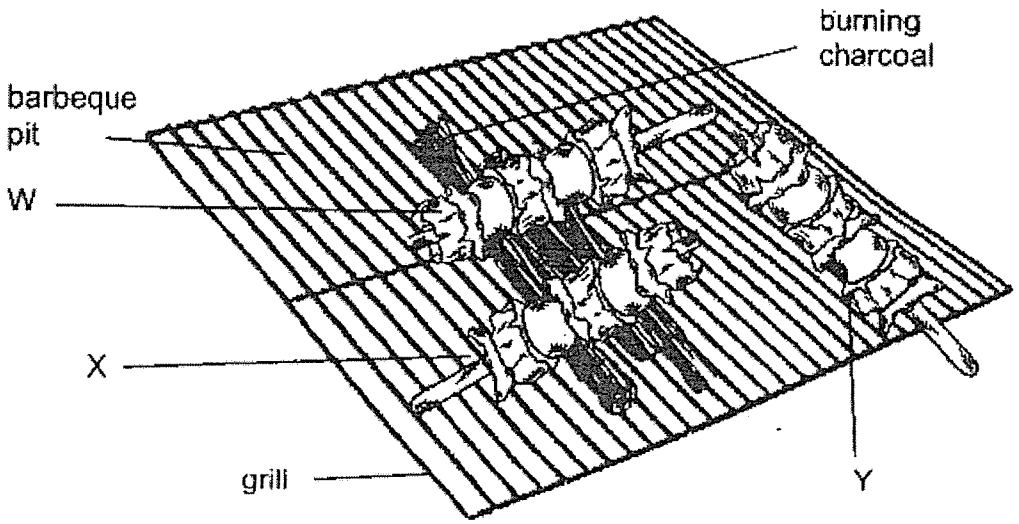
4

12 Tim wanted to find out if the amount of heat affects how fast the meat is cooked. He used the set-up shown below with three sticks of raw meat W, X and Y, being cooked on a barbeque pit with burning charcoal.



(a) State a hypothesis on how the amount of heat affects how fast the meat is cooked. [1]

_____

(b) State the variable Tim should keep constant for it to be a fair test. [1]

_____

(c) Tim observed that the meat on sticks W and X cooked faster than the meat on stick Y. Explain his observation. [1]

_____

_____

(d) The grill of the barbeque pit is made of metal. Give a reason for your choice. [1]

_____

_____

End of Paper

4

SCHOOL : AITONG PRIMARY SCHOOL
LEVEL : PRIMARY 5
SUBJECT : SCIENCE
TERM : TERM 3 (2023)

Q 1	Q2	Q3	Q4	Q5	Q6	Q7
1	3	2	1	4	2	2

Q8)	a) Lower surface b) Gaseous exchange in plants
Q9)	a) Leaves B and C. b) The results of the experiment is solely due to size of the leaf and not any other variables which is the type of plant.
Q10)	a) The water in the sea water gained heat from the warmer surrounding air and evaporated into water vapour. The warmer water vapour from the water in the sea water rises and comes into contact with the cooler inner surface of the plastic sheet, loses heat and condenses into water droplets which drip into the container. b) More water was collected. There was more exposed surface area for the sea water to be exposed in the hole. Hence, more sea water can evaporate and form water vapour. The warmer water vapour rises and comes into contact with the cooler inner surface of the plastic sheet,loses heat and condenses faster rate of condensation into water droplets which drip into the container.
Q11)	a)D is closer to the fan than C. D has more wind than C. faster rate of evaporation of water in D. b)The amount of exposed surface area, the temperature of the surroundings.

Q12)	a) The greater amount of heat allows the meat to be cooked faster. b) The material of the raw sticks. c) There were burning charcoal below sticks W and X, allowing move heat to flow to the raw meat on sticks W and X. d) Metal is a good conductor of heat, showing that it allows heat to flow through if at a faster rate for the meat to be cooked faster.