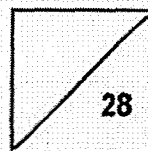




Rosyth School  
Weighted Assessment 2022  
SCIENCE  
Primary 5

Name: \_\_\_\_\_

Total  
Marks:



Class: Pr 5- \_\_\_\_\_

Register Nc

Date: 13 May 2022

Total Time for Booklet A and B: 1h

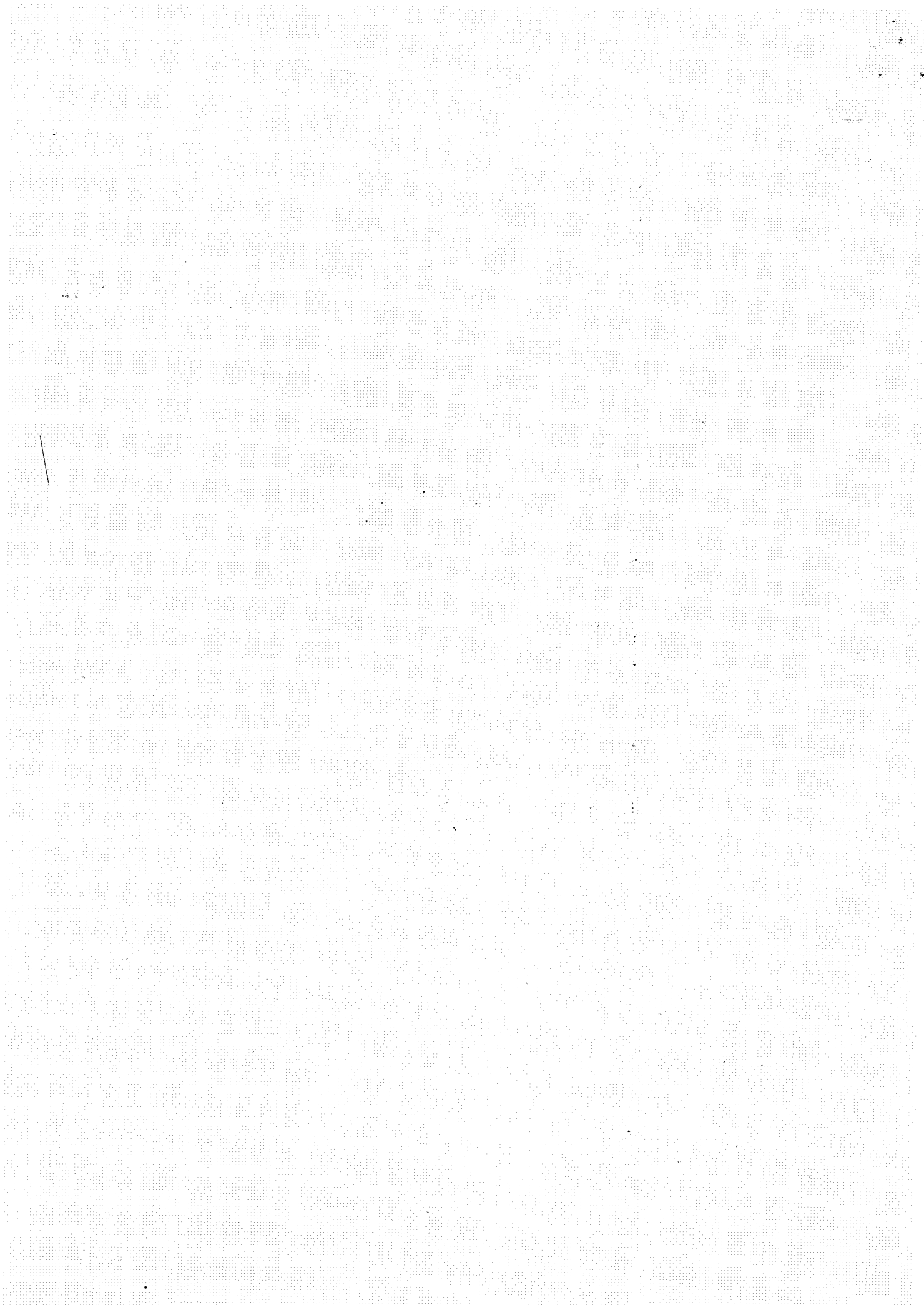
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## Booklet A

### Instructions to Pupils:

1. Do not open the booklet until you are told to do so.
2. Follow all instructions carefully.

\* This booklet consists of 11 printed pages (including cover page).



For each question from 1 to 14, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and shade your answer on the Optical Answer Sheet.

[28 Marks]

1 Which of the following characteristics are similar between animals and plants?

- A: Both grow
- B: Both reproduce
- C: Both grow towards sunlight
- D: Both need air, food and water to carry out life processes

- (1) A and B only
- (2) C and D only
- (3) A, B and D only
- (4) A, B, C and D

2 The table below shows the characteristics of three animals, A, B and C.

	Animal A	Animal B	Animal C
Where it lives	water	land	water
Its outer covering	hair	scales	scales
How it reproduces	gives birth	lays eggs	lays eggs

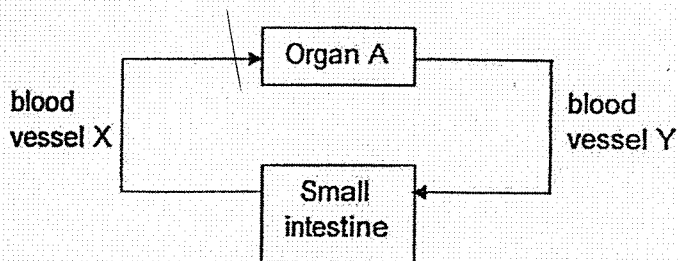
Which of the following shows the groups that animals A, B and C most likely belong to?

	Animal A	Animal B	Animal C
(1)	mammal	reptile	amphibian
(2)	mammal	reptile	fish
(3)	amphibian	fish	reptile
(4)	amphibian	mammal	fish

3 Which one of the following statements is true about human digestive system?

- (1) Digestion begins in the stomach.
- (2) Digested food is absorbed in the gullet.
- (3) Excess water is absorbed in the large intestine.
- (4) Undigested food is absorbed into the bloodstream.

4 The chart below shows how oxygen and digested food are transported in the human body.



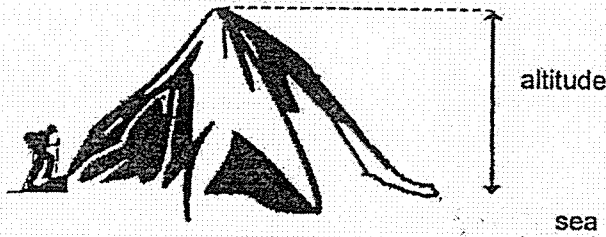
Which of the following is correct?

	Organ A	Oxygen at X compared to Y	Digested food at Y compared to X
(1)	Lungs	Less	More
(2)	Lungs	More	Less
(3)	Heart	Less	More
(4)	Heart	Less	Less

5 The air we breathe out \_\_\_\_\_ than the air that we breathe in.

- (1) is cooler
- (2) has more oxygen
- (3) has less water vapour
- (4) has more carbon dioxide

- 6 Mr Sim observed that his resting breathing rate is faster at an altitude of 5000m compared to at an altitude of 0 m. 'Altitude' refers to the height above sea level as shown in the diagram.



Based on the altitude, which of the following table shows the percentage of oxygen in inhaled air and his resting heart rate correctly?

(1)

altitude (m)	percentage of oxygen in inhaled air (%)	resting heart rate
0	20.9	70
5000	11.2	95

(2)

altitude (m)	percentage of oxygen in inhaled air (%)	resting heart rate
0	11.2	70
5000	20.9	95

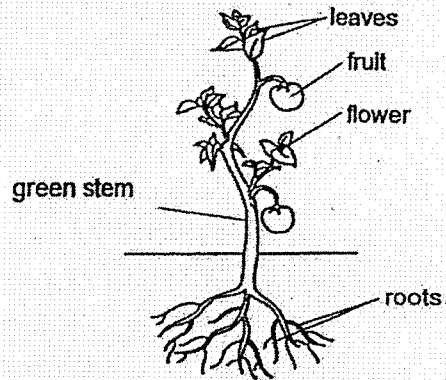
(3)

altitude (m)	percentage of oxygen in inhaled air (%)	resting heart rate
0	20.9	95
5000	11.2	70

(4)

altitude (m)	percentage of oxygen in inhaled air (%)	resting heart rate
0	20.9	70
5000	20.9	70

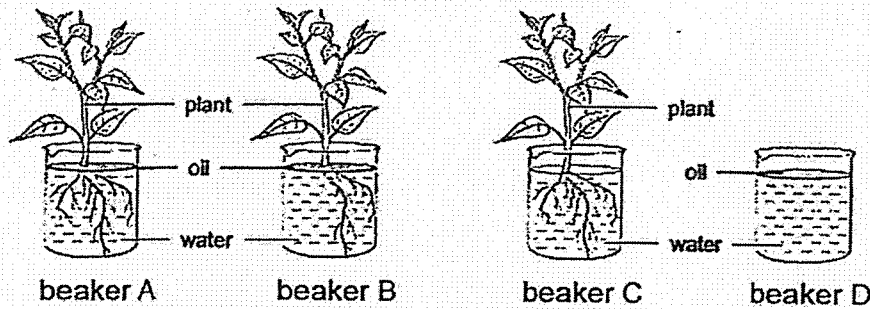
7 The diagram below shows a plant.



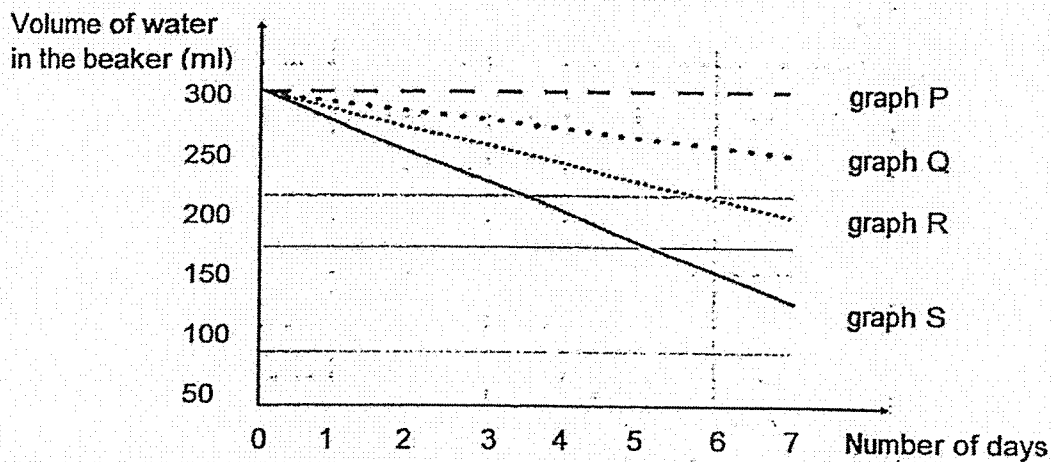
Which statement is not true about the above plant?

- (1) Food is made in the green stem and leaves.
- (2) Food-carrying tubes are found in the green stem.
- (3) Food and oxygen are transported to the fruit from the stem.
- (4) Food is transported from the leaves to the fruit, stem and roots.

- 8 Ahmad prepared four set-ups using four similar beakers A, B, C, D as shown in the diagram below. All the beakers have 300 ml of water. Beakers A, B and D have a layer of oil but not Beaker C. He placed the set-ups next to an open window.



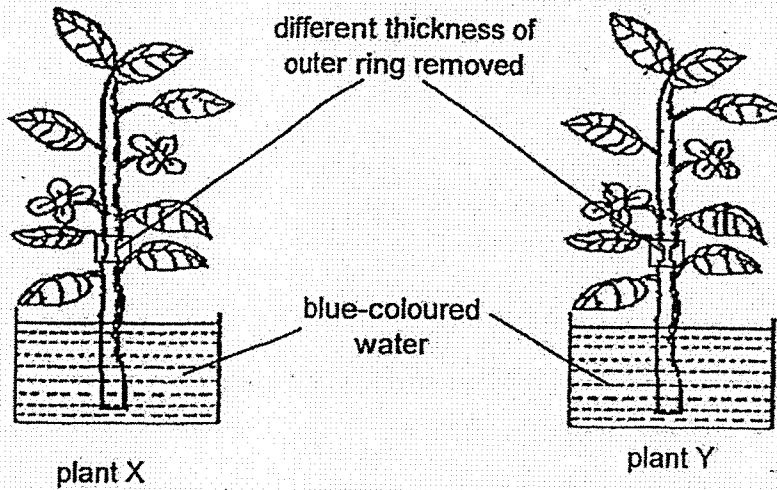
He observed the volume of the water in the four beakers over seven days and recorded the results in the graph shown below.



Which of the following beakers correctly match with graphs, Q and R?

	Graph Q	Graph R
(1)	D	A
(2)	D	B
(3)	B	C
(4)	B	A

- 9 June conducted an experiment using two identical plants X and Y. She cut out different thickness of the outer ring of the stems in plants X and Y.

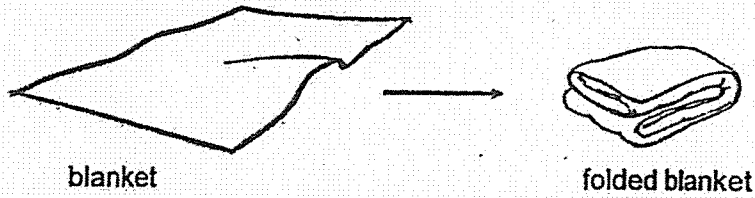


After one day, June observed that flowers of plant X turned blue but flowers of plant Y remained white. Which one of the following explains June's observation?

Type of tube(s) removed in	
Plants X	Plants Y
(1) food carrying tubes only	food and water carrying tubes
(2) food carrying tubes only	none
(3) none	food carrying tubes only
(4) food and water carrying tubes	food and water carrying tubes



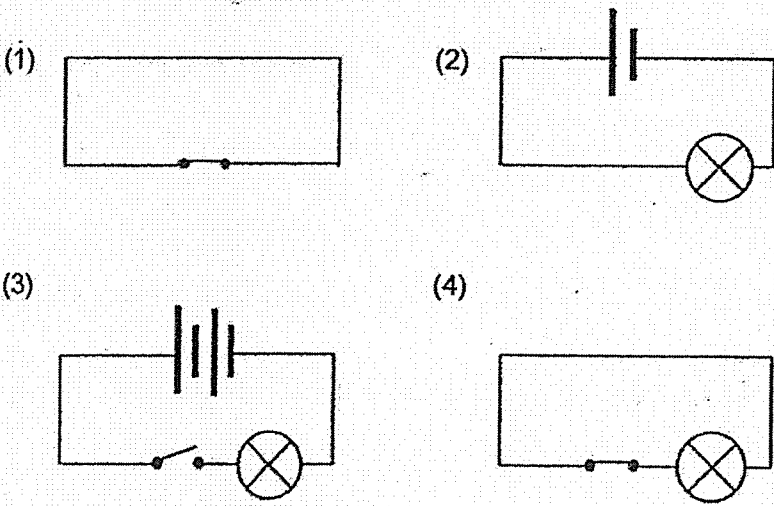
10 Peter folds his blanket every morning after getting off from bed as shown below.



The blanket can be folded because it is \_\_\_\_\_.

- (1) soft
- (2) strong
- (3) flexible
- (4) waterproof

11 Which of the following shows a closed electrical circuit?



- 12 Four metal pins, A, B, C and D, were fixed onto a cardboard. The diagram below shows the pins and front side of the cardboard where the pins were fixed on.

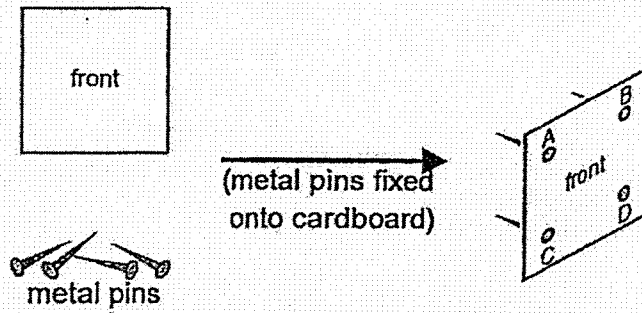
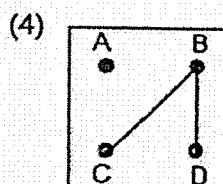
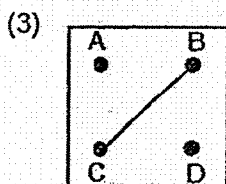
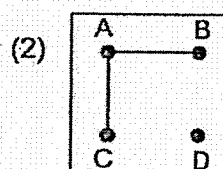
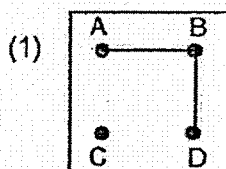


Figure 1

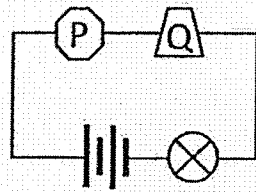
Some of the metal pins were connected with wires behind the cardboard. Gary used a circuit tester with a bulb to connect to different pairs of metal pins. He recorded his results in the table below.

Circuit tester connected to metal pins	Bulb lighted up on circuit tester
A and B	No
B and C	Yes
A and D	No
C and D	Yes

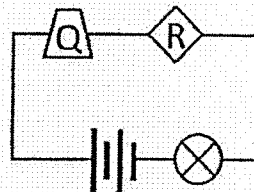
Which one of the following shows the wire connections at the back of the cardboard?



- 13 Paul set up two circuits using objects, P, Q and R. The bulb in the circuit with objects, P and Q, lighted up whereas the bulb in the circuit with objects, Q and R, did not light up.

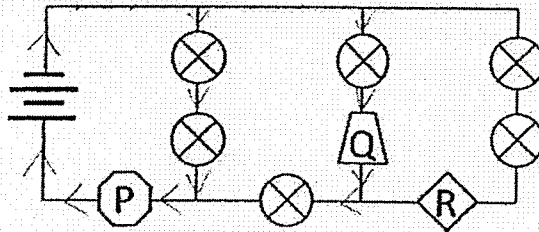


bulb lighted up



bulb did not light up

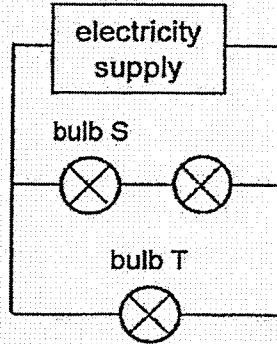
He then set up another new circuit using the same objects, P, Q and R, as shown below.



How many bulbs will be lighted up in the new circuit?

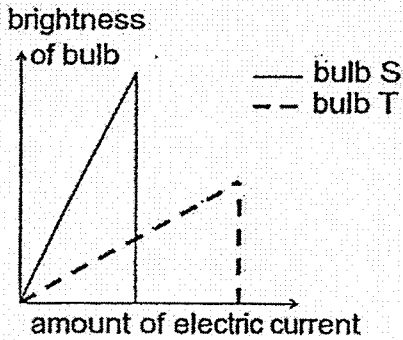
- (1) six
- (2) two
- (3) three
- (4) four

- 14 Jerry set up a circuit below with three bulbs. He wanted to find out how the amount of electric current flowing through the circuit will affect the brightness of bulb S and bulb T.

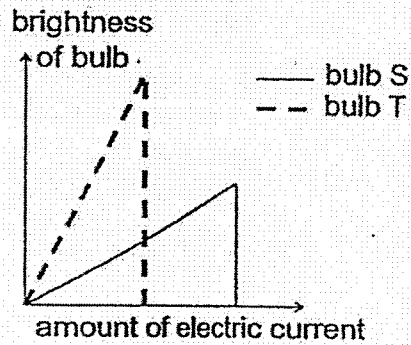


He increased the amount of electric current flowing through the circuit and recorded the brightness of bulb S and T each time, then plotted his findings on a graph. Which graph below would show the results of his experiment?

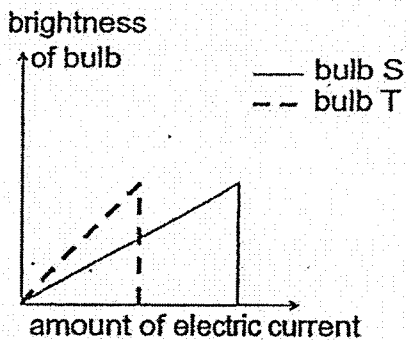
(1)



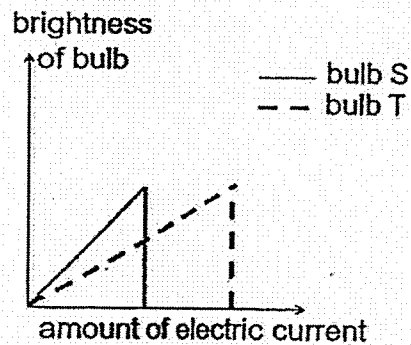
(2)



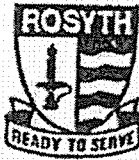
(3)



(4)



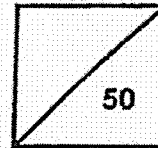
(go to Booklet B)



Rosyth School  
Weighted Assessment 2022  
SCIENCE  
Primary 5

Name: \_\_\_\_\_

Total  
Marks:



Class: Pr 5- \_\_\_\_\_ Register No. \_\_\_\_\_

Date: 13 May 2022

Parent's Signature: \_\_\_\_\_

Duration: Total time for Booklets A and B: 1 h

## Booklet B

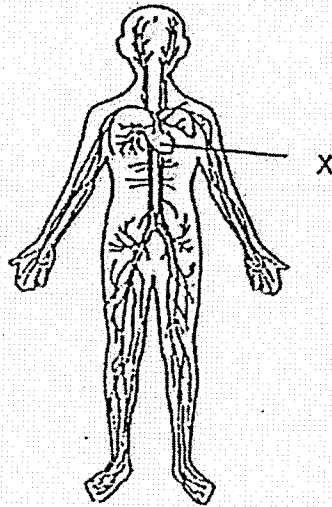
Instructions to Pupils:

1. Please do not turn this page until you are told to do so.
2. Follow all instructions carefully.
3. Answer all questions.

	Maximum	Marks Obtained
Booklet A	28 marks	
Booklet B	22 marks	
Total	50 marks	

\* This booklet consists of 8 printed pages (including cover page).

15 The diagram shows a human organ system.



(a) Identify the organ system. [1]

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(b) State the function of part X. [1]

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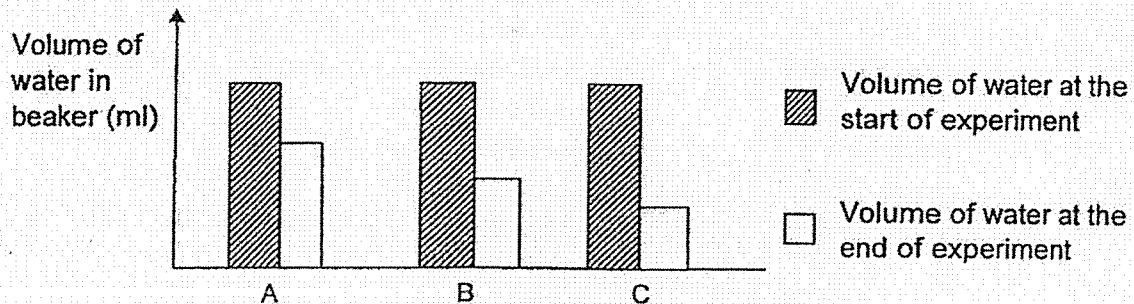
(c) Other than X, name another two parts of this system.

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- 16 Ahmad carried out an experiment using similar plants with different number of leaves in three set-ups A, B and C as shown below.

Set-up	A	B	C
Number of leaves on the plant	20	30	40



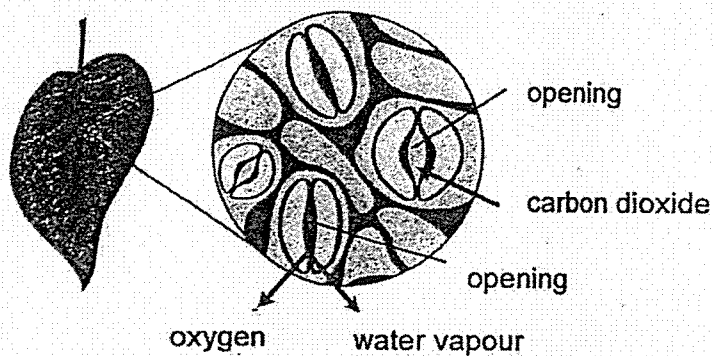
- (a) Based on the graph, what is the relationship between the number of leaves on the plant and the volume of water in the beaker at the end of the experiment? [1]

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Ahmad studied the leaf diagram under a microscope showing the openings. The arrows show the movement of gases such as carbon dioxide, oxygen and water vapour through the openings when the plant is placed in the presence of light.



Question 16 is continued on the next page

(b) What is the name of the opening?

[1]

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(c) Using the graph and the leaf diagram, explain why some trees shed most of their leaves in a dry season.

[2]

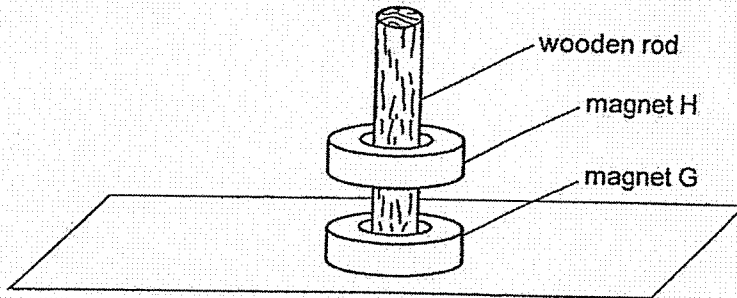
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- 17 Karl placed a magnet H above magnet G through a wooden rod and observed magnet H suspended in the air as shown below.

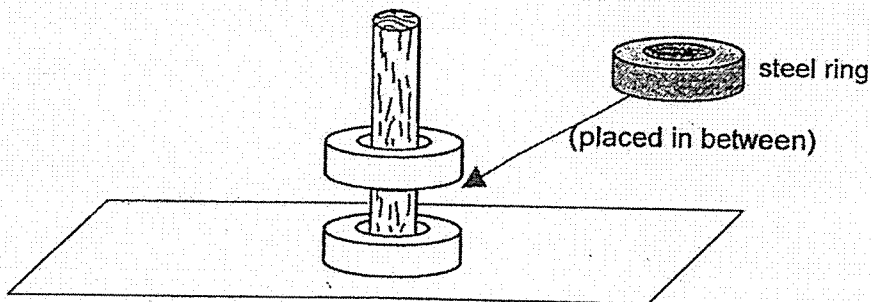


- (a) Explain why magnet H would be suspended above magnet G. [1]

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- (b) Karl removed magnet H and inserted a steel ring, then placed magnet H back into the wooden rod without flipping it.

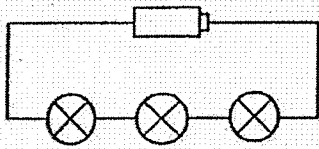


- What is the change Karl will observe? Explain the observation. [2]

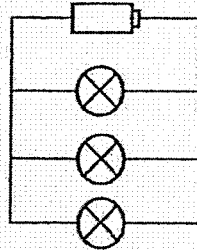
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18 Jacob set up two circuits, 1 and 2, for an experiment.



Circuit 1



Circuit 2

Jacob measured the time the bulbs in each circuit remained lighted up.

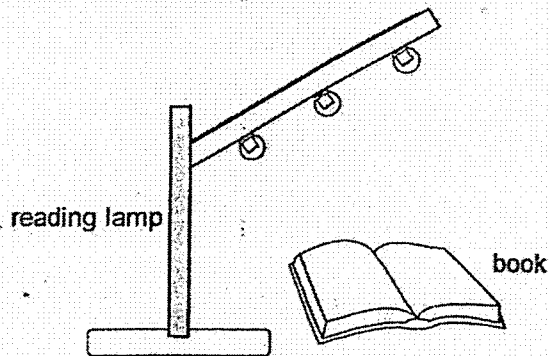
(a) What is the aim of Jacob's experiment?

[1]

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(b) Jacob wants to set up a circuit for a battery-operated reading lamp.



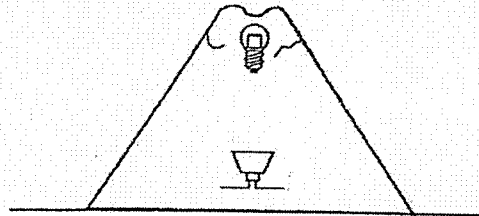
Which circuit, 1 or 2, would you suggest for this reading lamp? Explain why. [2]

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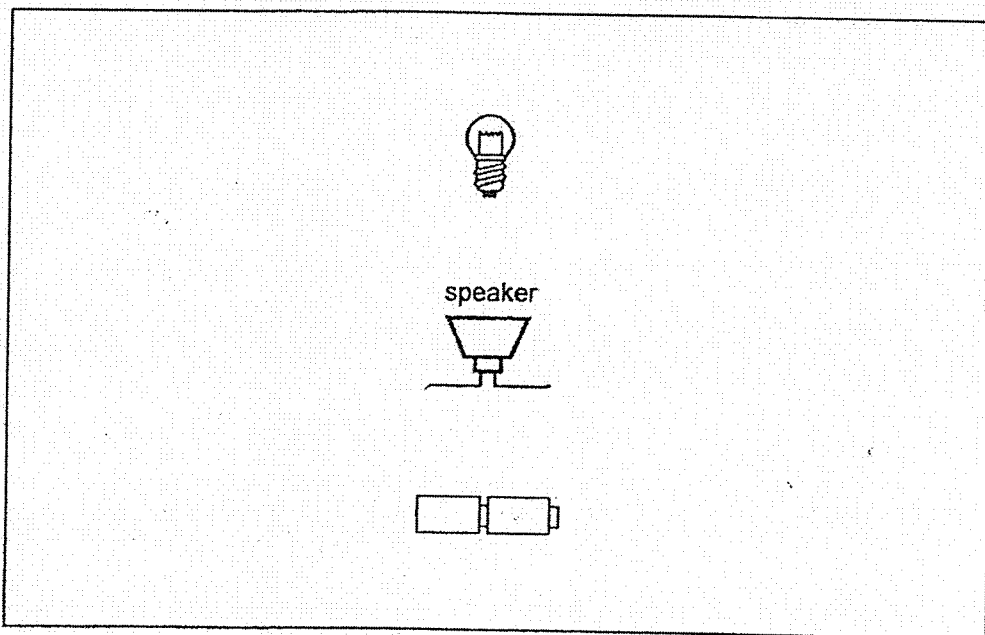
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- 19 Khairul wants to make a toy volcano that can light up at the top and make some sound.



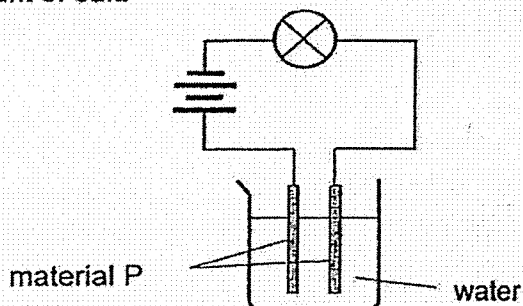
Toy volcano

- (a) Using wires and two switches, draw the electric circuit diagram for the toy volcano in the box below.
- i) The bulb should light up as brightly as possible.
  - ii) The volcano should be able to light up and make sounds independently. [3]



- (b) Suggest one way that Khairul can make his toy produce a louder sound. [1]
-

- 20 Nanda set up an experiment below to test the electrical conductivity of water with different amount of salt.



He recorded his results in a table.

Amount of salt in 100ml of water (g)	Electrical conductivity (unit/km)
0	0
10	5
30	10
50	10

- (a) What could material P be made of? [1]

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- (b) State one variable about material P that must be kept the same for a fair test. [1]

---

- (c) What is the relationship between the amount of salt in the water and electrical conductivity of the water? [2]

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- (d) Nanda did the experiment with no salt added as a control set-up. What is the purpose of having a control set-up? [1]

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End of Paper

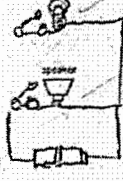
## ANSWER KEY

**YEAR : 2022**  
**LEVEL : Primary 5**  
**SCHOOL : Rosyth School**  
**SUBJECT : SCIENCE**  
**TERM : Weighted Assessment**

### Booklet A

Q1	3	Q2	2	Q3	3	Q4	4	Q5	4
Q6	1	Q7	3	Q8	4	Q9	1	Q10	3
Q11	2	Q12	4	Q13	4	Q14	2		

### Booklet B

Q15	<p>(a) Circulatory system</p> <p>(b) The function of X is to pump blood to transport digested food, water and oxygen to all parts of the body and transport carbon dioxide to the lungs for removal.</p> <p>(c) Blood, blood vessels.</p>
Q16	<p>(a) As the number of leaves increases, the volume of water at the end of the experiment decreases.</p> <p>(b) Stomata</p> <p>(c) The lesser number of leaves, the lesser the volume of water lost through the stomata, so less water is taken in by the plant.</p>
Q17	<p>(a) Magnet. H's and G's like poles are facing each other and since like poles repel, H and G is repelling each other.</p> <p>(b) H will drop as magnetic force cannot pass through the steel ring.</p>
Q18	<p>(a) To find out how the arrangement of the bulbs will affect the time the bulb in each circuit remained lighted up.</p> <p>(b) Circuit 1, arrange light bulbs in series, so that the bulbs will last for a longer period of time.</p>
Q19	 <p>(a)</p> <p>(b) Add another speaker in parallel to the first speaker.</p>
Q20	<p>(a) Steel</p> <p>(b) Thickness of material P</p>

(c) As the amount of salt in 100ml of water increases from 0 to 30g, the electrical conductivity increases from 0 to 10. As the amount of salt in water increases from 30g to 50g, the electrical conductivity remains the same.

(d) To compare and confirm that the electrical conductivity of water is only due to the amount of salt.

2  
EJD