NAN HUA PRIMARY SCHOOL

PRELIMINARY EXAMINATION 2026

PRIMARY 6

SCIENCE
(BOOKLET A)

Total Time for Booklets A and B: 1 hour 45 minutes

INSTRUCTIONS TO CANDIDATES

1. Write your name, index number and class in the spaces provided below.
2. Do not turn over the page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Use a 2B pencil to shade your answers on the Optical Answer Sheet (OAS).

Marks Obtained

Booklet A		**/ 60**
Booklet B		**/ 40**
Total		**/ 100**

Name: _____ ( )

Form Class: P6 _____ **Teaching Group: 6S** _____

Date: 19 August 2026 **Parent's Signature:** _____

This booklet consists of 20 printed pages.

For each question from 1 to 30, 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. (60 marks)

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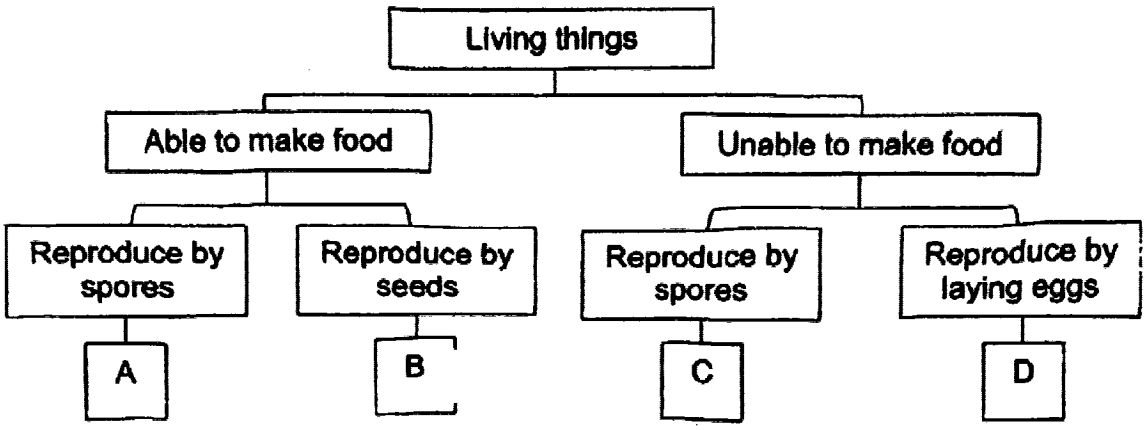
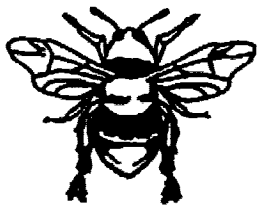
1 Study the chart.

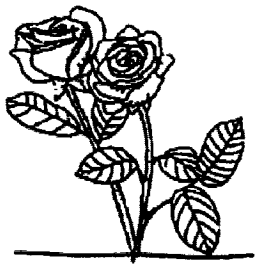


Which is living thing C?

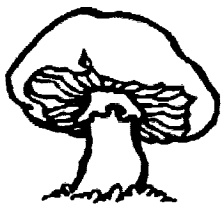
(1) insect



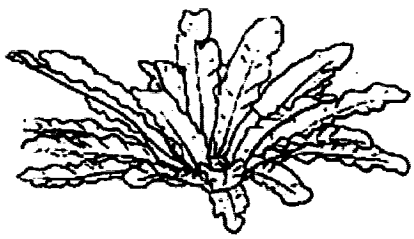
(2) rose plant



(3) mushroom



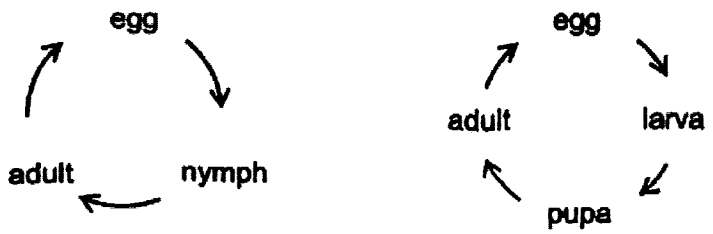
(4) fern



2 Which of the following characteristics can be used to differentiate between amphibians, mammals and reptiles?

(1) number of legs
(2) type of body covering
(3) method of reproduction
(4) whether it can live both on land and in water

3 Below show life cycles E and F.



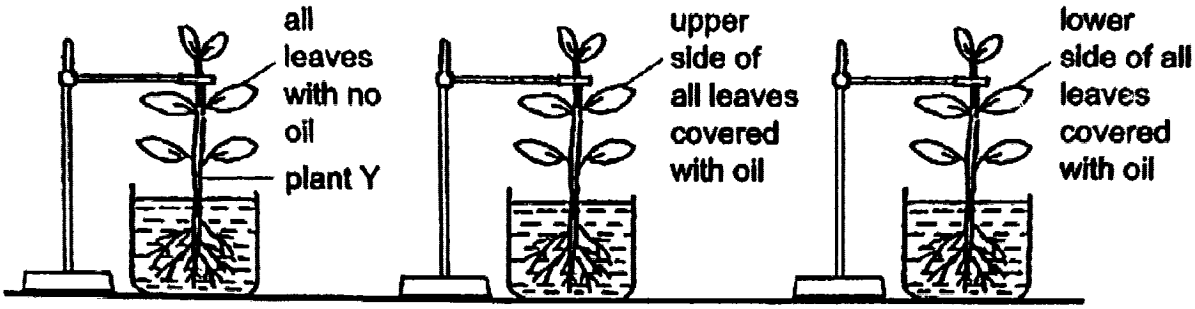
Life cycle E Life cycle F

Which of the following correctly identifies the organisms with life cycles E and F?

	Life cycle E	Life cycle F
(1)	frog	mosquito
(2)	chicken	beetle
(3)	cockroach	frog
(4)	grasshopper	butterfly

(Go on to the next page)

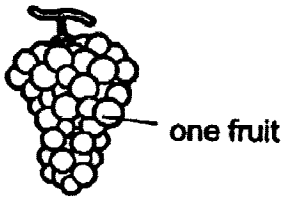
4 Linda plucked a leaf of plant Y and put it in boiling water. She noticed that there were more bubbles on the lower side than the upper side of the leaf. Then, she conducted an experiment using three similar plants Y placed in beakers containing 200 cm^3 of water. She placed them in the same place for two days and measured volume of water left.



Which is the most likely results at the end of the experiment?

	Volume of water in each beaker at the end of the experiment (cm^3)		
	Set-up A	Set-up B	Set-up C
(1)	150	170	180
(2)	150	180	170
(3)	180	170	150
(4)	180	180	180

5 K is made up of many small fruits.



K develops from many flowers. Each flower develops into a fruit with a few seeds. Which statement about K, before it develops into small fruits, is correct?

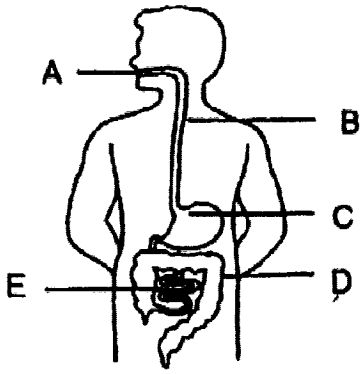
(1) It has one ovary and one ovule.

(2) It has one ovary and many ovules.

(3) It has many ovaries and one ovule.

(4) It has many ovaries and many ovules.

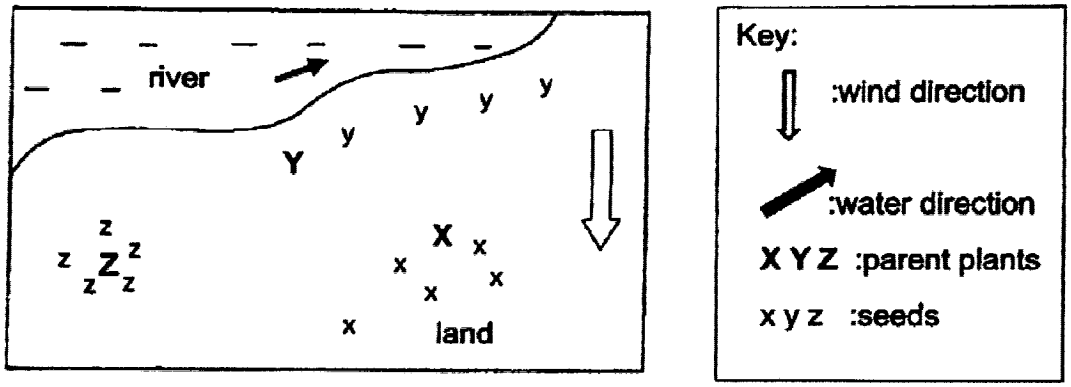
6 Study the diagram below



Which organs do **not** produce digestive juice?

(1) A and B
(2) A and D
(3) B and D
(4) C and E

7 The diagram shows the parent plants, X, Y and Z, and where their seeds are dispersed.



Which row correctly shows the method of seed dispersal of plants, X, Y and Z?

	Plant X	Plant Y	Plant Z
(1)	wind	water	splitting
(2)	wind	splitting	splitting
(3)	splitting	wind	water
(4)	splitting	water	wind

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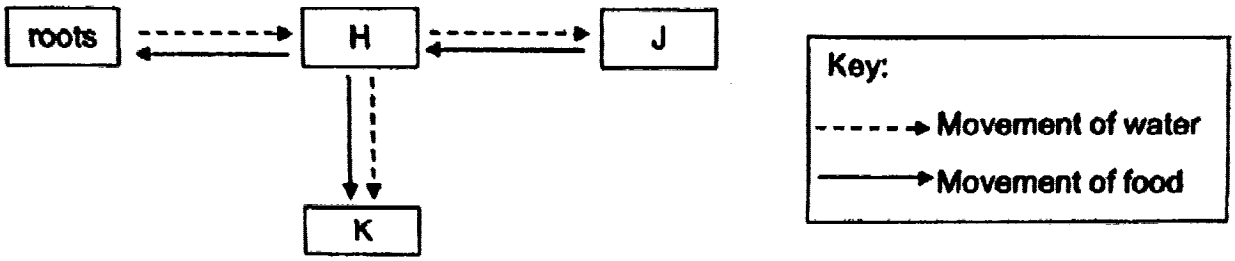
Use the information below to answer Questions 8 and 9.

The diagram shows the movement of water and food in the different plant parts, H, J and K.



8 Which row correctly identifies the plant parts, H, J and K?

	H	J	K
(1)	leaf	stem	fruit
(2)	stem	fruit	flower
(3)	stem	leaf	fruit
(4)	flower	stem	leaf

9 What will be the effect of removing the food-carrying tubes between the roots and H?

(1) H will not receive food.

(2) J will not receive water.

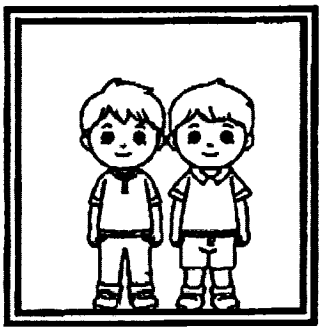
(3) K will receive more water.

(4) Roots will die after some time.

10 Which row shows where sperms, pollen grains and eggs are contained?

	Sperms	Pollen grains	Eggs
(1)	ovary	anther	stigma
(2)	anther	testes	ovary
(3)	testes	anther	stigma
(4)	testes	anther	ovary

11 Two boys were trapped in a lift for several hours.



Which of the following gas(es) remain(s) the same after several hours?

(1) nitrogen only
(2) carbon dioxide only
(3) nitrogen and water vapour
(4) oxygen and carbon dioxide

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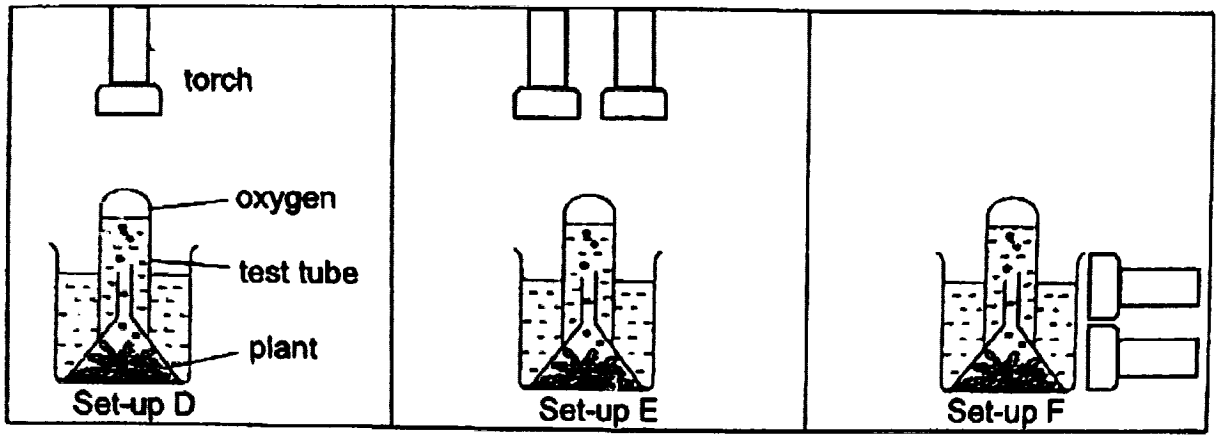
12 Shixuan conducted an experiment using identical torches in a dark room.

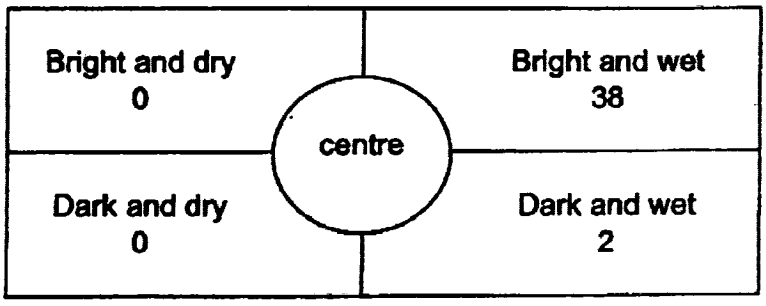


After some time, he measured the volume of oxygen collected in the test tube.

Which of the following shows the rate of photosynthesis in the set-ups from the lowest to highest?

(1) D, E, F
(2) D, F, E
(3) E, F, D
(4) F, E, D

13 David placed 40 organism P in the centre of a box with four sections with different conditions. The number of organism P found in each section after 15 minutes is as shown.



Which place is organism P most likely to be found?

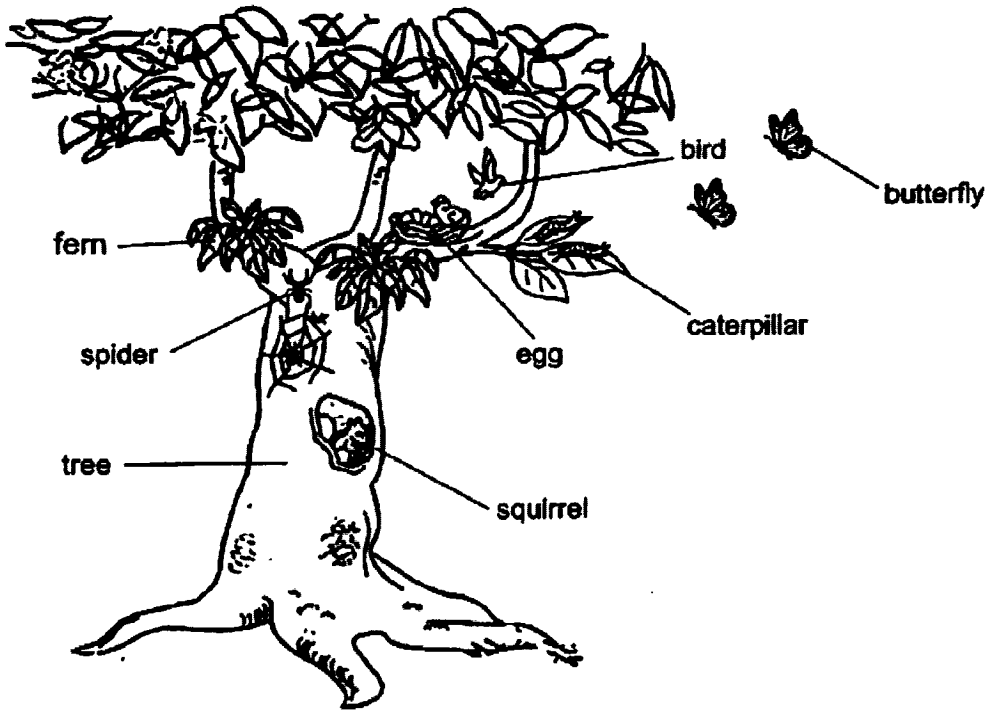
(1) In the soil in the garden
(2) On the grass in the field
(3) Underneath leaves on a tree
(4) In the water along the seashore

14 Which of the following is/are **not** the effect(s) of deforestation?

A increase in rainfall
B decrease in oxygen
C increase in land slides
D more types of plants and animals

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

15 The diagram below shows a tree.



Which of the following is correct?

(1) There are five communities.
(2) There are two types of producers.
(3) There are six populations of consumers.
(4) Butterflies and caterpillars formed two populations.

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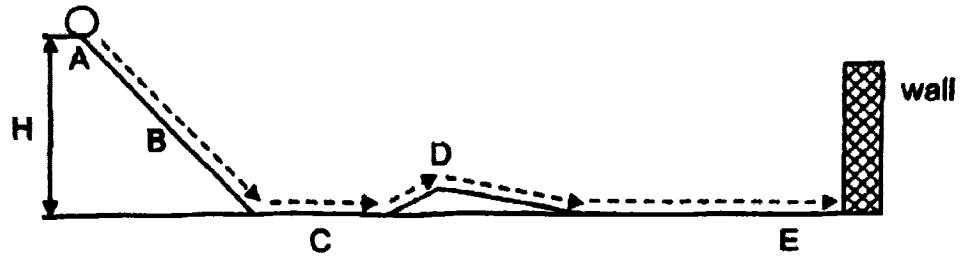
16 A ball, at height, H, rolled down from a slope and travelled all the way till it hit the wall before stopping completely.



Which of the following is correct?

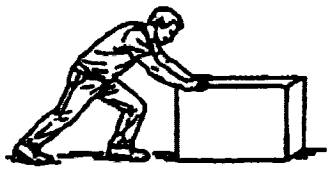
(1) At point B, the ball only has kinetic energy.

(2) The ball has more kinetic energy at E than at C.

(3) The ball will roll down the slope slower if H is less.

(4) The ball has the same amount of potential energy at A and D.

17 The diagram shows a man pushing a box across the floor.



Which of the following force(s) would help the man to move the box across the floor?

A The weight of the box.

B The pushing force exerted by the man.

C The frictional force between the box and the floor.

D The frictional force between the man's shoes and the floor

(1) B only

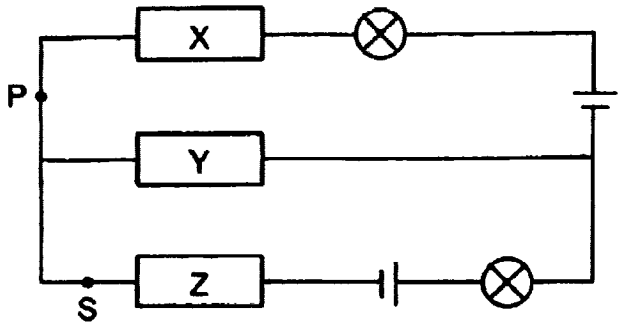
(2) C only

(3) A and D only

(4) B and D only

Use the information below to answer Questions **18** and **19**.

Ahmad set up a circuit with three materials, X, Y and Z, of similar size.



He observed that only one bulb was lit.

18 Which material(s), X, Y or Z, is/are made of an electrical insulator?

(1) Y only
(2) Z only
(3) X and Y only
(4) X and Z only

19 What should Ahmad do if he wants the bulb to be lit up less brightly?

(1) Add one bulb at P
(2) Add one bulb at S
(3) Add one battery at P
(4) Add one battery at S

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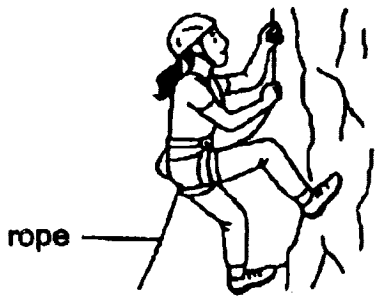
20 Ropes are a necessary equipment for people who are rock climbing to catch falls.



Based on the diagram, what properties should the rope have to ensure safety?

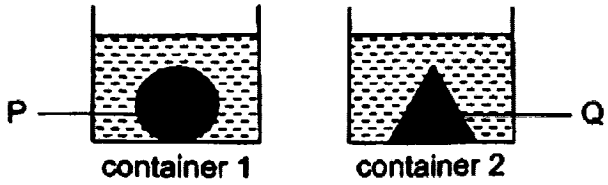
(1) strong and rigid

(2) strong and flexible

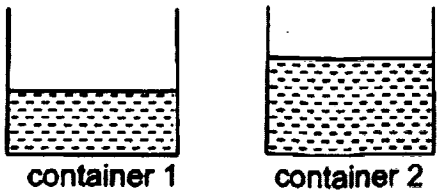
(3) waterproof and rigid

(4) waterproof and flexible

21 Danielle put objects P and Q into two containers and poured in water till the water levels in both containers were the same.



When Danielle removed objects P and Q from the containers, the water levels were as shown.



Which can she conclude from her experiment?

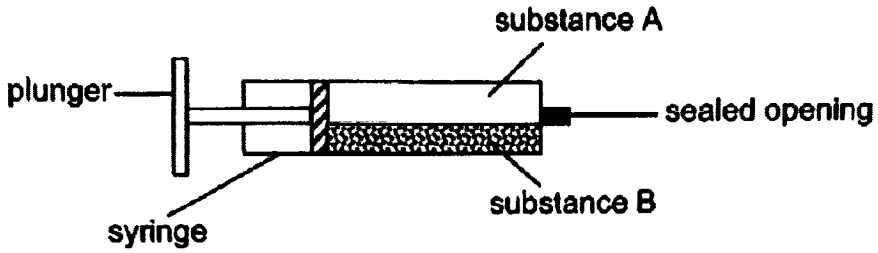
(1) P has a greater mass than Q.

(2) P and Q are of the same size.

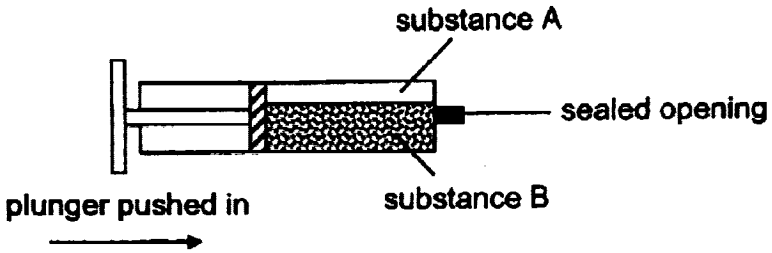
(3) P occupies less space than Q.

(4) P has a greater volume than Q.

22 John has a syringe containing substances A and B as shown. One of the substances is a liquid. The opening of the syringe was sealed.



John was able to push the plunger in as shown below.



What happened to the mass and volume of substances A and B after the plunger was pushed in?

	Substance A		Substance B	
	Mass	**Volume**	**Mass**	**Volume**
(1)	No change	Decreased	No change	Increased
(2)	Decreased	Decreased	Increased	Increased
(3)	No change	Decreased	No change	No change
(4)	Decreased	No change	Increased	No change

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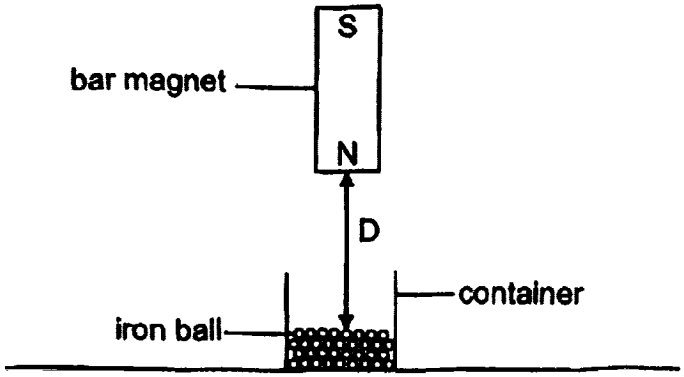
23 Chan Yee prepared a set-up to find out how the distance between a bar magnet and the iron balls, D, affects the number of iron balls attracted.



She recorded the number of iron balls attracted to the magnet.

Distance, D (cm)	10	8	6	4
Number of iron balls attracted	4	7	11	16

She then made a change to her experiment and carried out the experiment again. The results of her second experiment are shown in the table below.

Distance, D (cm)	10	8	6	4
Number of iron balls attracted	0	0	0	1

Based on the above results, what was the change Chan Yee made to her second experiment?

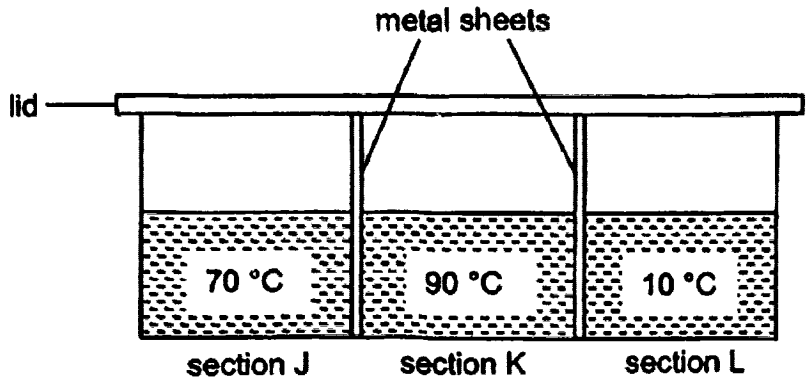
(1) She changed the bar magnet to an iron rod.

(2) She used iron balls that were lighter in mass.

(3) She turned the bar magnet such that the centre was facing the iron balls.

(4) She turned the bar magnet such that the South pole was facing the iron balls.

24 A large container was separated by two identical metal sheets into three sections, J, K and L, of equal size. Each section was filled with 200 mℓ of water at different temperatures. The container was placed in a room with a temperature of 25 °C for 10 minutes.



Which of the following statements is correct?

(1) Heat flowed from section K to J and then to L.

(2) Water in section J and L gained heat from the water in section K.

(3) Temperature of water in section K will be lower than that of section J at the end.

(4) More water droplets will be seen on the underside of the lid above section L compared to section K.

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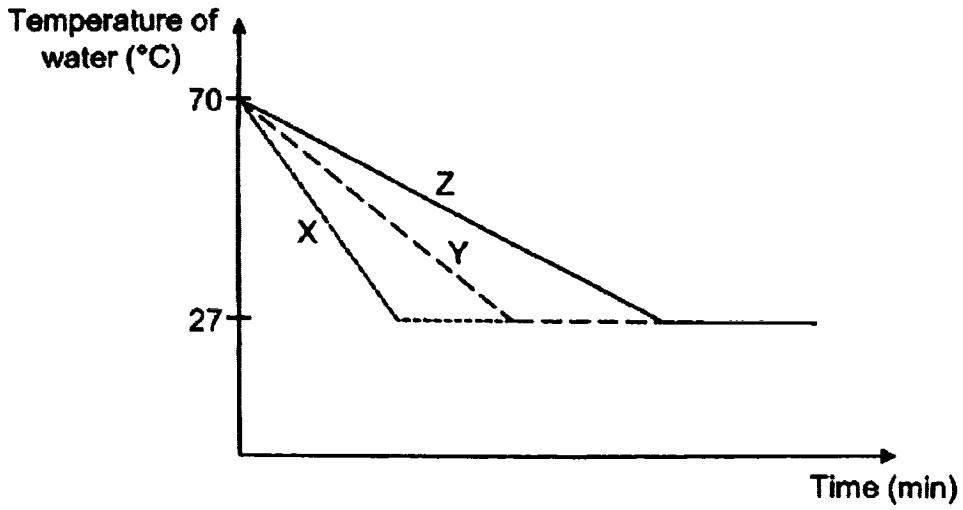
25 Suresh filled three similar sized cups made of different materials, X, Y and Z, with 250 mℓ of water at 70 °C and left them in the classroom. The change in the temperature of water was recorded and plotted in the graph as shown.



Which statement is **not** correct?

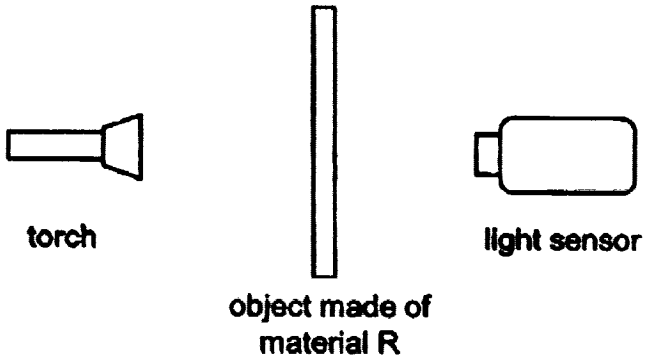
(1) The room temperature is 27 °C.

(2) Material X is a better conductor of heat than Y.

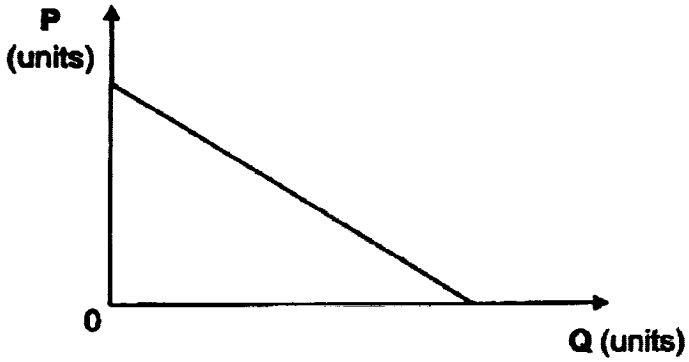
(3) The water in the cup made of material Z lost heat the fastest.

(4) The cup made of material Y can keep water cold for a shorter time as compared to Z.

26 Jamie prepared the following set-up. The position of the torch and light sensor was fixed.



She turned on the torch and changed one variable to observe the effect on another variable. The graph shows the results.



What could variables P and Q be?

	P	Q
(1)	Thickness of material R	Amount of light detected by light sensor
(2)	Distance between the object and light sensor	Amount of light detected by light sensor
(3)	Amount of light detected by light sensor	Distance between the object and light sensor
(4)	Amount of light detected by light sensor	Thickness of material R

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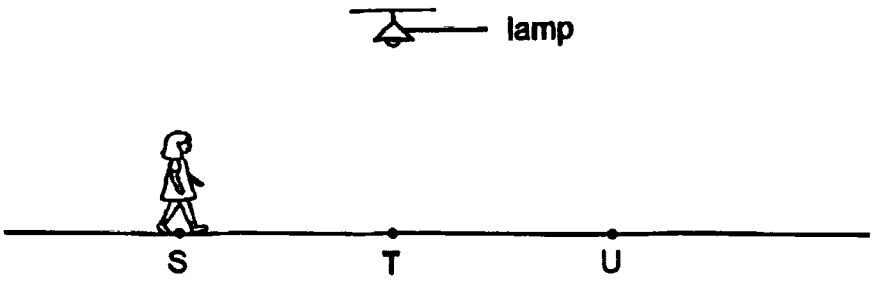
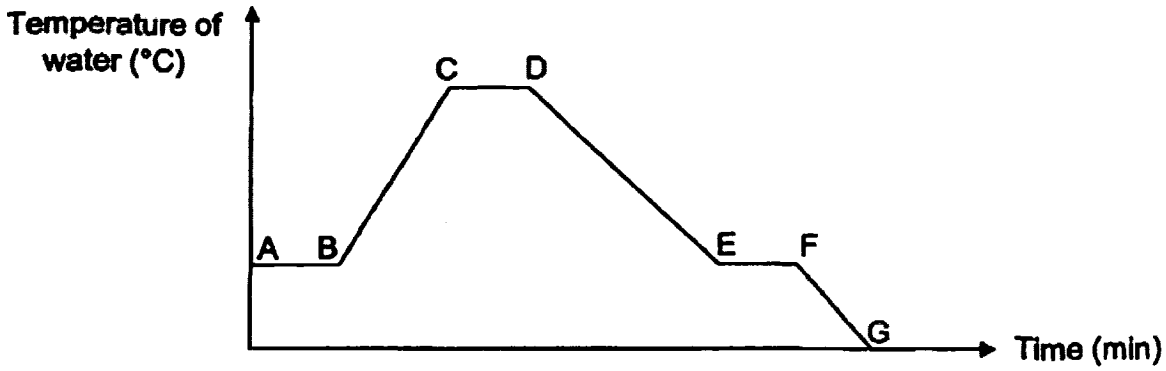
27 Lily walked in a straight line from S to T and then to U as shown.



Which of the following correctly describes the length and position of Lily's shadow at positions S and U?

	Position S		Position U	
	Length of shadow	Position of shadow	Length of shadow	Position of shadow
(1)	Longer than at T	In front of Lily	Shorter than at T	In front of Lily
(2)	Shorter than at T	In front of Lily	Longer than at T	Behind Lily
(3)	Shorter than at T	Behind Lily	Shorter than at T	Behind Lily
(4)	Longer than at T	Behind Lily	Longer than at T	In front of Lily

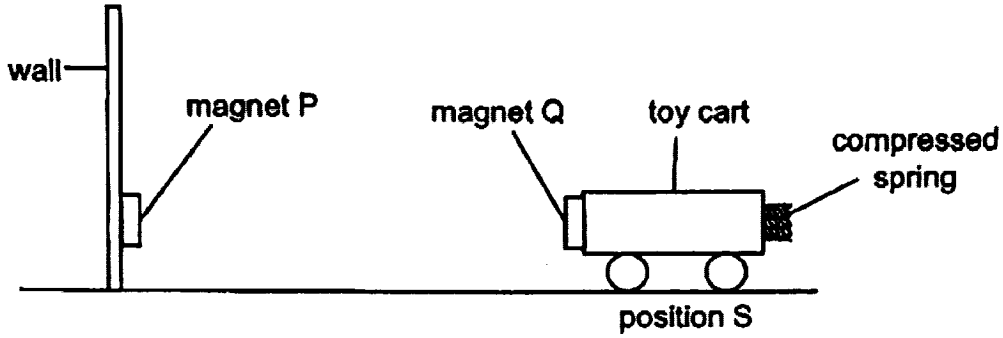
28 The graph shows the changes in the temperature of water in a pot over a period of time.



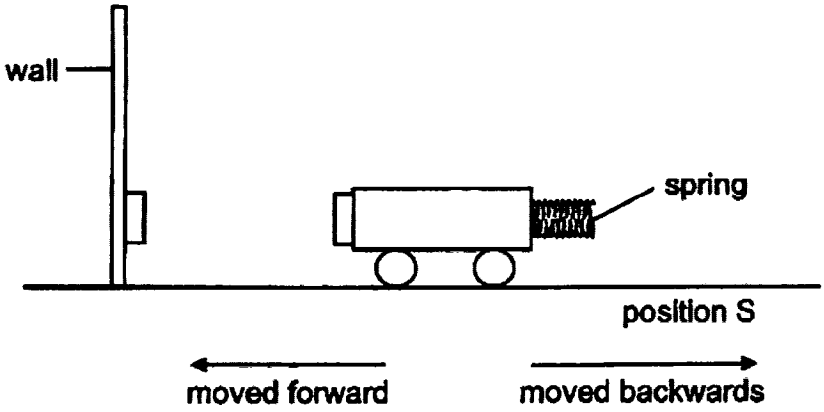
Based on the graph, identify the point in time the following actions took place.

	Pot is placed on the heater	Pot is removed from the heater	Pot is placed in the freezer
(1)	A	C	E
(2)	B	D	F
(3)	A	D	G
(4)	B	C	D

29 Devi glued magnet P to a wall and magnet Q to a toy cart as shown. She compressed the spring at the back of the toy cart and held the toy cart in place at position S.



When she let go of the toy cart, it moved forward for a short distance before reversing to move backwards as shown. The toy cart did not hit magnet P.



What were the forces acting on the toy cart when it is moving backwards?

A Magnetic force
B Frictional force
C Gravitational force
D Elastic spring force

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

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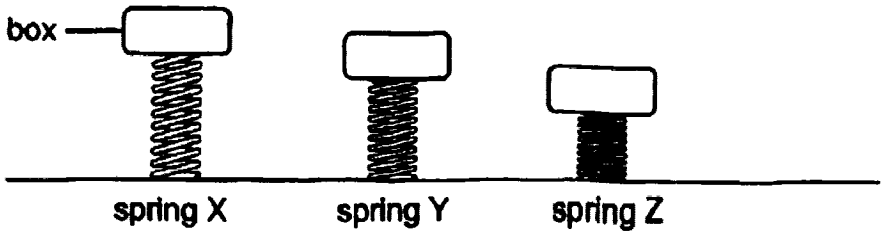
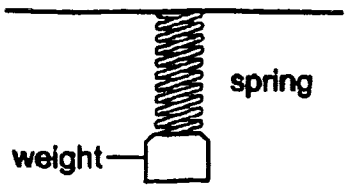
30 Ginny conducted an experiment with three different springs, X, Y and Z, of equal length. She placed an identical box on each of the spring and noted the compression of each spring.

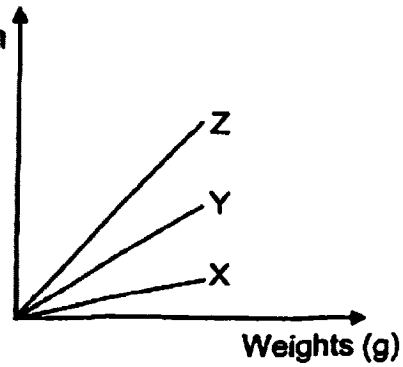


Ginny then attached weights of different mass on each spring as shown and measured the extension of the springs.

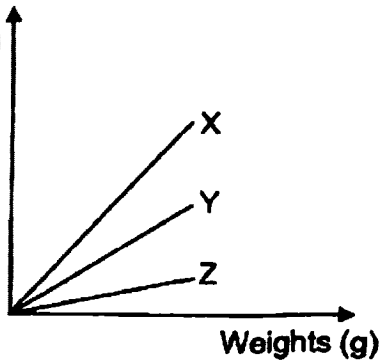


Which graph correctly shows the relationship between the weights and the extension of springs X, Y and Z?

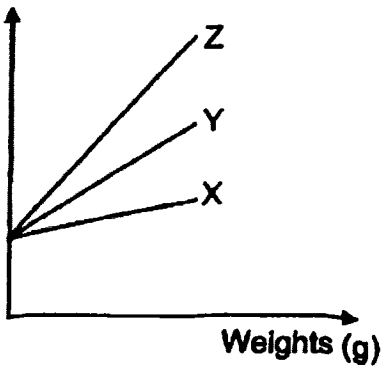
(1)



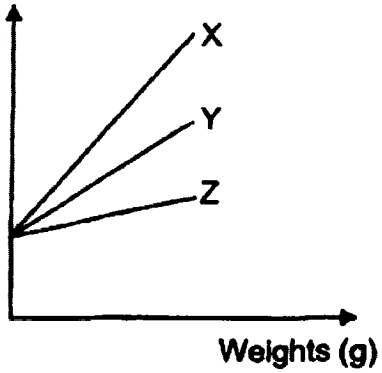
(2)



(3)



(4)



(Go to Booklet B)

NAN HUA PRIMARY SCHOOL

PRELIMINARY EXAMINATION 2026

PRIMARY 6

SCIENCE
(BOOKLET B)

Total Time for Booklets A and B: 1 hour 45 minutes

INSTRUCTIONS TO CANDIDATES

1. Write your name, index number and class in the spaces provided below.
2. Do not turn over the page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Use dark blue or black ballpoint pen to write your answers in the space provided for each question.
6. Do not use correction fluid/tape or highlighter.

Marks Obtained

Booklet B		**/ 40**

Name: _____ ( )

Form Class: P6 _____ **Teaching Group: 6S** _____

Date: 19 August 2026 **Parent's Signature:** _____

This booklet consists of 14 printed pages

For questions 31 to 41, write your answers in this booklet.
The number of marks available is shown in brackets [ ] at the end of each question or part question. (40 marks)

31 (a) Draw the life cycle of a plant using only words and arrows. [1]

Rajah has some plant T in his garden. The flowers of plant T give off a sweet smell and have nectar. He also observed that bees are visiting the flowers of plant T.

(b) How does the flower benefit when bees visit it? [1]

_____

_____

(c) How does the bee benefit when it visits the flowers? [1]

_____

_____

(d) Rajah examines the fruit of plant T. He noticed that there are many seeds in the fruit. Explain why it is beneficial to plant T to have many seeds. [1]

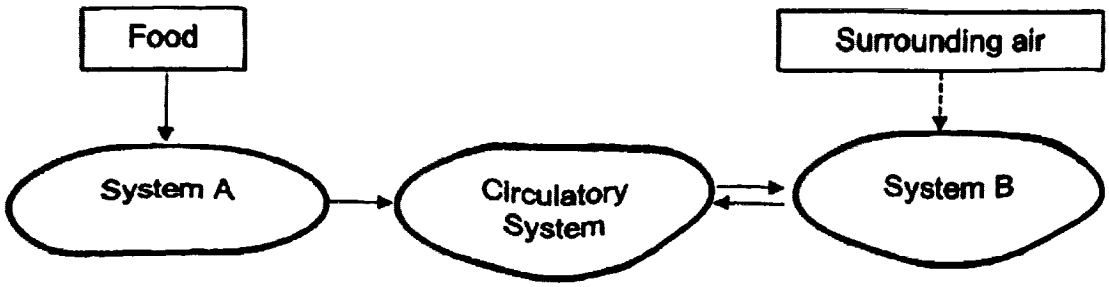
_____

_____

Score	/ 4

32 (a) Describe what respiration is. [1]

The diagram below shows how food and various gases are transported in the human body.



(b) Identify systems A and B. [1]

System A: _____

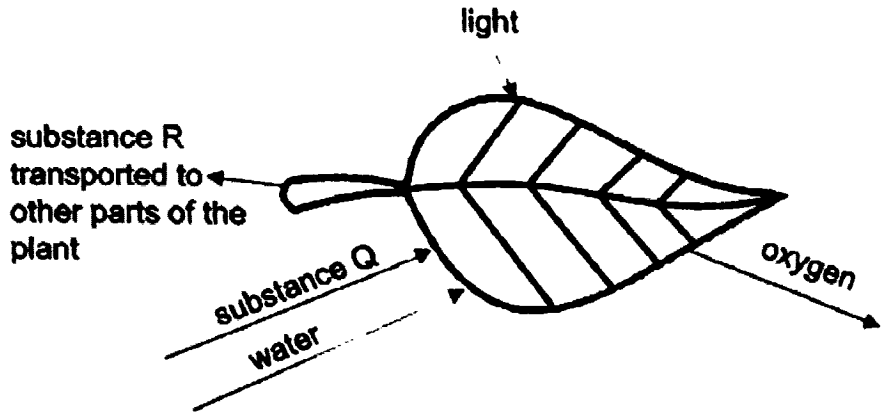
System B: _____

(c) Explain how circulatory system helps respiration to take place in all parts of the body. [1]

Score 3

(Go on to the next page)

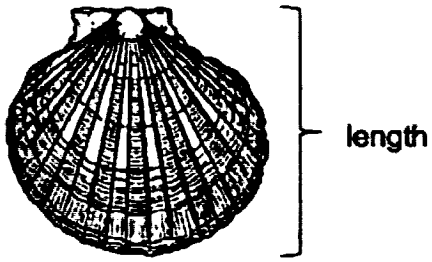
33 The diagram below shows the substances going in and out of a leaf in the presence of light.



(a) Identify substances Q and R. [1]

Q: _____ R: _____

Organism S lives in seawater.



organism S

The table shows the amount of carbon dioxide in seawater and average length of organism S.

Amount of carbon dioxide (unit)	Average length of organism S (cm)
2000	5.0
2200	4.9
2400	4.7

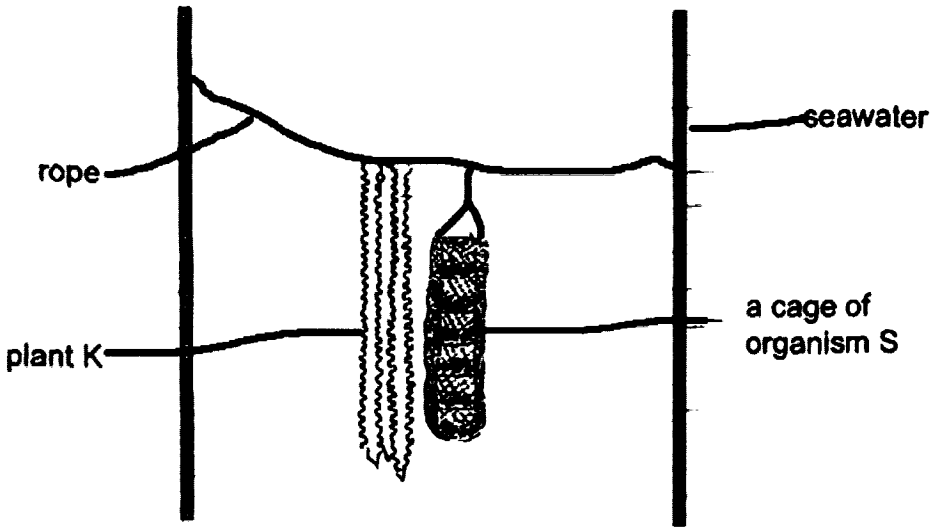
(b) What is the relationship between the average length of organism and the amount of carbon dioxide in seawater? [1]

_____

_____

(c) Burning of fossil fuel increases the amount carbon dioxide in the air. Some of this carbon dioxide in the air can get into the seawater. State the effect of burning fossil fuel on the growth of organism S. [1]

To grow organism S well, fishermen tied plant K next to the cage of S near the surface of the sea.



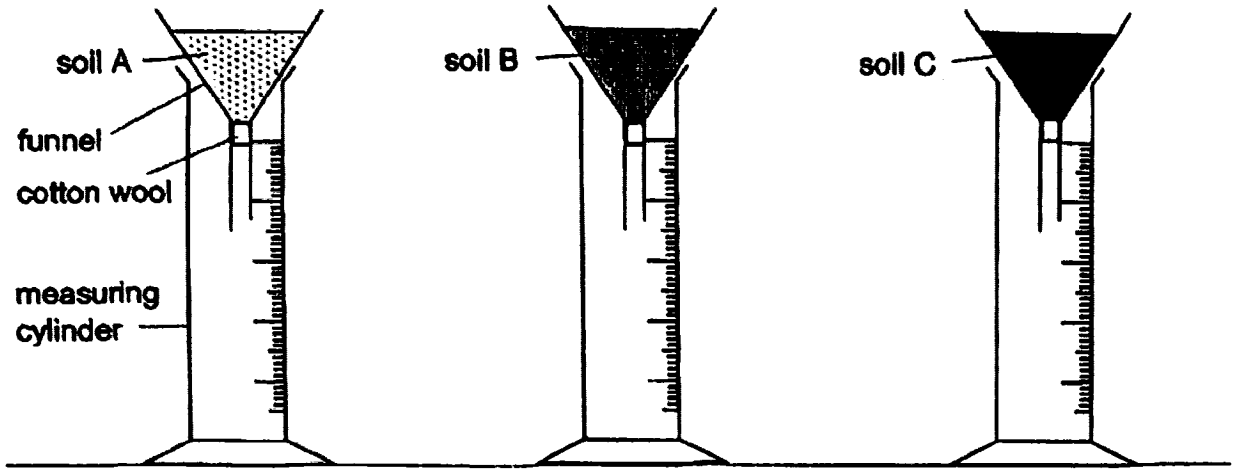
(d) Explain how plant K helps organism S to grow well when the amount of carbon dioxide in the seawater is high. [1]

(e) A fisherman lowered the cage and plant K deeper into the seawater. At this depth, plant K could not be seen from the surface. Will this method still help organism S grow well? Explain your answer. [1]

Score	5

(Go on to the next page)

34 John poured 100 cm^3 of water into 100 g of soil A, B and C as shown.

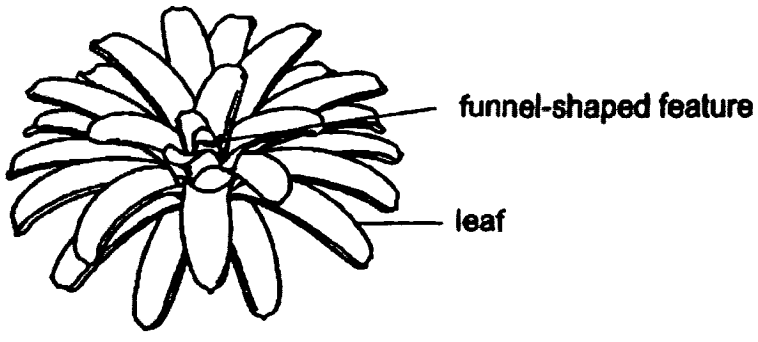


He observed the volume of water collected in the measuring cylinders after a few minutes and recorded the results in the table.

Type of soil	Volume of water collected in the measuring cylinder (cm^3)
A	89
B	65
C	42

(a) State the aim of this experiment. [1]

Plant X can grow well in soil A. It has leaves which grow and form into a funnel-shaped feature which holds water and dead organisms. It has short roots for anchoring but most water is absorbed directly through the leaves.



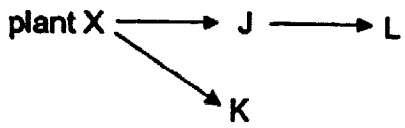
(b) State and explain one adaptation that plant X has to help it grow well in soil A. [1]

After some time, the dead organisms in the funnel-shaped feature undergo process R and turn into a liquid.

(c) Name process R. [1]

(d) Explain how process R benefits plant X. [1]

Populations of plant X, organisms J, K and L are found in the same habitat. The following food web shows their food relationship.

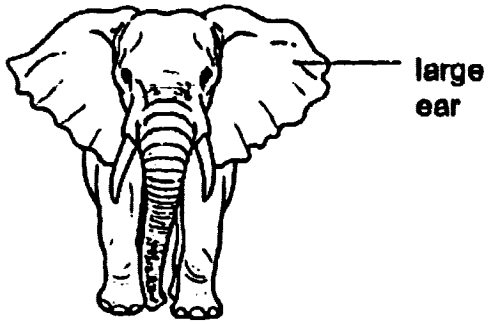


(e) Explain how spraying insecticide to kill L affects the population of K. [1]

Score	5

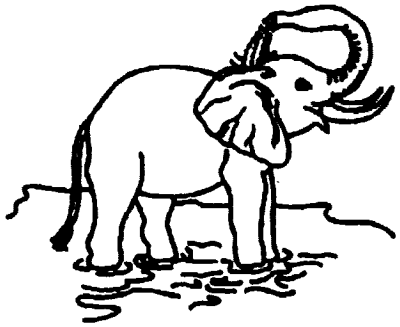
(Go on to the next page)

35 Elephant G lives in a hot area and has large ears as shown.



(a) Given that elephants can lose heat through their skin, explain why having large ear is an advantage for elephant G. [1]

Elephant G also sprays water on its body to cool itself.

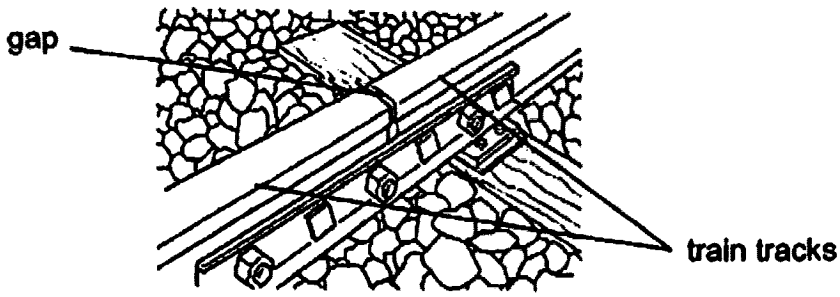


(b) Explain how spraying water on its body helps to cool itself. [1]

(c) Elephant G flaps its ears after spraying water on its body. Explain how this action helps it cools faster. [1]

Score	
	3

36 Henry noticed that there were gaps between train tracks as shown. He also observed that the gaps were smaller on a hot day.



(a) Explain how the gaps help to ensure that trains can travel safely on the tracks on hot days. [1]

Henry conducted an experiment to compare how much three identical rods made of different metals, A, B and C, expand when heated for the same duration. He recorded the results in the table.

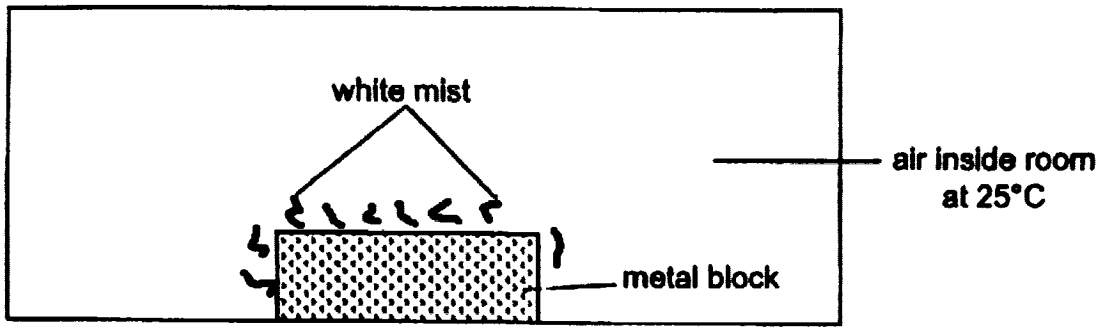
Metal rod	Length before heating (mm)	Length after heating (mm)
A	200	205
B	200	214
C	200	209

(b) Which metal, when used to make the train tracks, will cause the gap between the tracks to be the largest on a hot day? Explain your answer. [2]

Score	
	3

(Go on to the next page)

37 Isabel placed a metal block at 0°C in a room. After some time, she observed that there was a layer of white mist forming around the metal block.



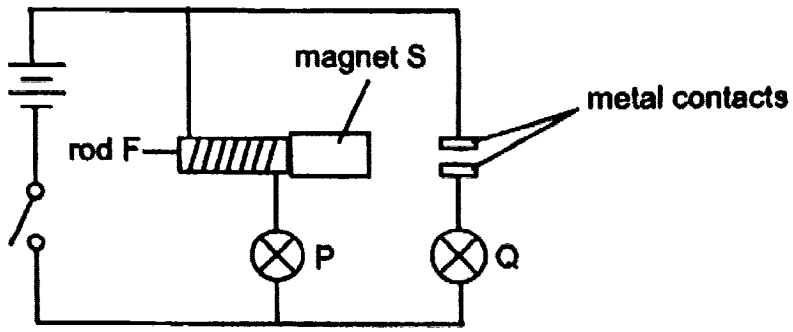
(a) Explain how the white mist was formed. [2]

(b) After observing the metal block closely, Isabel noticed that a thin layer of white solid had formed on it. What could the white solid be? [1]

(c) Explain how the white solid was formed. [1]

Score	
	4

38 Kelly set up a circuit as shown using an iron rod, F.



She closed the switch and magnet S moved to the right and touched the metal contacts. She recorded which bulb lit up in the table below. She then repeated the experiment after replacing rod F with rods, G and H, of different materials.

	Did the bulb light up?	
	P	Q
Rod F	yes	yes
Rod G	yes	no
Rod H	no	no

(a) What is the property of rod G that allowed Kelly to obtain the above results? [1]

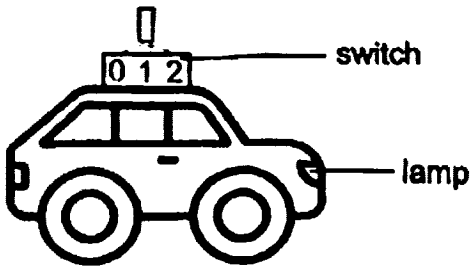
(b) Kelly's teacher told her that one result with rod H in the circuit is wrong. What should the correct result for rod H be? Explain your answer. [1]

(c) With rod G in the circuit, what should Kelly do if she wanted magnet S to move with more force? [1]

Score 3

(Go on to the next page)

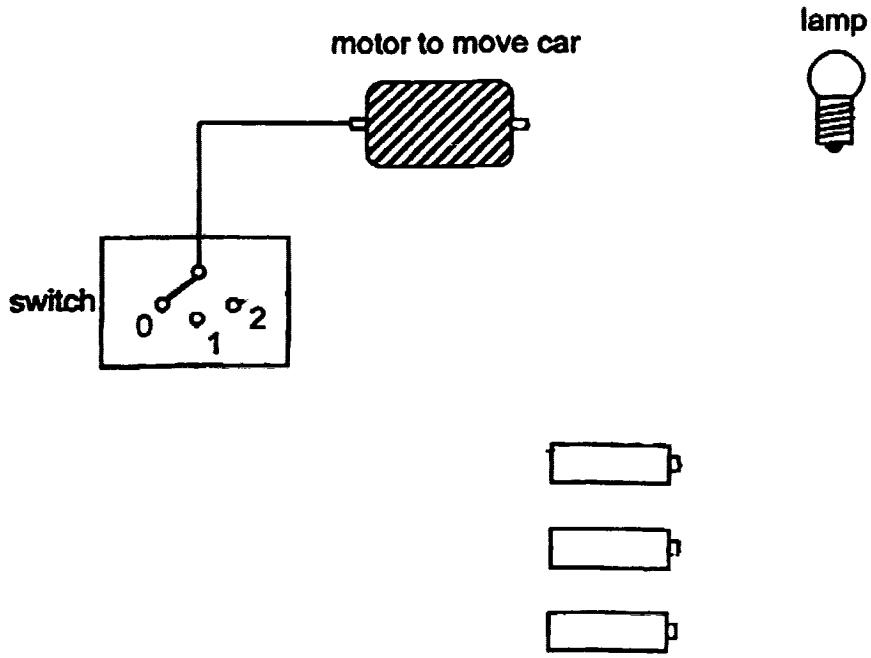
39 Mr Lee built a toy car that works on batteries and a special switch.



The toy car works in the following manner.

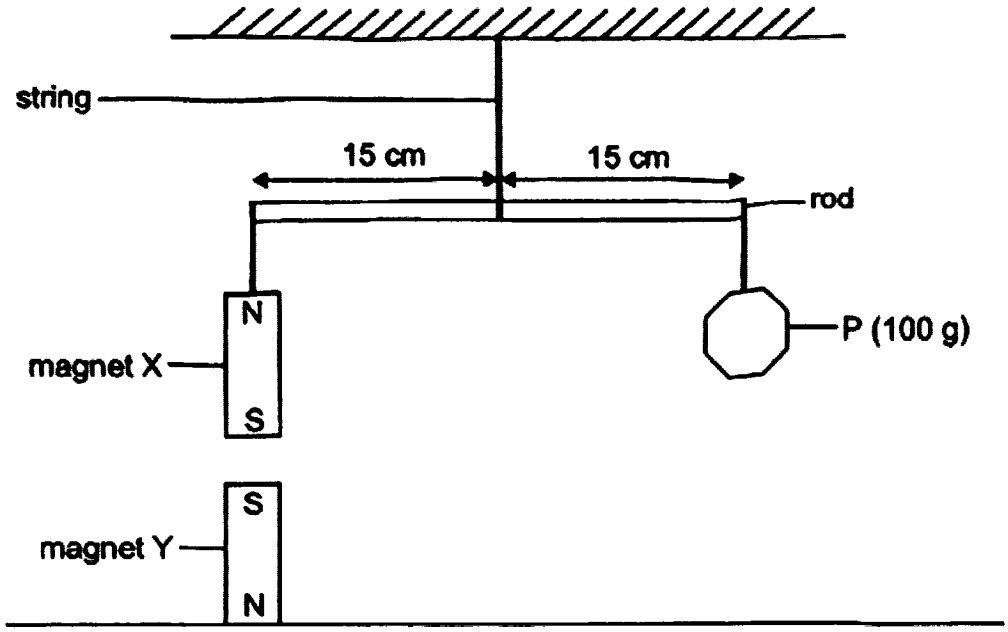
Position of switch	Number of batteries connected	Observation
	0	• Car does not move • Lamp does not light up
	1	• Car moves at a slow pace • Lamp lights up
	2	• Car moves at a fast pace • Lamp lights up brighter

Complete the circuit below to allow the toy car to work as stated above. [3]



Score	
	3

40 Object P and magnet X are balanced on a rod that is held up by a string as shown.



(a) Name the force(s) acting on magnet X. [1]

_____

(b) Is the mass of magnet X greater than, equal to or less than 100 g? [1]

_____

(c) Will object P and magnet X still be balanced if magnet Y is replaced with a plastic block of the same size? Explain your answer. [2]

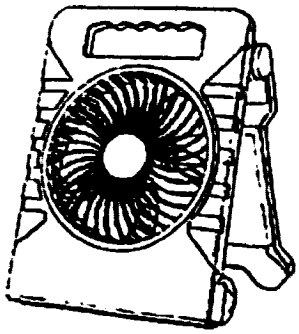
_____

_____

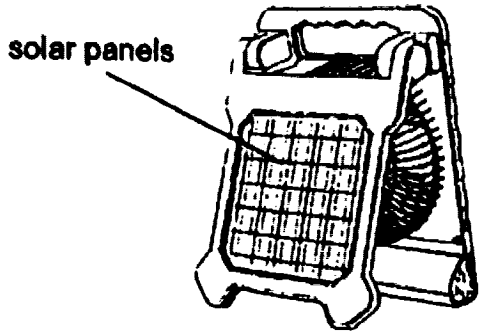
_____

Score 4

41 The diagrams show a solar-powered portable fan.

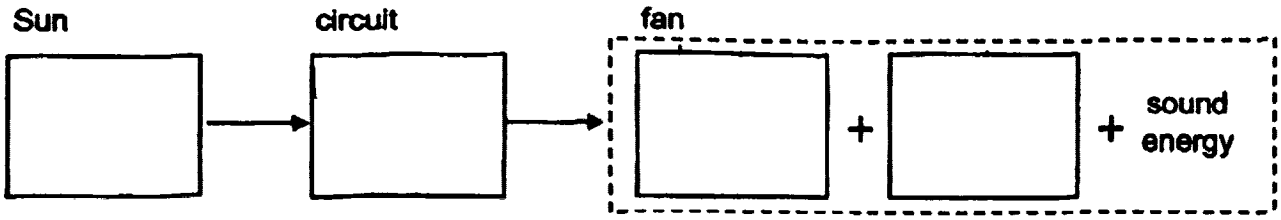


Front of fan



Back of fan

(a) Fill in the boxes to show the energy conversion in the fan when it is working. [2]



(b) State one disadvantage of using a solar-powered portable fan. [1]

_____

_____

End of Paper

Score	
	3

NAN HUA PRIMARY SCHOOL
PRELIMINARY EXAMINATION 2026
PRIMARY 6 SCIENCE
STUDENT ANSWER KEY

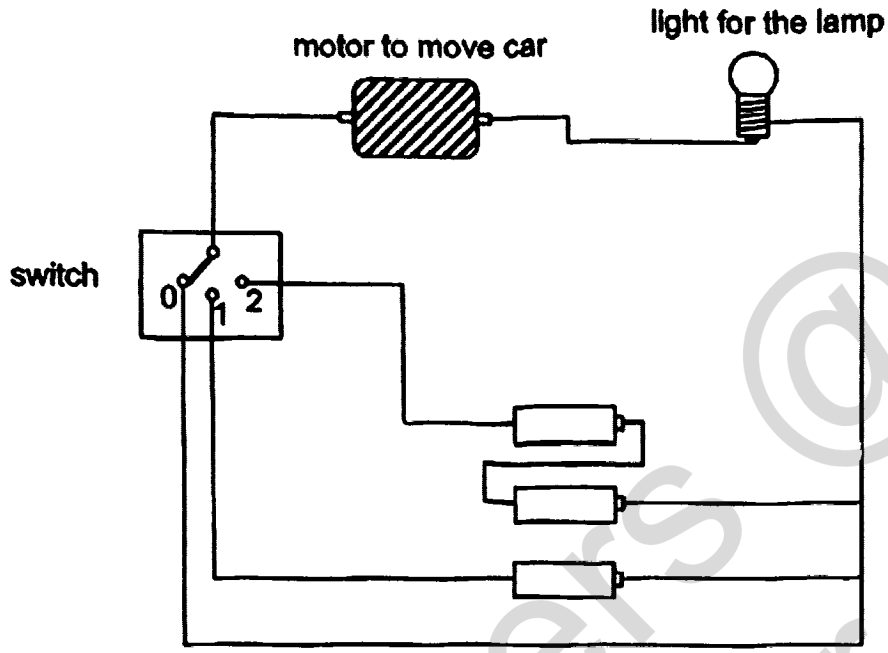
Booklet A

Question	Answer	Question	Answer	Question	Answer
1	3	11	1	21	4
2	2	12	1	22	3
3	4	13	4	23	3
4	1	14	2	24	2
5	4	15	2	25	3
6	3	16	3	26	4
7	1	17	4	27	4
8	3	18	2	28	2
9	4	19	1	29	2
10	4	20	2	30	1

Booklet B

Qn	Correct/Acceptable Answers
31a	
31b	The flower T is pollinated by the bees.
31c	The bees obtain food from the flower.
31d	To increase the chance of a seed to germinate.
32a	Process where food and oxygen are needed to release energy, carbon dioxide and water
32b	**System A:** digestive **System B:** respiratory
32c	The heart pumps blood that contains oxygen and digested food to all parts of the body to release energy.
33a	**Q:** carbon dioxide **R:** sugar
33b	As the amount of carbon dioxide in the seawater increases, the average length of organism S decreases.
33c	The growth of organism S decreased.
33d	Plant K is able to absorb carbon dioxide in the water when it photosynthesises.
33e	**Choice:** No. **Concept:** Plant K receives less sunlight, so it absorbs less carbon dioxide. **Link:** There is more carbon dioxide in the water which will cause the organism S to grow less well.
34a	To find out if the type of soil affects the volume of water collected in the measuring cylinder
34b	Funnel-shaped feature to hold water for the leaves to absorb.
34c	Decomposition
34d	Decomposers break down the dead organisms into simpler substances which become fertiliser for the plant so they can grow more healthily.

34e	**Choice:** Population of K will decrease. **Concept:** There will be less L to feed on J so there are more J to feed on more plant X. As J and K feed on plant X, there is less plant X for K to feed on.
35a	There is a greater exposed surface area of the ears in contact with the warmer surrounding air, so the elephant will lose heat to warmer surrounding air faster.
35b	The water gains heat from the elephant's body and evaporates.
35c	Flapping ears creates more wind, thus increasing the rate of evaporation.
36a	The gaps allow space for expansion so the tracks will not buckle.
36b	**Choice:** Metal A. **Evidence:** Length after heating is the shortest. **Concept:** So, it expanded the least.
37a	The water vapour from the surrounding air in the room came into contact with the cooler air surrounding the metal block, lost heat to it and condensed into tiny water droplets.
37b	Ice
37c	Water on the block lost more heat to the block and froze into ice.
38a	non-magnetic
38b	**Choice:** P should light up. **Concept:** Electric current is flowing through the wire of the closed circuit.
38c	Increase the number of batteries OR number of coils of wire around rod F

39	
40a	Gravitational force and magnetic force of repulsion
40b	More than 100 g
40c	**Choice:** No **Concept:** Magnet X will not be repelled by the plastic block <u>Focus on X only</u> Weight of magnet X will pull it downwards./ Gravitational force acting on magnet X will pull it downwards. **OR** <u>Comparing both X and P:</u> More gravitational force/weight is acting on magnet X.
41a	Light / Solar (energy) → Electrical (energy) → Kinetic (energy) + Heat (energy)
41b	It cannot be used when there is no light.