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南侨小学

NAN CHIAU PRIMARY SCHOOL
PRELIMINARY EXAMINATION
2026
SCIENCE
PRIMARY 6
BOOKLET A

Name / Index no.		( )
Class	**Primary 6**	
Date	**19 August 2026**	
Duration for Booklets A and B	**1 h 45 min**	
Marks	**Booklet A**	**60**
	Booklet B	**40**
	Total	**100**
Parent's Signature		

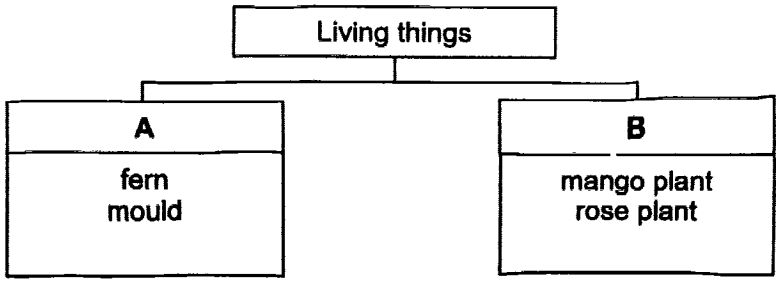
Instructions to students	1.	Do not turn over this page until you are told to do so.
	2.	Follow all instructions carefully.
	3.	Answer all questions.
	4.	Use a 2B pencil to shade your answers on the Optical Answer Sheets (OAS) provided.

This paper consists of 22 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]

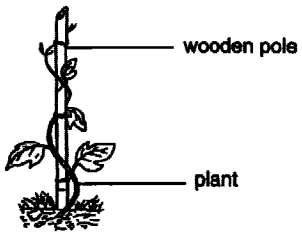
1 Study the classification chart below.



Which one of the following shows the correct headings for groups A and B?

	A	B
(1)	Do not make food	Make food
(2)	Fungi	Plants
(3)	Non-flowering plants	Flowering plants
(4)	Reproduce by spores	Reproduce by seeds

2 Study the diagram below carefully.

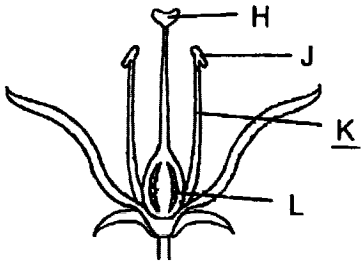


Based on the diagram, the wooden pole helps the plant to _____.

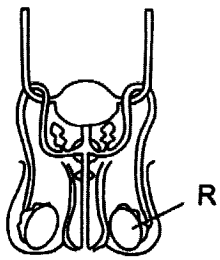
A: grow upright
B trap more light
C absorb more water

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

3 The diagram below shows the reproductive parts of a plant and a male human.



reproductive parts of a plant

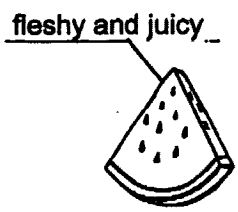


reproductive part of a male human

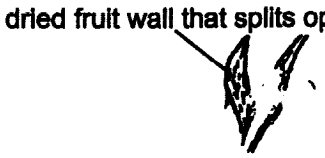
Which of the following parts has a similar function to the male human reproductive part R?

(1) H
(2) J
(3) K
(4) L

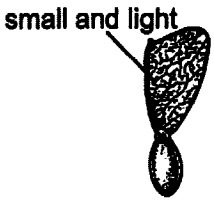
4 Study the diagrams of fruits M, N and O below.



fruit M

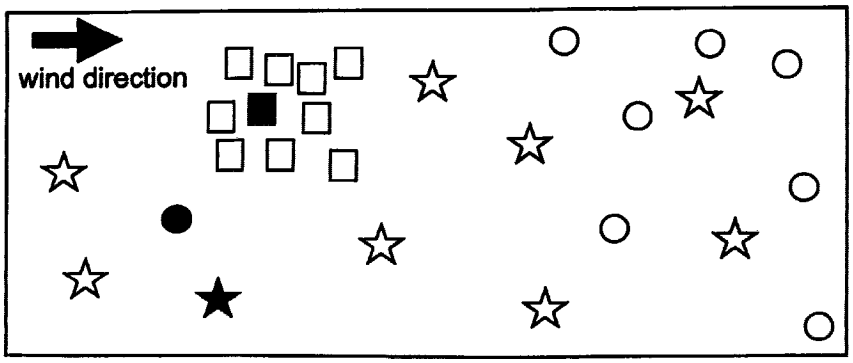


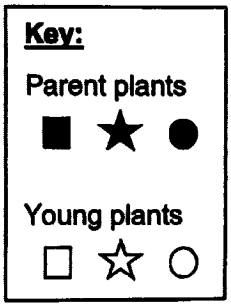
fruit N



fruit O

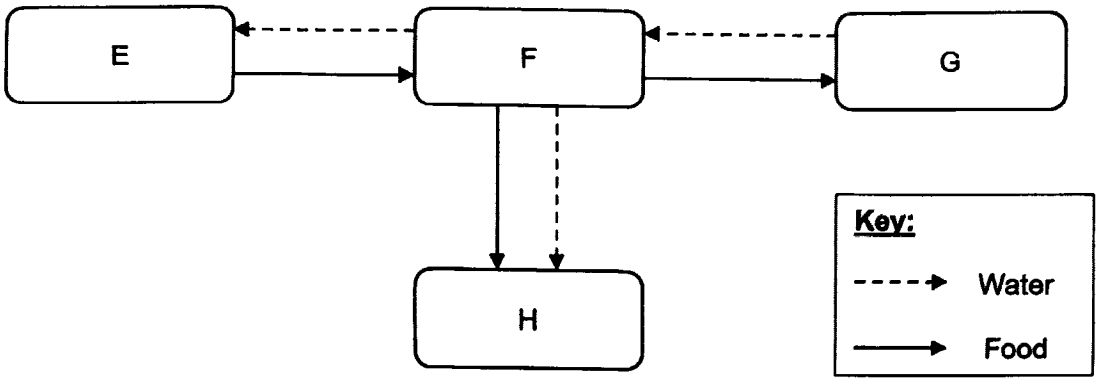
Based on the dispersal pattern of fruits M, N and O below, which of the following would best represent the parent plants?





	■	★	●
(1)	M	N	O
(2)	N	M	O
(3)	N	O	M
(4)	O	N	M

5 The diagram below shows how substances are transported in a plant.



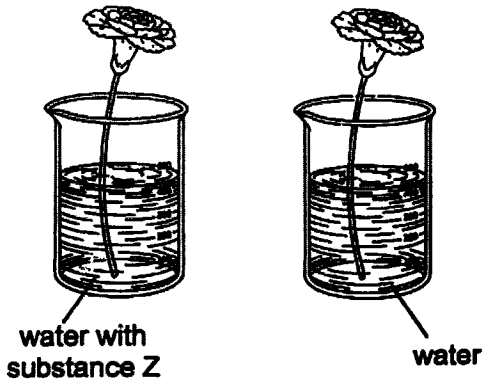
Which of the following represents E, F, G and H?

	E	F	G	H
(1)	leaves	roots	stem	flowers
(2)	flowers	roots	stem	leaves
(3)	leaves	stem	roots	flowers
(4)	roots	flowers	leaves	stem

6 Rui Qi conducted an experiment and came up with the hypothesis that substance Z increases the rate of water absorbed by a plant. She placed identical stalks of roses into two beakers.

Which of the following set-ups should she use to test her hypothesis?

(1)



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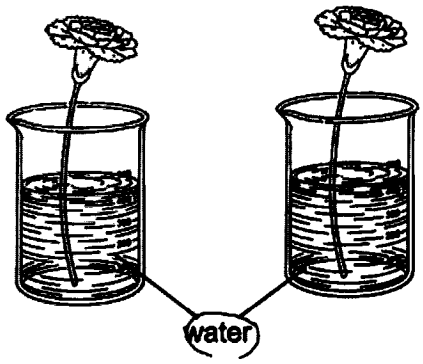
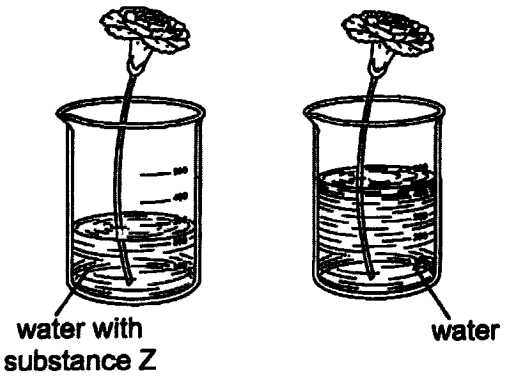
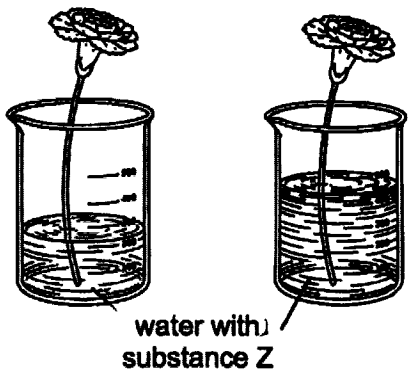


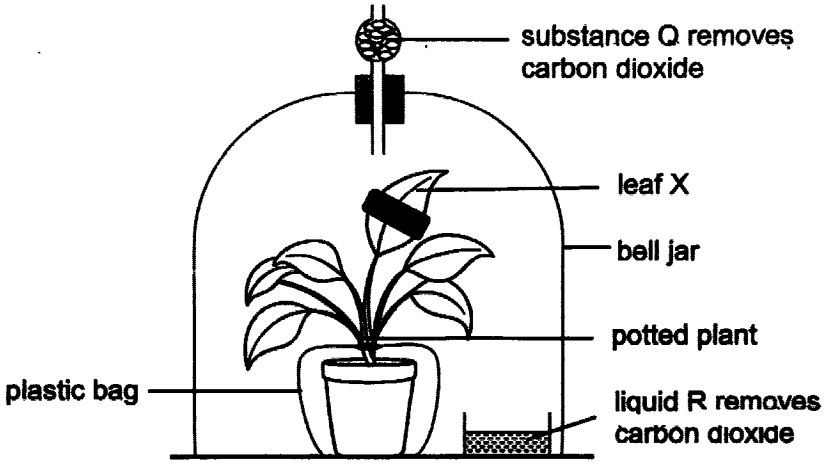




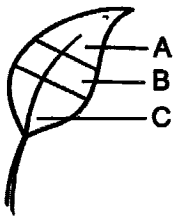
7 Andy kept a potted plant in a cupboard for a day to remove any starch present in its leaves.

He then partially covered leaf X with a piece of black paper on both of its upper and lower surfaces. The plant was then watered and had its pot covered with a plastic bag.

Andy placed the plant in a bell jar and left the set-up under the Sun for a day as shown below.



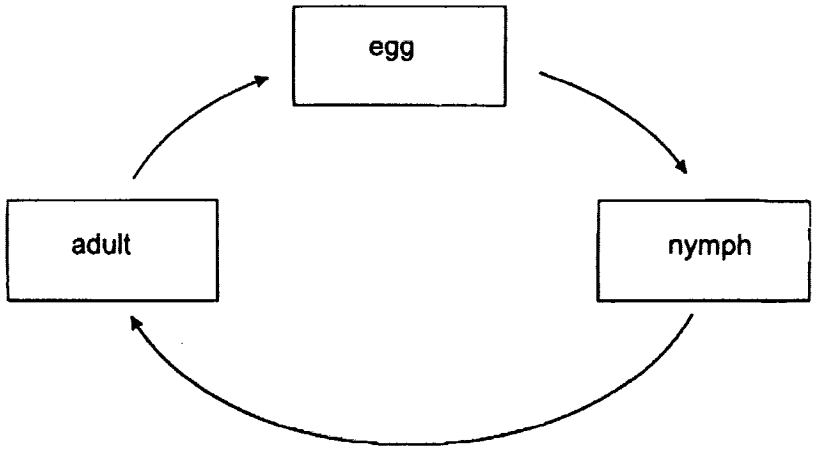
The following day, Andy removed leaf X and tested it for starch with iodine solution. He learnt that the brown iodine solution would turn blue-black in the presence of starch.



On which part(s) of leaf X would the iodine solution remain brown?

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

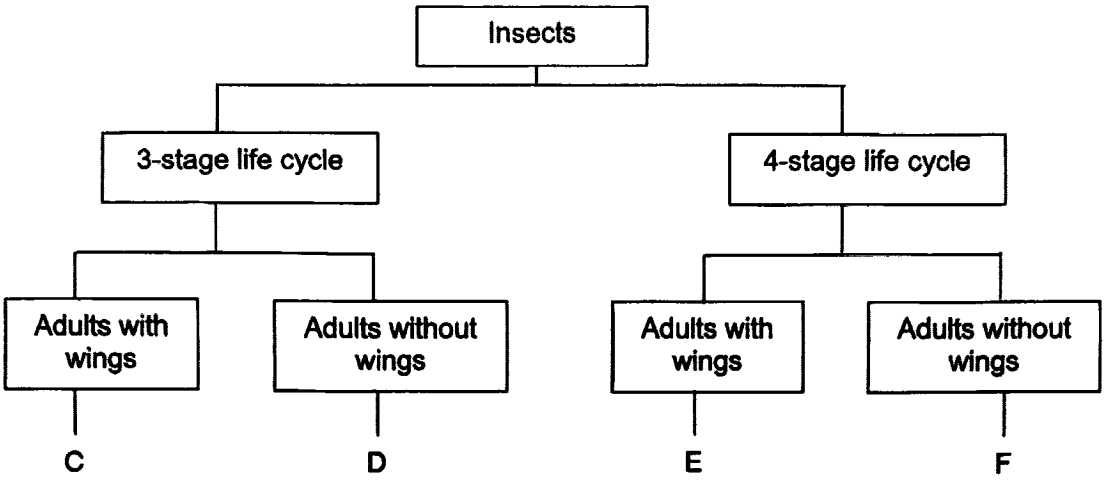
8 The diagram below shows the life cycle of an animal.



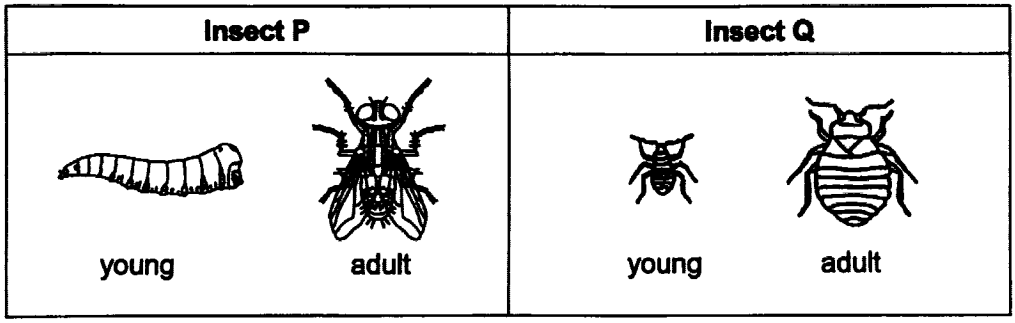
Which animal is likely to have the life cycle as shown above?

(1) chicken
(2) butterfly
(3) grasshopper
(4) mealworm beetle

9 Study the classification chart below.



The diagram below shows the young and adult stages of insects P and Q.



Which of the following shows the correct classification of insects P and Q?

	Insect P	Insect Q
(1)	C	D
(2)	C	F
(3)	E	D
(4)	E	F

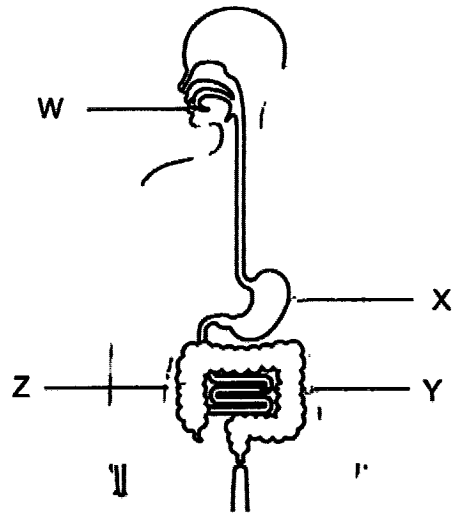
10 Ian was involved in three activities J, K and L at different times of the day. He recorded his heart rate in the table shown below.

Activity	Heartbeat per minute
J	90
K	125
L	65

Based on the information above, which of the following correctly represents J, K and L?

	J	K	L
(1)	running	reading	jogging
(2)	jogging	running	reading
(3)	jogging	reading	running
(4)	reading	running	jogging

11 The diagram below shows parts of the human digestive system W, X, Y and Z.



Which of the following statement(s) is/are correct?

A Digestion starts at X.
B Food is mostly digested at Z.
C Digestive juices are found at W, X and Y.
D. There is more undigested food at W than at Y.

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

12 Which of the following is **not** an effect of global warming?

(1) rising sea levels
(2) melting of ice glaciers
(3) decrease in amount of rainfall
(4) increase of oil spillage in the ocean

13 Fertilisers from a farm entered a nearby pond. This caused tiny floating water plants to grow quickly and cover the surface of the pond.

The following events then took place:

A The population of fish decreased.
B The population of fully submerged water plants decreased.
C The amount of dissolved oxygen in the pond decreased.
D Less sunlight reached the organisms in the pond.

Which of the following shows the correct order of events?

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

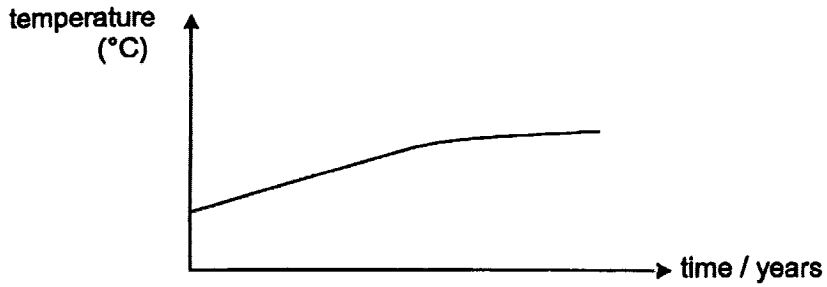
14 A group of lizards live in a very hot desert. Scientists observed that these lizards hide under rocks during the day and come out to hunt for food at night when it is cooler.

The lizards can survive better as _____.

A: there are more prey at night
B: they adapt better structurally
C staying under rocks helps the lizards avoid the heat during the day
D hunting at night allows the lizards to avoid hot daytime temperatures

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

15 The graph below shows the average temperature of the Earth over a period of time.



Which of the following explain(s) the change in average temperature over the period of time?

W Fumes released from factories and vehicles.
X Clearing big areas of forests to make way for housing.
Y Using renewable sources of energy to generate electricity.
Z Burning coal, oil and natural gas in power stations to generate electricity.

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

16 The table below classifies objects as not waterproof or waterproof.

Not waterproof	Waterproof
object A	object B

Which of the following correctly represents objects A and B?

	Object A	Object B
(1)	towel	spectacles
(2)	water bottle	iron nail
(3)	towel	paper
(4)	spectacles	cotton wool

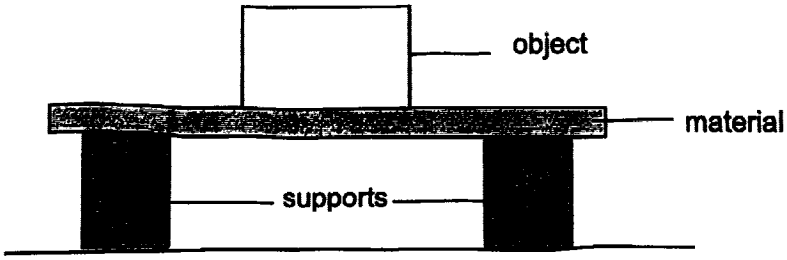
17 Construction workers wear special boots to protect their feet from injury and rain.

The table below shows three different properties. A tick (✓) shows that the property is present.

Which of the following shows the properties that allow the boots to perform the functions stated above?

	Waterproof	Strong	Flexible
(1)		✓	
(2)	✓	✓	✓
(3)	✓		✓
(4)		✓	✓

18 Leonard carried out an experiment to test the flexibility of three different types of materials using the set-up below. He placed an object on each material and measured how much each material bent.



Which of the following should he keep the same to ensure a fair test?

A length of the material
B type of material
C position where the object is placed on the material

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

19 The table below shows the melting and boiling points of three substances A, B and C.

Substance	Melting Point (°C)	Boiling Point (°C)
A	11	42
B	81	104
C	28	77

Which substance(s) is/are at liquid state at 30°C?

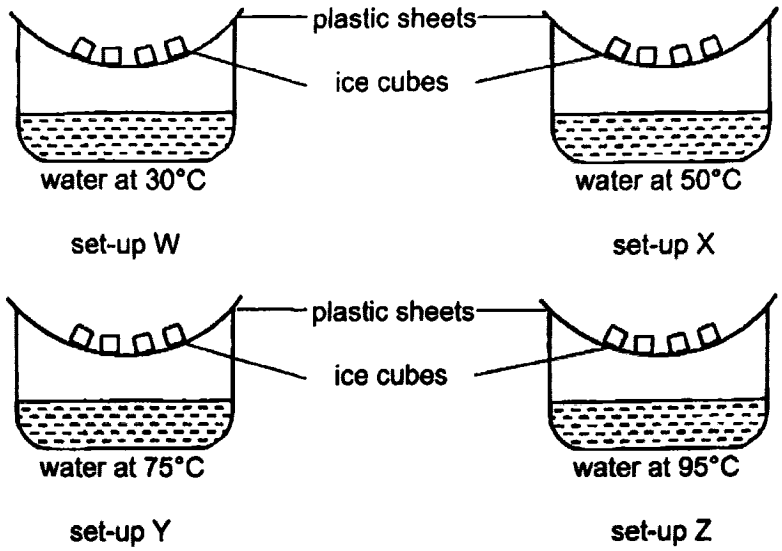
(1) A only
(2) B only
(3) A and C only
(4) B and C only

20 Which of the following statements about condensation and evaporation are correct?

A Both processes involve a change in state.
B Both processes do not occur at fixed temperatures.
C One process involves heat gain while the other involves heat loss.

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

21 Hayley conducted an experiment with four set-ups W, X, Y and Z filled with equal amount of water as shown below.



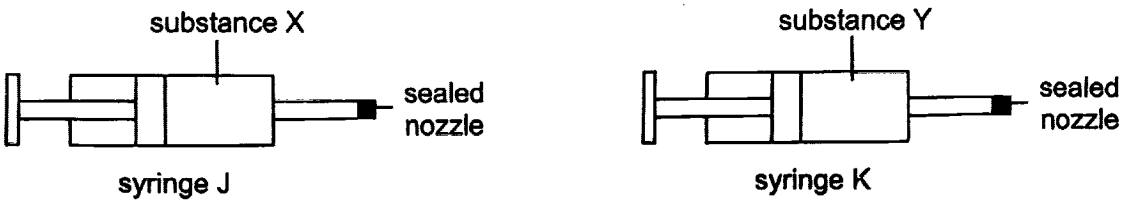
She measured the time taken for the first water droplet to form on the underside of each plastic sheet.

The aim of her experiment is to find out how the _____.

(1) amount of water affects the rate of evaporation
(2) temperature of water affects the melting of ice cubes
(3) temperature of water affects the rate of condensation
(4) number of ice cubes affects the rate of evaporation

22 Miya had two similar syringes J and K. Syringe J contained 50 cm^3 of substance X while syringe K contained 50 cm^3 of substance Y.

The nozzles of both syringes are sealed tightly.

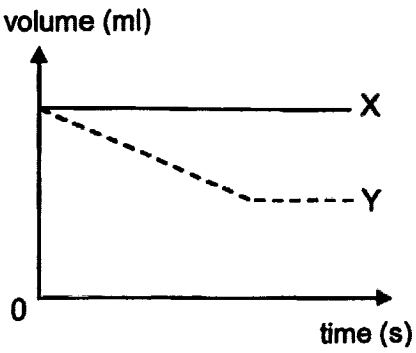


During Science lesson, the teacher told the Miya that only one of the substances could be compressed to some extent while the other could not be compressed at all.

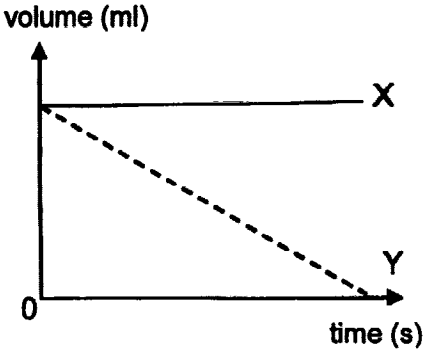
Miya pushed the plunger of each syringe until she could not push in further and recorded the change in the volume of both substances in a graph.

Which of the following correctly shows her observations?

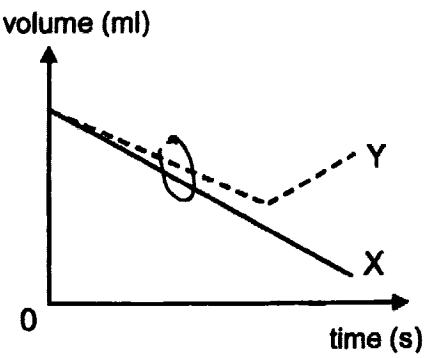
(1)



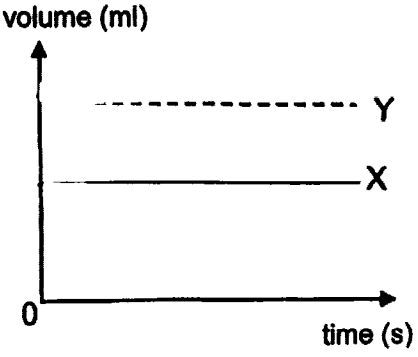
(2)



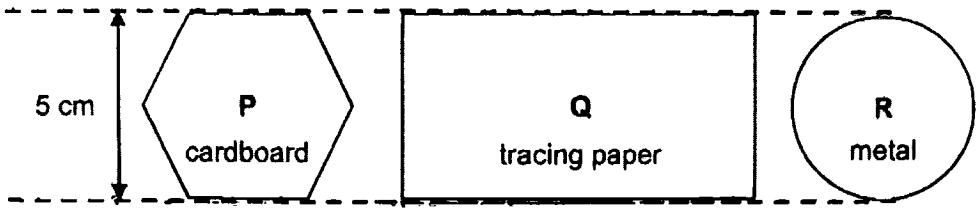
(3)



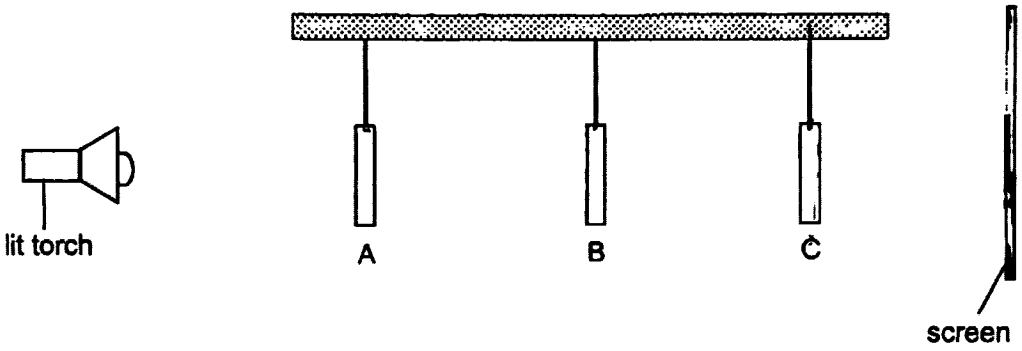
(4)



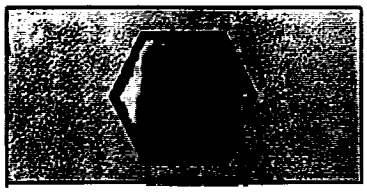
23 Amy cut the following shapes, P, Q and R, from different materials.



She hung the three shapes at positions A, B and C and shone a torch at them as shown below.



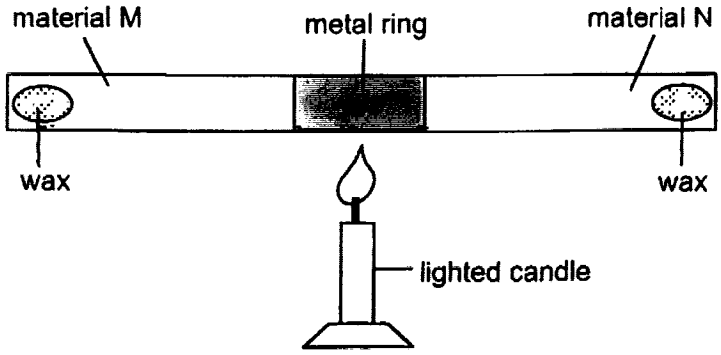
She observed the following shadow on the screen.



Which of the following correctly shows the shapes P, Q and R at positions A, B and C, respectively?

	A	B	C
(1)	R	P	Q
(2)	Q	P	R
(3)	P	Q	R
(4)	Q	R	P

24 Camy set up an experiment as shown below. After a few minutes, the wax on material M melted and dropped but the wax on material N did not.



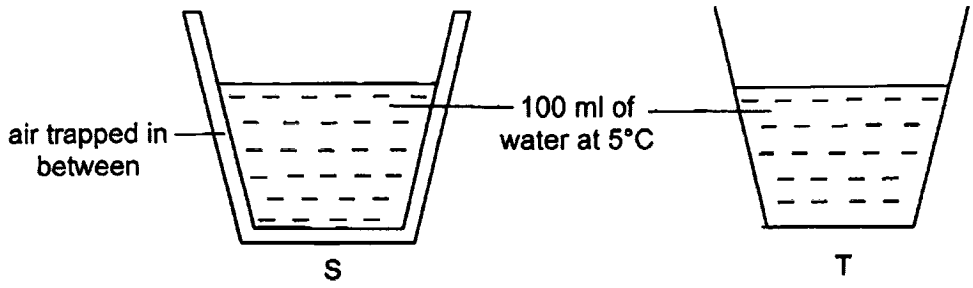
Based on the observations, Camy can conclude that heat _____.

A does not travel through material N
B travels through material M faster
C travels through material N faster
D travels from the hotter part to the cooler part of both materials

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

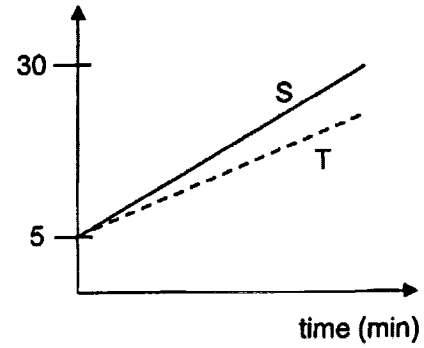
25 Katie poured 100 ml of water at 5°C into two similar-sized glasses S and T and left them in the same room at 30°C.

Glass S has a double layer of glass with air trapped in between the two walls of the glass.

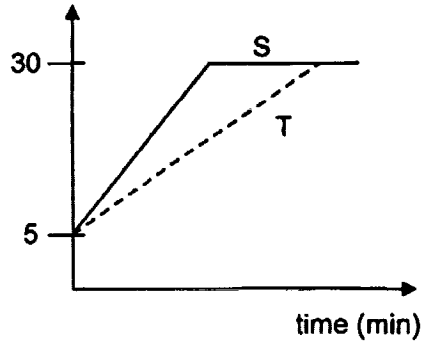


Which one of the following graphs correctly shows how the temperature of water changes with time in each type of glass?

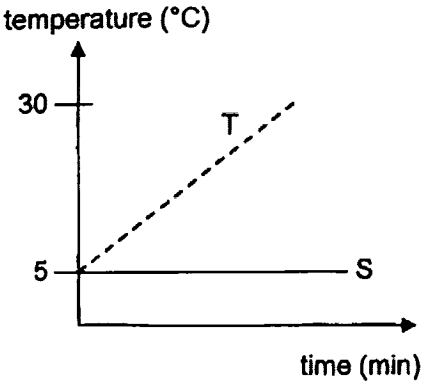
(1)



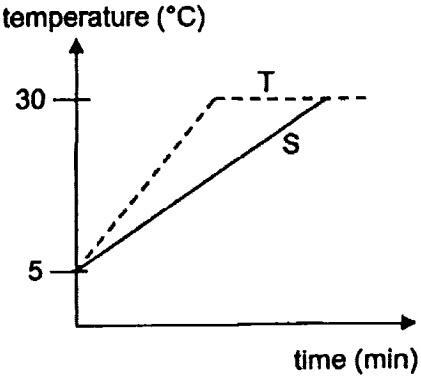
(2)



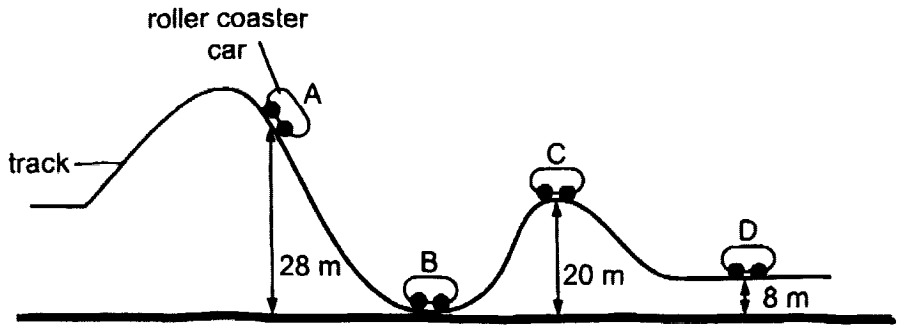
(3)



(4)



26 Study the diagram of a rollar coaster ride below.

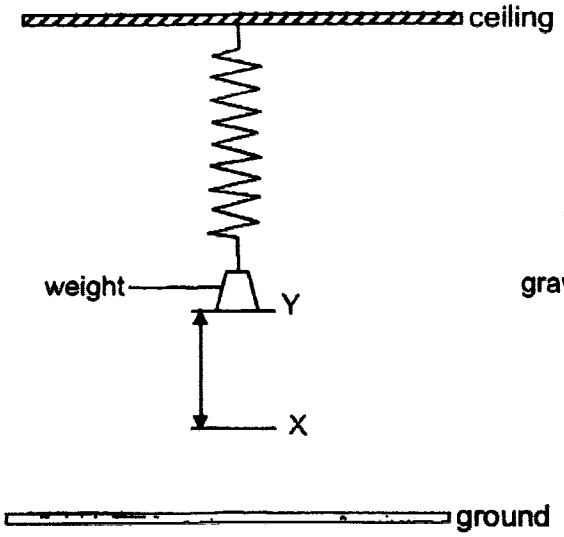


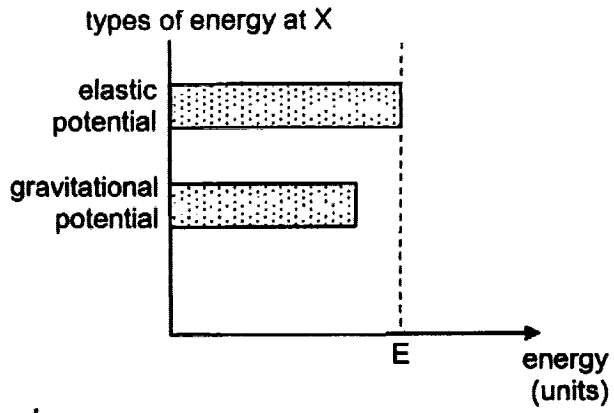
At which points would the roller coaster car have the most amount of kinetic energy and the least amount of potential energy?

	Most amount of kinetic energy	**Least amount of potential energy**
(1)	A	D
(2)	B	B
(3)	C	D
(4)	D	B

27 A weight is attached to a spring. Sam stretched the spring to point X and released the weight. He observed the weight moved upwards from point X to point Y.

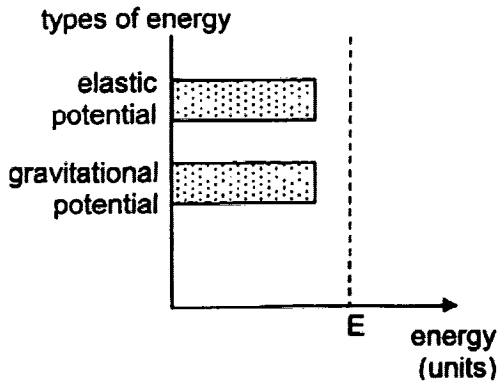
The graph shows the amounts of elastic potential energy and gravitational potential energy at point X.



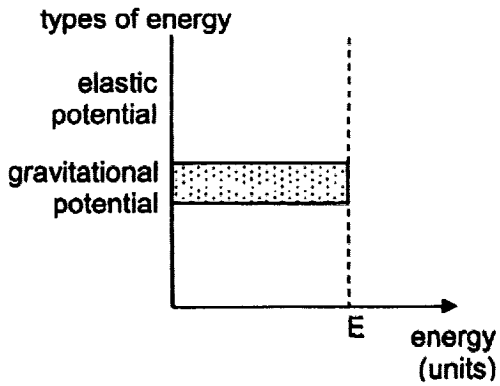


Which of the following graphs correctly shows the amounts of elastic potential energy and gravitational potential energy at point Y?

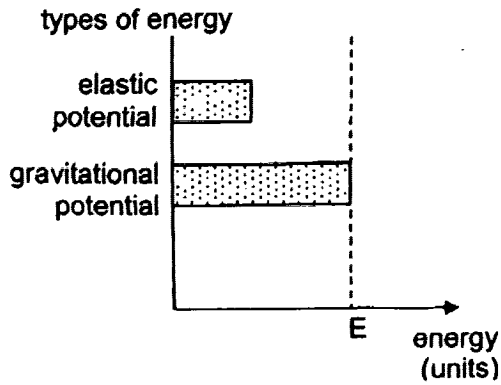
(1)



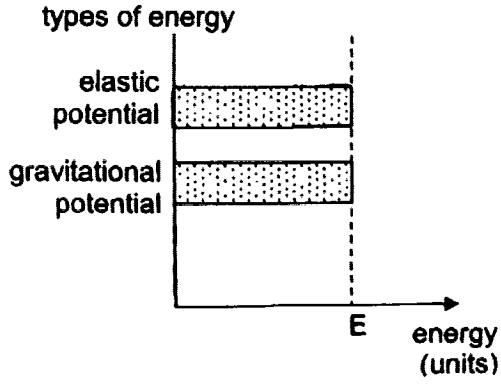
(2)



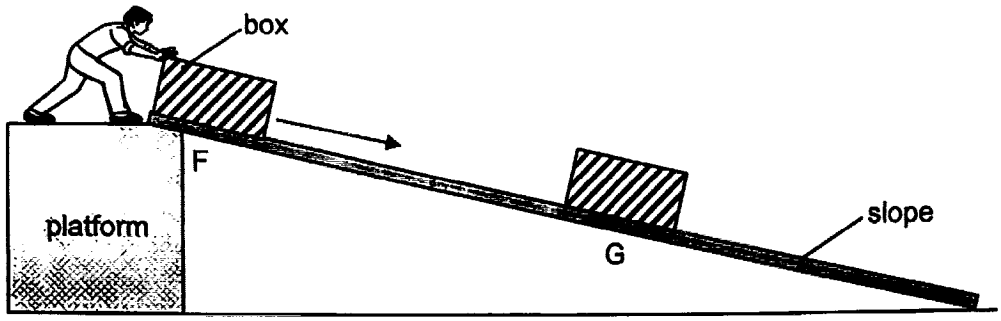
(3)



(4)



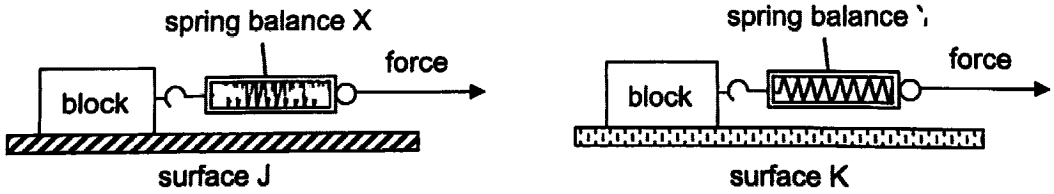
28 Bob stood on a platform and released a box down a slope at point F. He observed that the box only reached point G and stopped.



Which one of the following statements does **not** correctly explain the movement of the box down the slope?

(1) The box only reached point G due to frictional force.
(2) Frictional force between the box and slope slowed the box down.
(3) The box stopped at point G because there was no force acting on it.
(4) Gravitational force acting on the box remained the same from point F to point G.

29 Using identical spring balances and blocks, Jamie conducted an experiment shown below. She pulled both blocks at a constant speed over a distance of 50 cm across surfaces J and K.

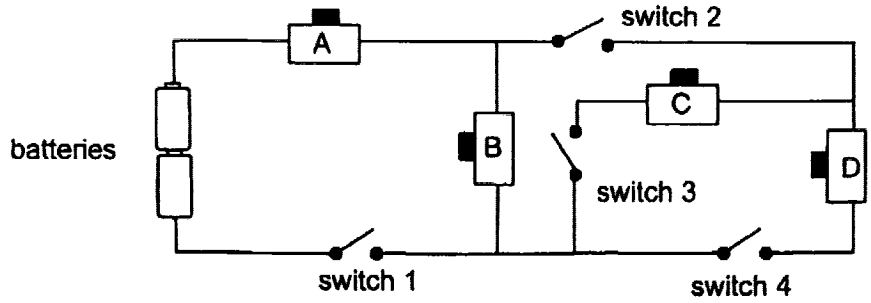


Based on the diagrams, which of the following statements are true?

A The spring in spring balance X is stiffer.
B Surface K is rougher than surface J.
C The elastic spring force exerted by the spring for the set-up with surface J is smaller.
D The amount of frictional force between the block and surface is the same for both set-ups.

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

30 · Sherry connected four buzzer boxes A, B, C and D as shown in the circuit below.



Based on the circuit diagram above, which of the following did Sherry observe?

	Switch(es) that were closed	Buzzer box(es) that sounded
(1)	1	A, B
(2)	2, 3	A, C
(3)	1, 4	B, D
(4)	1, 3, 4	A, B, C

(Go on to Booklet B)

Founded 1947

NAN CHIAU PRIMARY SCHOOL
PRELIMINARY EXAMINATION
2026
SCIENCE
PRIMARY 6
BOOKLET B

Name / Index no.		( )
Class	**Primary 6**_____	
Date	**19 August 2026**	
Duration for Booklets A and B	**1 h 45 min**	
Marks	**Booklet B**	40
Parent's Signature		

Instructions to students

1. Do not turn over this page until you are told to do so.
2. Follow all instructions carefully.
3. Answer all questions.
4. Use a dark blue or black ballpoint pen to write your answers and use a pencil for drawings, diagrams or graphs.
5. Do not use correction fluid/tape.
6. Do not use highlighter on any part of your answers.

This paper consists of 15 printed pages and 1 blank page.

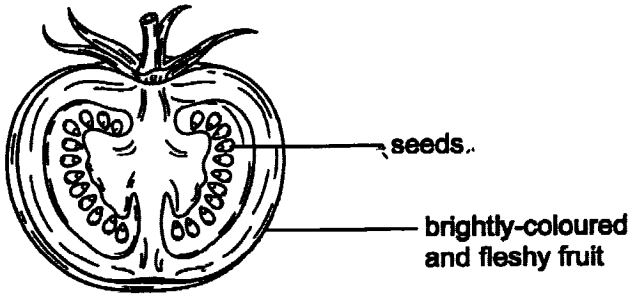
For questions **31** to **41**, write your answers in this booklet.

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

[40 marks]

---

31 The diagram below shows the cross-section of fruit R.



fruit R

(a) Explain clearly how the seeds of fruit R are dispersed by animals. [1]

_____

_____

(b) State a characteristic of the seeds of fruit R. [1]

_____

Please continue question 31 on the next page.

Glenn studied plant S, which produces fruit R with red skin, and plant T, which produces fruit R with orange skin at his garden. Animals usually feed on Fruit R.

He placed the fruits from both plants S and T in his garden.

A week later, he counted the number of fruits left and recorded his results in the table below.

Plant	Number of fruits	
	Start of experiment	End of experiment
S (red-skinned fruit)	40	5
T (orange-skinned fruit)	46	26

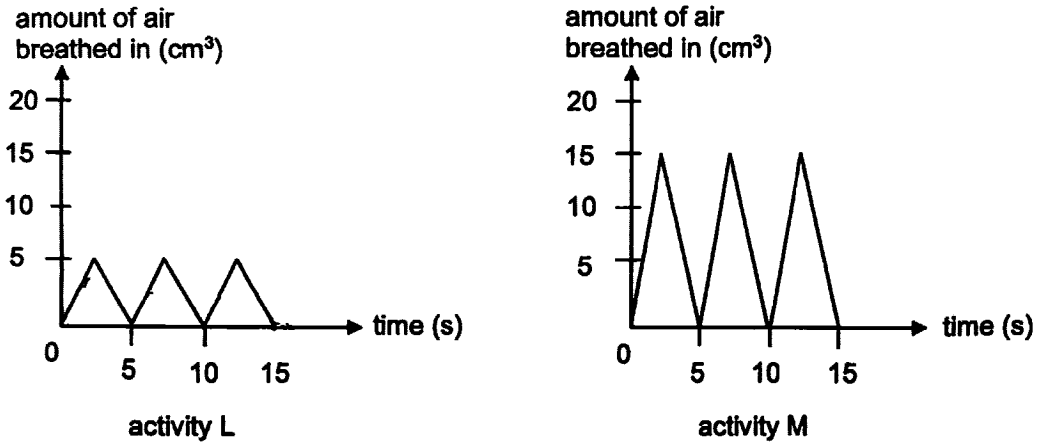
(c) What is the aim of Glenn's experiment? [1]

(d) Glenn concluded that fruit R with red-skinned are more attractive to animals.

How did he arrive at this conclusion? [1]

SCORE /4

32 The graphs below show the amount of air breathed in by Sue during two activities L and M.



(a) In activity L, how many breaths did Sue take in 15 seconds? [1]

_____

(b) In which activity L or M was Sue most likely exercising? [1]

_____

(c) State how the amount of air breathed in during activity M was different from activity L.

Explain why. [2]

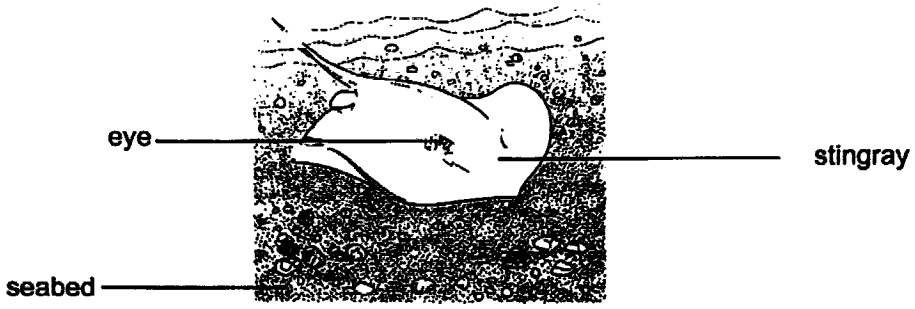
_____

_____

_____

SCORE ____/4

33 Stingrays have a flat, brownish and grey body. They also burrow and bury themselves in the sand on the seabed and hide.



(a) Based on the information above, state the type(s) of adaptation the stingray has. [1]

_____

(b) Explain how the flat, brownish and grey body helps the stingray to increase its chances of survival in its habitat. [2]

_____

_____

_____

(c) Scientists observed that stingrays have eyes located on the top of their body rather than on the sides. Explain how this adaptation helps the stingray survive in its habitat. [2]

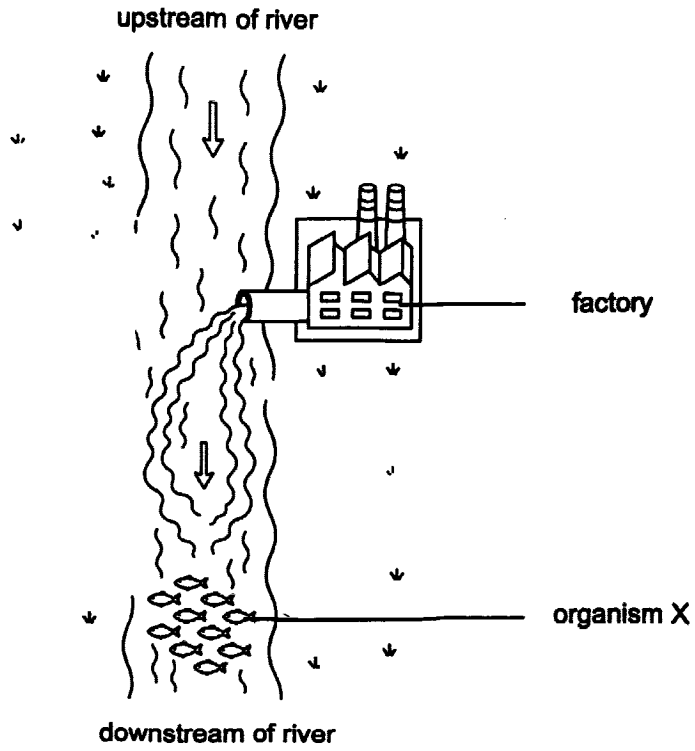
_____

_____

_____

SCORE	/ 5

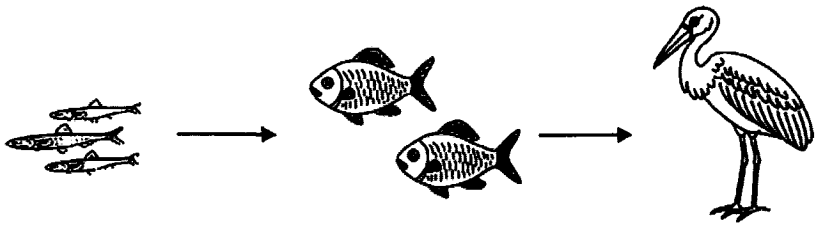
34 A recent study showed that waste released from a nearby factory caused a large amount of poisonous substance to be found in organism X.



(a) What would happen to the population of organism X over several months? [1]

Please continue question 34 on the next page.

Study the food chain in the river as shown below.



organism X organism Y organism Z

Organism Z lives near the riverbank. The same poisonous substance can also be found in organism Z.

(b) Using the food chain above, explain how the poisonous substance was transferred to organism Z. [1]

_____

_____

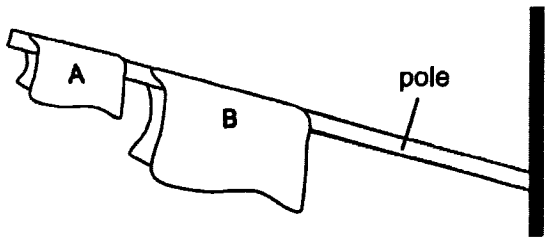
(c) After several months, more organism Z were found near the upstream of the river. Explain why. [1]

_____

_____

SCORE	/ 3

35 Bella had two similar towels A and B, each with a mass of 200 g. She soaked each towel with an equal amount of water. She then folded towel A before hanging both towels on a pole under the Sun as shown below.



After 30 minutes, she measured the mass of both towels and recorded them in the table below.

Towels	Mass of towel at the start (g)	Mass of wet towel after 30 minutes (g)
A	400	300
B	400	250

(a) Explain why towel B had a smaller mass after 30 minutes. [2]

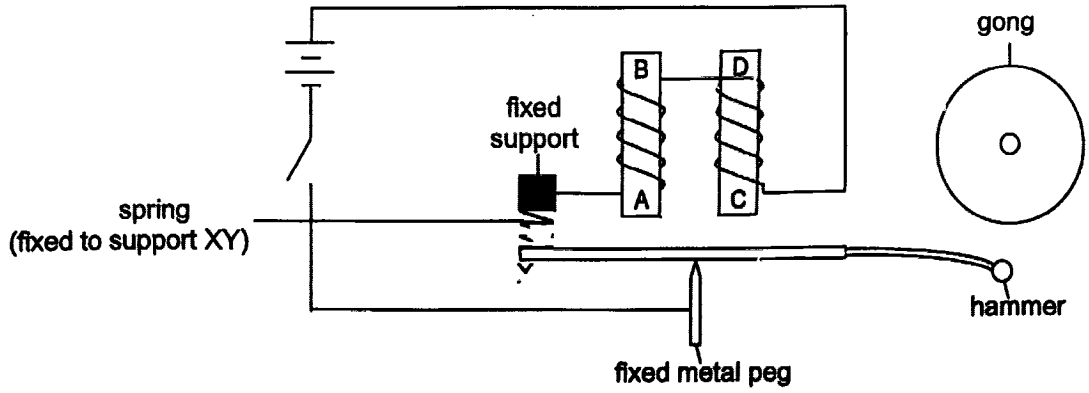
(b) Suggest one thing Bella should change and one thing she should keep the same if she wanted to find out if the surrounding temperature affects the mass of the towels after 30 minutes. [2]

(i) Change:

(ii) Keep the same:

SCORE 4

36 Ellie set up an experiment as shown. AB and CD are identical steel rods and are fixed in place. XY is a steel bar with a hammer at end Y and rests on the fixed metal peg.



When Ellie closed the switch, the hammer struck the gong to produce a "tong" sound.

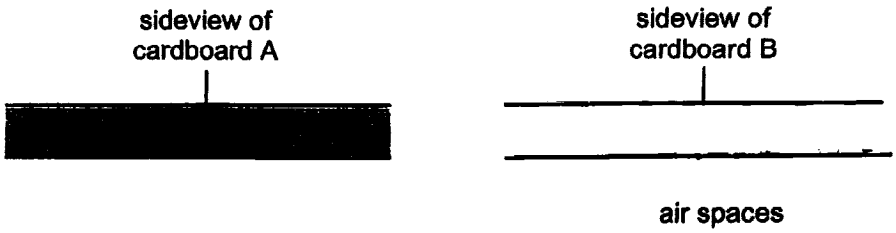
(a) Based on the information above, identify two properties of XY. [1]

(b) Explain how the "tong" sound is produced when Ellie closed the switch. [1]

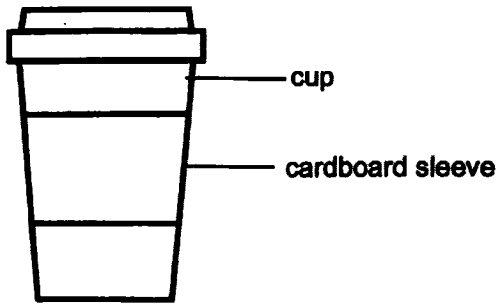
(c) Ellie replaced the spring with another spring. This time, the hammer struck the gong with a softer sound.
Describe how the new spring was different and explain how this affected the sound produced. [2]

SCORE / 4

37 Andrew cut two different types of cardboard into pieces of the same size and thickness as shown below.



He then bought a cup of hot coffee. To hold the cup without burning his fingers, Andrew used one of the cardboard pieces as a sleeve around the cup.

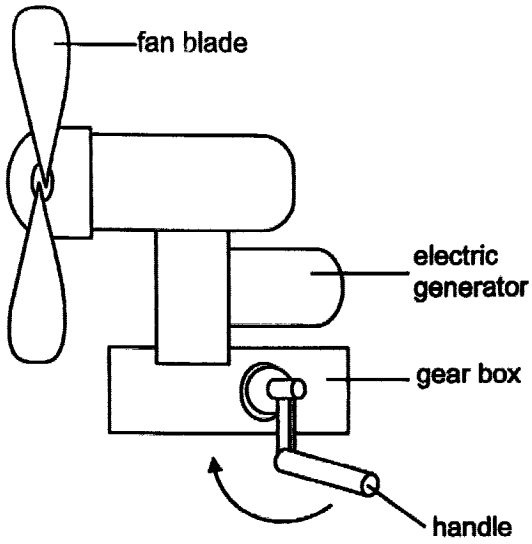


Which cardboard, A or B should Andrew use as the sleeve? Explain your answer. [2]

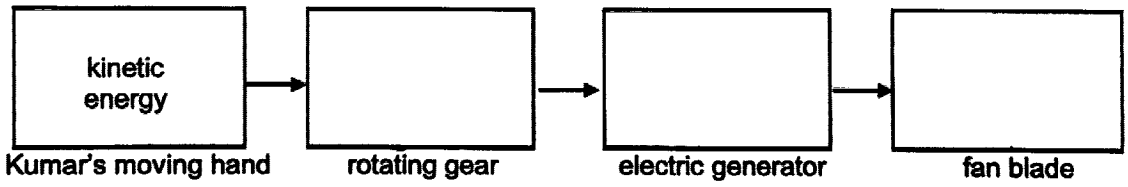
SCORE 2

38 Kumar has a handheld fan that works without batteries.

To use the fan, he must turn the handle attached to the gear box rapidly. This rotates the gears in the gear box, causing the electric generator to produce energy that makes the fan blades spin.



(a) State the energy conversions for Kumar's handheld fan. [1]

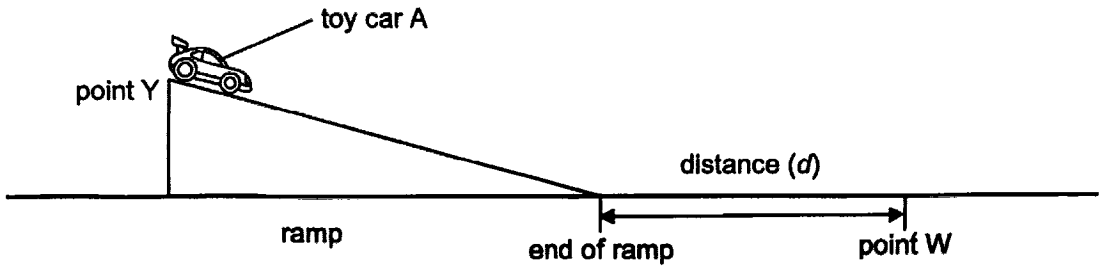


Kumar observed that when he turned the handle faster, the fan blades spun faster.

(b) Explain his observation using energy conversion. [2]

SCORE / 3

39 Mike released toy car A from point Y. It travelled down the ramp and across distance (*d*) before coming to a stop at point W.



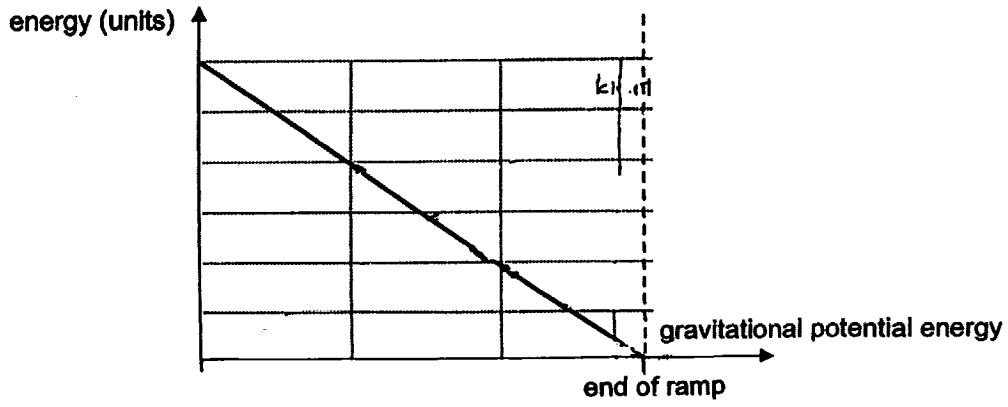
(a) Mike was asked to release the same toy car from a point lower than point Y on the ramp.

State how the distance travelled by the toy car changes.
Explain your answer using the concept of energy conversion. [2]

(b) The graph below shows the gravitational potential energy of the toy car as it moves from point Y to the end of ramp.

Draw and label a line graph below to show how the kinetic energy of the toy car changes as it moves from point Y to the end of the ramp.

[1]



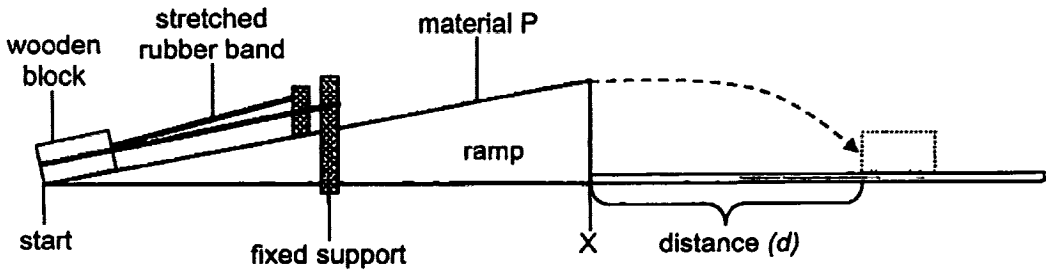
SCORE 3

40 Roy wanted to find out how different materials covering a ramp affect the distance travelled by a wooden block.

He covered the ramp with material P. He pulled a wooden block down to the bottom of a ramp, stretching the rubber band. When released, the wooden block moved up the ramp and landed on the ground.

Roy then measured the distance from point X to where the block landed (distance "d") as shown in the diagram.

He repeated the experiment using the same ramp covered with materials Q and R, one at a time. In each trial, he stretched the rubber band by the same distance before releasing the block.



Roy recorded the results of his experiment in the table below.

Material	Distance that the block landed from point X *(d)* (cm)		
	First Try	Second Try	Third Try
P	30	32	29
Q	83	81	84
R	15	18	16

Please continue question 40 on the next page.

(a) Based on the results of Roy's investigation, which material P, Q or R is most suitable to make the poolside flooring? Explain your answer using the concept of forces. [2]

(b) Roy wanted to increase the distance travelled by the wooden block on all three materials.

Without changing the ramp, the wooden block and the starting position, state two ways Roy can increase the distance travelled by the wooden block. [2]

(i)

(ii)

SCORE	/ 4

41 Zack set up an electric circuit as shown in diagram 1 below. Bulb A did not light up when the switch was closed.

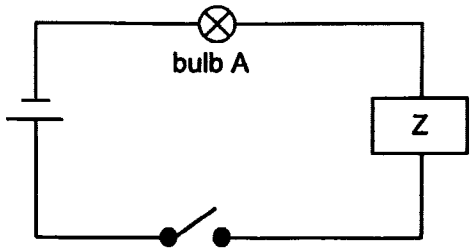


diagram 1

(a) Based on Zack's observation above, state the property of material Z. [1]

Zack replaced material Z in diagram 1 with bulb B and observed that bulb A became dimmer.

(b) Complete the circuit in diagram 2 below such that it fulfils the following conditions:
- Both bulbs will be brighter.
- Both bulbs will be controlled by one switch. [1]

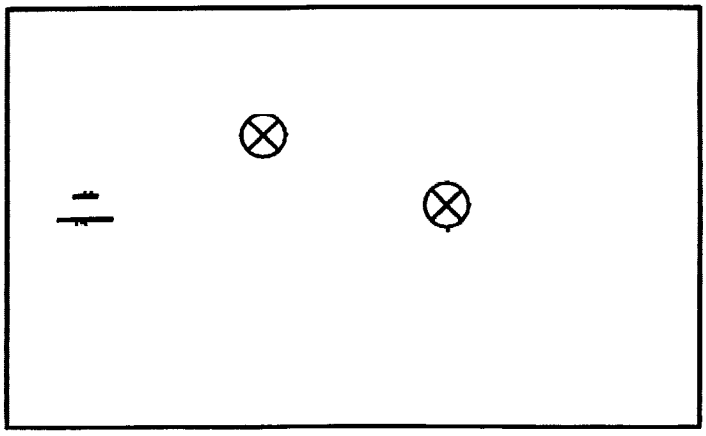


diagram 2

Please continue question 41 on the next page.

(c) In a classroom, all the ceiling lights are connected to the same power supply.

Which arrangement of bulbs should be used for the classroom ceiling lights?
State two reasons for your answer. [2]

_____

_____

_____

End of Paper

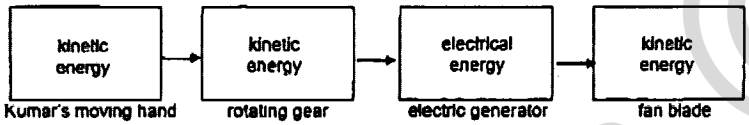
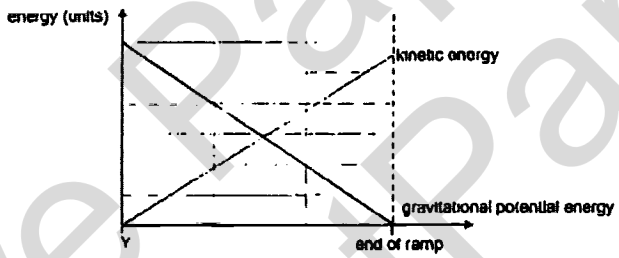
SCORE	/ 4

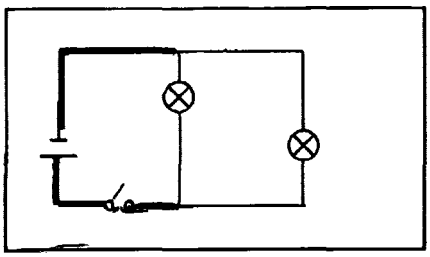
26p6	(NCPS)
1	4
2	3
3	2
4	2
5	3
6	1
7	4
8	3
9	3
10	2
11	3
12	4
13	4
14	2
15	4
16	1
17	2
18	3
19	3
20	4
21	3
22	1
23	2
24	2
25	4
26	2
27	3
28	3
29	3
30	1

Nan Chiau Primary School
Primary 6 Science
Preliminary Examination 2026
Booklet B
Answer Key

Name: _____ ( ) **Class:**_____

Qn	Answer
31(a)	[R1] The animals will feed on fruit and seeds. [R2] Seeds are then passed out in the animals' waste material as the animals move from place to place.
(b)	[C] Indigestible.
(c)	[C] He wanted to find out if the colour of the fruits would affect their attractiveness to animals.
(d)	[C] There is a greater difference for fruit R with red-skinned / from plant S.
32(a)	[C] 3.
(b)	[C] Activity M.
(c)	[C] More air was breathed in during activity M. [R1] More energy is needed for activity M. [R2] She breathed in more air so that she can take in more oxygen [R3] needed for respiration.
33(a)	[C1] Structural and [C2] behavioural adaptations.
(b)	[E] The flat, brownish and grey body allows the stingray [R1] to camouflage and blend in with the sand on the seabed. [R2] This reduces the chances of predators spotting it.
(c)	[E] Having eyes located on the top of its body helps the stingray [R1] to see the predators moving above the sand while remaining buried. [R2] This increases the chances of escaping from its predators.
34(a)	[C] Population of organism X would decrease.
(b)	[C1 and E1] Organism Y preys on organism X and takes in the poisonous substance. [C2 and E2] Organism Z then preys on organism Y.
(c)	[E] The upstream of the river is less polluted.
35(a)	[E] Towel B was not folded. [R1] Towel B has a larger exposed surface area of water. [R2] This allows water in towel B to evaporate faster.
(b)	(i) Change: • She should [C1] place the towels in surroundings with different temperatures. (ii) Keep the same: • [C2] The exposed surface area of water must be kept the same.
36(a)	[C1] Electrical conductor and [C2] magnetic.

Qn.	Answer
(b)	When the switch was closed, electric current flowed through the closed circuit. [R1] AB and CD became electromagnets. [R2] The electromagnets attracted magnetic XY upwards. causing the hammer at end Y to strike the gong and caused a "tong" sound.
(c)	[C] The spring was stiffer. [R1] The compressed spring would exert more elastic spring force. Hence, [R2] the hammer struck the gong with less impact.
37	[C] B. [E] Cardboard B has air spaces in between. [R1] Air is a poor conductor of heat. [R2] Heat from the hot coffee would be transferred the cardboard then to his fingers slower.
38(a)	[C] 
(b)	[R1] Turning the handle faster means more kinetic energy from his hand would be transferred to more kinetic energy in the rotating gear. [R2] More kinetic energy in the rotating gear would be converted to more electrical energy in the generator. [R3] More electrical energy in the generator would be converted to more kinetic energy in the fan blades.
39(a)	[C] Shorter distance. [R1] The toy car has less gravitational potential energy at a lower height . [R2] Less gravitational potential energy of the toy car would be converted to less kinetic energy as the car moved down the ramp.
(b)	[C] 
40(a)	[C] R. [E] The wooden block moved the shortest distance. [R1] There is greatest amount of frictional force between surface R and the wooden block. [R2] This would reduce the chances of people slipping.
(b)	[C] He can add lubricant onto the material. [C] Add more rubber bands.
41(a)	[C] Insulator of electricity.

Qn.	Answer
(b)	[C]  Switch can be drawn anywhere along the bold line.
(c)	[C] Bulbs arranged in parallel. [R1] When one bulb fuses, the other bulb can still light up. [R2] Bulbs arranged in parallel are brighter than those arranged in series.

End of answer key