CATHOLIC HIGH SCHOOL

PRELIMINARY EXAMINATION (2018)

PRIMARY SIX

SCIENCE

BOOKLET A

Name: _____ ( )

Class: Primary 6 - _____

Date: 28 August 2018

28 questions

56 marks

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

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Shade your answers in the Optical Answer Sheet (OAS) provided.

This booklet consists of 18 printed pages, excluding the cover page.

Booklet A (28 × 2 marks)

For each question from 1 to 28, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade your answer on the Optical Answer Sheet. (56 marks)

Use the information provided below to answer questions 1 and 2.

The table below shows some characteristics of three things, A, B and C. A tick (✓) indicates the presence of the characteristic.

Characteristics	A	B	C
Able to reproduce		✓	✓
Able to make its own food			✓
Able to respond to changes	✓	✓	✓
Able to move from place to place	✓	✓	

1 Which one of the following is correct?

	Living thing	Non-living thing
(1)	A	B, C
(2)	C	A, B
(3)	B, C	A
(4)	A, B, C	-

2 Which one of the following statements is correct?

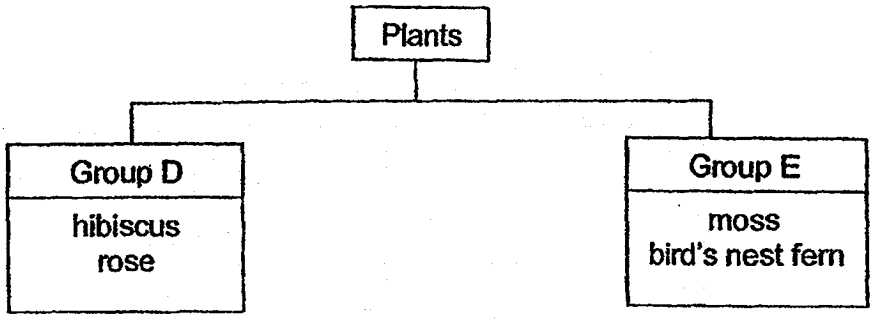
(1) C is a plant.

(2) A and B are animals.

(3) A, B and C can grow in size.

(4) A, B and C need air, food and water to survive.

3 Study the chart below.



Which one of the following shows the correct headings for groups D and E?

	Group D	Group E
(1)	Grows on land	Grows in water
(2)	Produces flowers	Does not produce flowers
(3)	Has a weak stem	Has a strong stem
(4)	Reproduces from spores	Reproduces from seeds

4 The table below shows some characteristics about the male reproductive cells of a flowering plant and a human.

	Flowering plant	Human
A	Produced in the anther	Produced in the testes
B	Required for pollination	Required for fertilisation
C	Fuses with female reproductive cell in the stigma	Fuses with female reproductive cell in the ovary

Which one of the following is correct?

(1) C only

(2) A and B only

(3) B and C only

(4) A, B and C

5 Ali studied the percentage of males and females hatched from the eggs of organism G at different temperatures. His results are shown in the table below.

Temperature of surrounding (°C)	Males hatched from eggs (%)	Females hatched from eggs (%)
18	10	90
19	25	75
20	40	60
21	55	45
22	80	20

Which of the following statements is/are correct?

A More eggs hatched at lower temperatures than higher temperatures.
B At higher surrounding temperatures, more males hatched from eggs than females.
C The population of organism G will decrease over time as temperature of surrounding increases.

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

6 Ravi observed three cells P, Q and R under the microscope. He observed some characteristics in these cells and recorded his observations in the table below. A tick (✓) indicates the presence of the part of the cell.

Part of cell	Cell P	Cell Q	Cell R
Cell wall		✓	✓
Nucleus	✓	✓	✓
Chloroplasts			✓

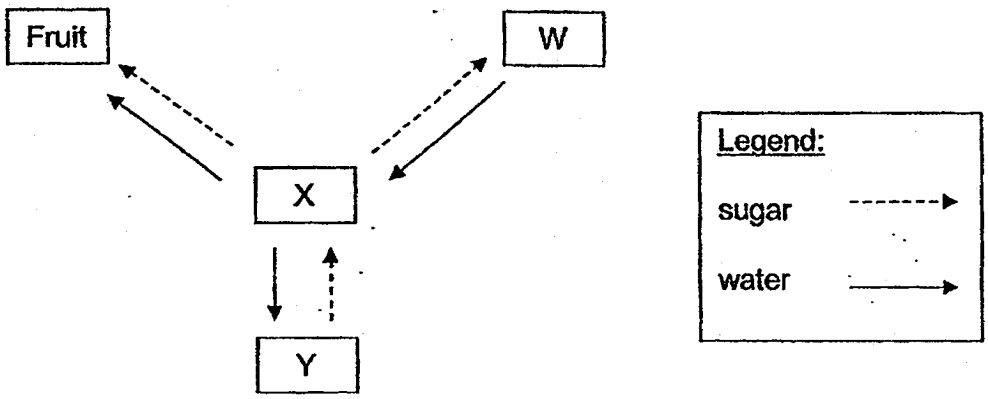
He made some statements about the three cells.

A Cell Q most likely belongs to an animal.
B Cell P can be found in the stem of a plant.
C Cell R is most likely able to produce oxygen.

Which of the above statements is/are correct about cells P, Q and R?

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

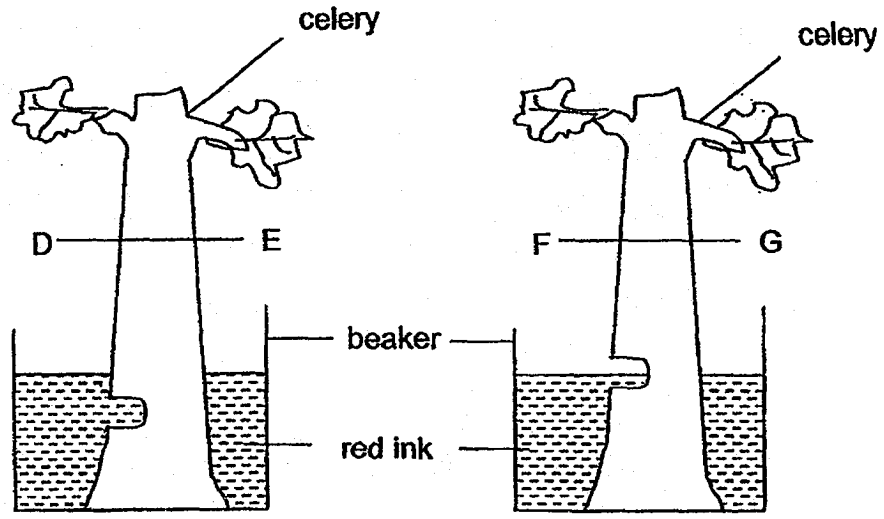
7 The diagram below shows how sugar and water are transported to and from different parts of a plant.



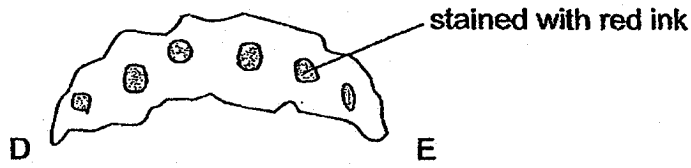
Which one of the following correctly shows the parts of the plant that are represented by W, X and Y?

	W	X	Y
(1)	roots	stem	leaves
(2)	stem	leaves	roots
(3)	roots	leaves	stem
(4)	leaves	roots	stem

8 Two similar stalks of a celery plant, each with a portion cut out, are lowered into two separate beakers with red ink as shown in the diagram below.

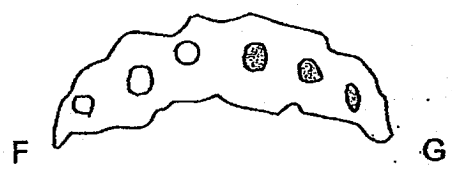


After a few hours, the two stalks were cut at DE and FG respectively. The diagram below shows the parts stained with red ink as seen in the cut at DE.

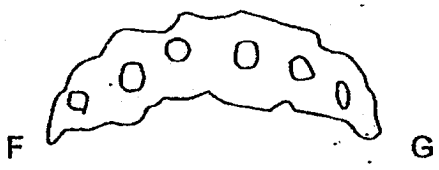


Which one of the diagrams below would be seen in the cut at FG?

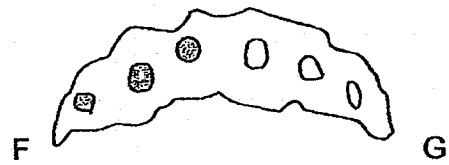
(1)



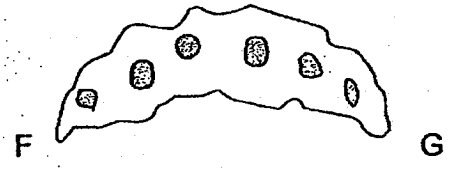
(2)



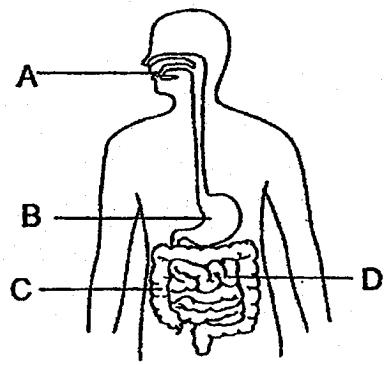
(3)



(4)



9 The diagram below shows the human digestive system.



Where do/does digested food get completely absorbed into the bloodstream?

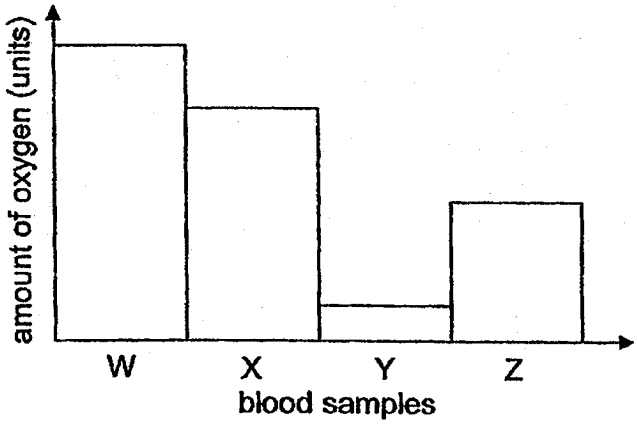
(1) D only

(2) A and C only

(3) B and D only

(4) A, B, C and D

10 Four blood samples W, X, Y and Z were taken from different blood vessels in the body. The graph below shows the amount of oxygen in each of these blood samples.



Which blood samples were most likely taken from the following blood vessels?

	Blood vessels carrying blood from	
	lungs to heart	heart to lungs
(1)	X	Y
(2)	W	Y
(3)	W	Z
(4)	Z	X

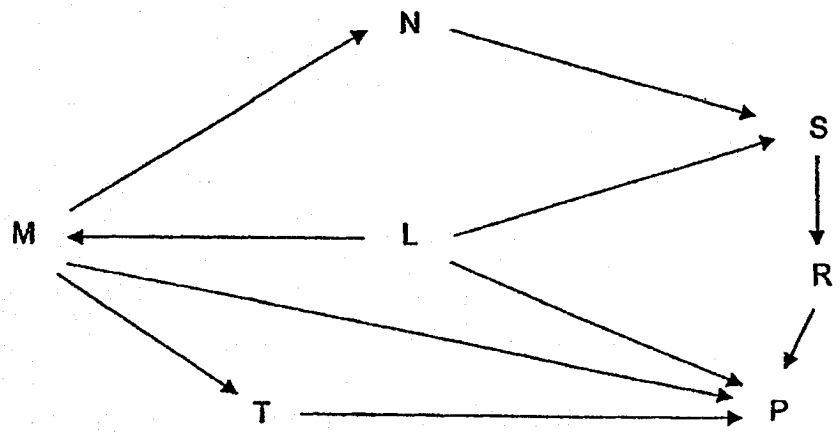
11 The table below provides some information on three different types of organisms, X, Y and Z.

Organism	Information
X	- Birds help to pollinate its flowers
Y	- Walks on sand - Breathes both on land and in water
Z	- Feeds on small animals - Hunts only at night

Which one of the following shows the correct adaptations of organisms X, Y and Z?

	Organism X	Organism Y	Organism Z
(1)	- Has colourful petals - Presence of nectar	- Has thin, pointed legs - Presence of gills and gill chamber	- Has sharp claws - Has good night vision
(2)	- Grows on land - Absence of nectar	- Has padded feet - Presence of lungs	- Has a curved beak - Has good night vision
(3)	- Has waxy leaves - Has brightly-coloured flowers	- Has thin, pointed legs - Has moist skin	- Has sharp claws - Has streamlined body
(4)	- Has needle-like leaves - Has dull-coloured Flowers	- Has padded feet - Presence of lungs	- Has a curved beak - Has hollow bones

12 Study the food web below.



Which of the following statements about the food web are correct?

A P is a food producer.
B N and T are plant-and-animal eaters.
C M is the only plant-eater in the food web.
D Population of R will decrease when all of S is removed.

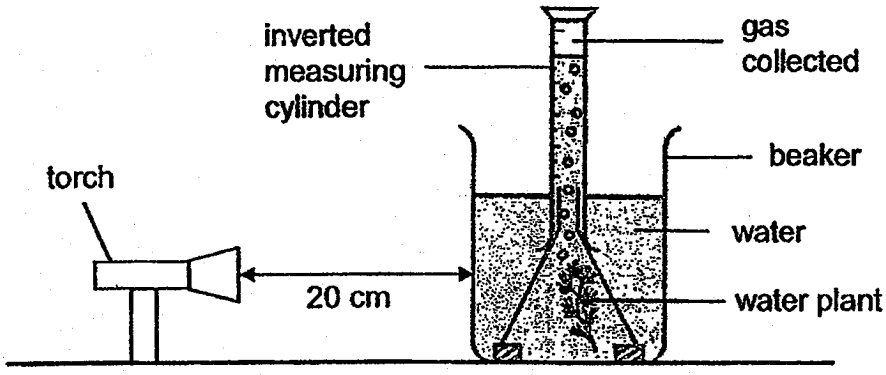
(1) A and B only
(2) B and C only
(3) C and D only
(4) A, B and D only

13 Which of the following organisms are decomposers?

A algae
B bacteria
C maggots
D mushrooms

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

14 James set up an experiment in a dark room as shown below.



He placed a torch at a distance of 20 cm from the beaker. After one hour, he observed that the cylinder had collected 5 cm^3 of gas.

Then he added a few drops of liquid Y to the water and observed that the colour of the solution was red.

The table below shows the colour of liquid Y in the presence of different levels of carbon dioxide.

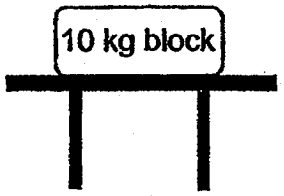
Amount of carbon dioxide in water	less than normal	normal	higher than normal
Colour of water with liquid Y	purple	red	yellow

He repeated the experiment by placing the torch at a distance of 10 cm from the beaker.

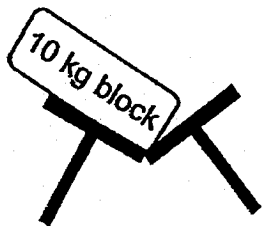
Which one of the following shows the most likely result of the experiment?

	Volume of gas collected (cm^3)	Colour of water with liquid Y
(1)	less than 5	purple
(2)	more than 5	purple
(3)	less than 5	yellow
(4)	more than 5	yellow

15 Two similar 10 kg metal blocks were placed on two similar stools made of different materials, E and F. The diagram below shows the observations made once the metal blocks were placed on the stools.

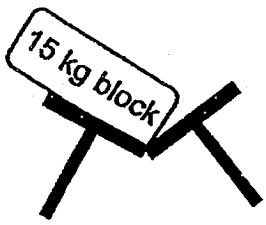


stool made of material E

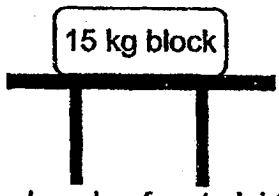


stool made of material F

Another two similar 15 kg metal blocks were placed on the stool made of material E and another similar stool made of material G. The diagram below shows the observations made once the metal blocks were placed on the stools.



stool made of material E



stool made of material G

What conclusions can be made from the above observations?

A Material F is the strongest material.
B Material E is as strong as material G.
C Material E is stronger than material F.
D Material G is stronger than material F.

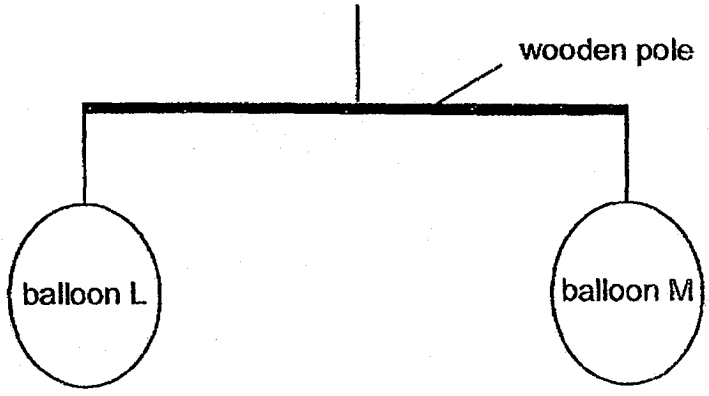
(1) A and B only
(2) C and D only
(3) B, C and D only
(4) A, B, C and D

16 Which of the following is/are not example(s) of matter?

A oil
B sugar
C oxygen
D shadow

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

17 Santi balanced two inflated balloons, L and M, at the ends of a wooden pole as shown in the set-up below.



Santi then burst balloon M with a needle.

Which one of the following correctly matches the observation made by Santi and the property of air that is demonstrated in the set-up?

	Observation	Property of air
(1)	Wooden pole tilted upwards at balloon L.	Air has a definite volume.
(2)	Wooden pole tilted upwards at balloon M.	Air can be compressed.
(3)	Wooden pole tilted downwards at balloon L.	Air has mass.
(4)	Wooden pole tilted downwards at balloon M.	Air takes up space.

18 Noraini wanted to find out how the rate of evaporation of water is affected by the exposed surface area. She prepared four set-ups as shown in the table below.

	Set-ups			
	P	Q	R	S
Temperature of surroundings (°C)	25	30	30	25
Exposed surface area of water (cm^2)	60	120	60	120
Volume of water at the start of the experiment (ml)	200	400	400	400

Which of the following two set-ups should Noraini use for her experiment?

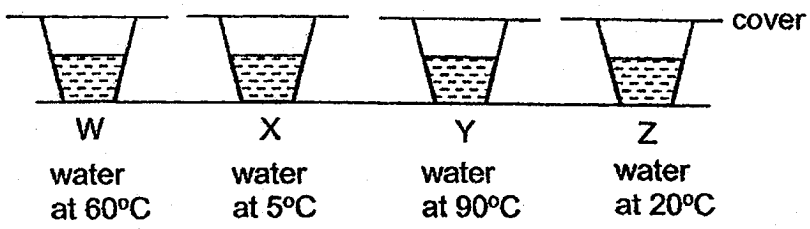
(1) P and Q

(2) Q and R

(3) Q and S

(4) R and S

19 Four similar cups, W, X, Y and Z, were each filled with 100 ml of water at different temperatures as shown in the diagram below.

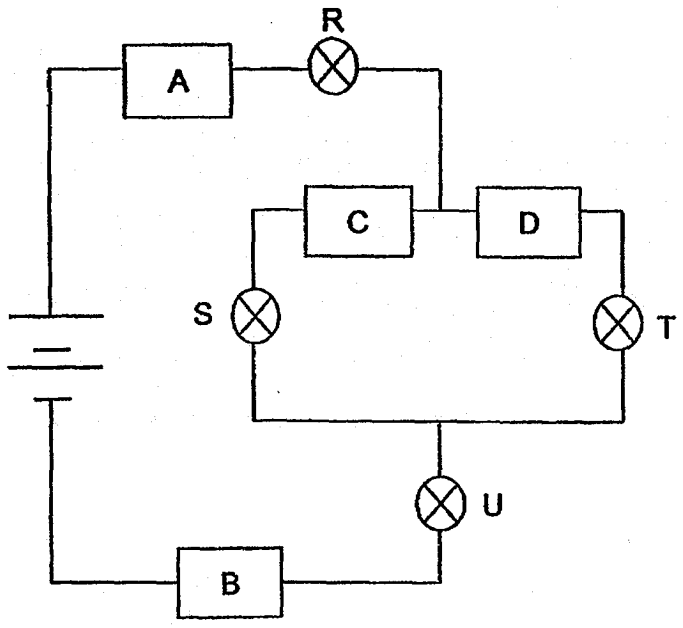


The cups were placed in the same room where the temperature was 30°C.

Which one of the following correctly identifies the cups and surfaces where water droplets were formed?

	Surfaces of cups where water droplets were formed	
	Inner	Outer
(1)	Cups X and W	Cups Y and Z
(2)	Cups X and Z	Cups W and Y
(3)	Cups W and Z	Cups X and Y
(4)	Cups W and Y	Cups X and Z

20 Study the circuit diagram below.



In the circuit above, only bulbs R, T and U light up.
Which object, A, B, C or D, is an electrical insulator?

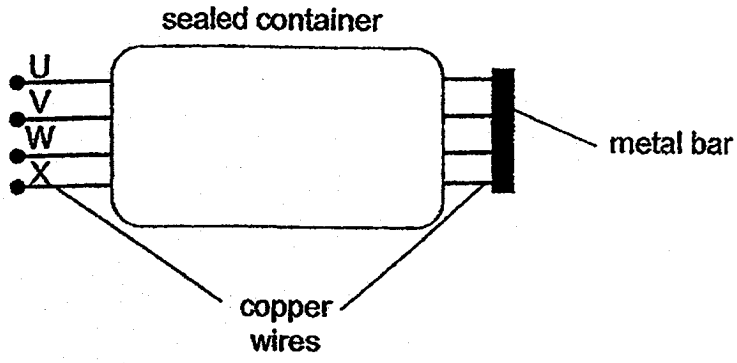
(1) A

(2) B

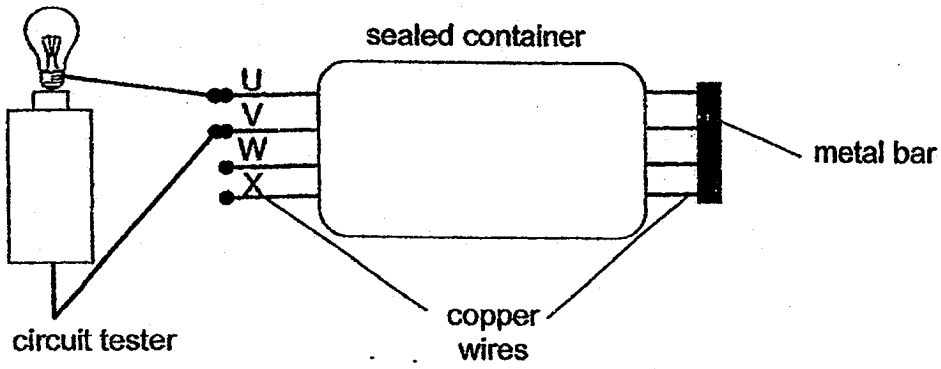
(3) C

(4) D

21 Four copper wires, U, V, W and X, run through a sealed container with one end connected to a metal bar as shown below.



One of the copper wires was broken and Jia Sheng used a circuit tester to find out which wire was broken. He connected the circuit tester to wires U and V. He observed that the bulb did not light up.



He continued to use the circuit tester and recorded his observations as shown in the table below.

Wires which the circuit tester were connected to	Result
U and V	bulb did not light up
W and X	bulb lit up
U and X	bulb lit up
V and W	bulb did not light up

Based on his observations, which copper wire in the sealed container was broken?

(1) U

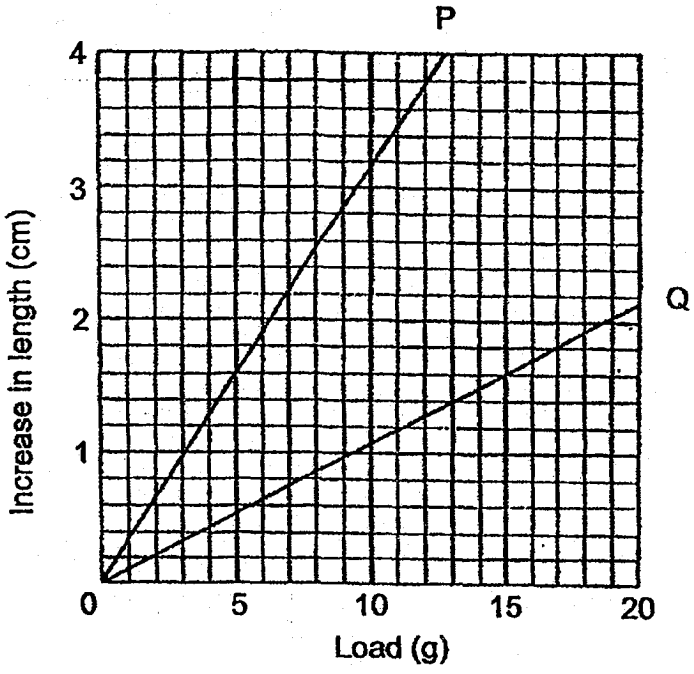
(2) V

(3) W

(4) X

Use the graph below to answer questions 22 and 23.

The graph below shows the increase in length of two springs, P and Q, when loads were hung on them.



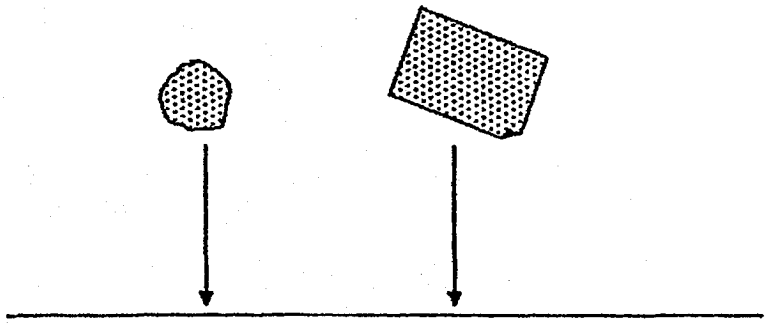
22 What is the increase in length of spring P when a load of 5 g is hung on it?

(1) 0.6 cm
(2) 1.3 cm
(3) 1.6 cm
(4) 5.0 cm

23 Based on the graph above, which one of the following statements is correct?

(1) The length of spring P is longer than the length of spring Q.
(2) The extension of both springs is the same for the same load hung.
(3) Spring Q has more elastic potential energy than spring P when the same load is hung.
(4) The gravitational force acting on spring P is the same as that of spring Q when the same load is hung.

24 Two identical pieces of paper, one crumpled into a ball, are released from the same height at the same time as shown in the diagram below.



The crumpled ball of paper reaches the ground first because _____.

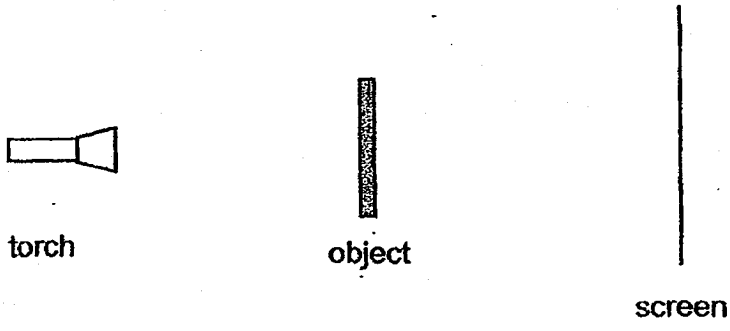
(1) its mass is greater

(2) its weight pulls it down faster

(3) the force of gravity exerted on it is lesser

(4) the friction between the ball of paper and the air is lesser

25 Tiffany placed an object between a torch and a screen as shown in the diagram below.



What can Tiffany do to increase the size of the shadow of the object on the screen?

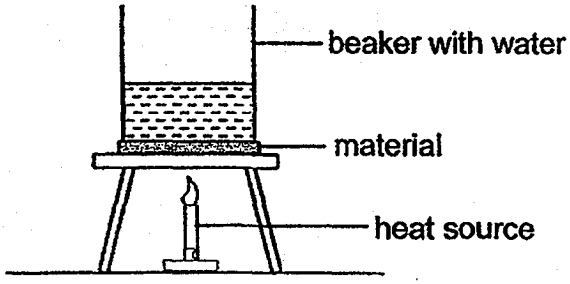
(1) Move the object closer to the torch.

(2) Move the object closer to the screen.

(3) Move the screen closer to the object.

(4) Move the torch further away from the object.

26 Henry conducted an experiment using the set-up as shown below.



He recorded the time taken for the water to boil when different materials, A, B and C, were placed below the beaker of water in the table below.

Material	Ability to conduct heat	Time taken for water to start boiling (min)
A	good	10
B	very good	10
C	poor	10

After completing the experiment, Henry realised that he did not record how much water he had used.

Which one of the following is most likely the volume of water used at the start of the experiment?

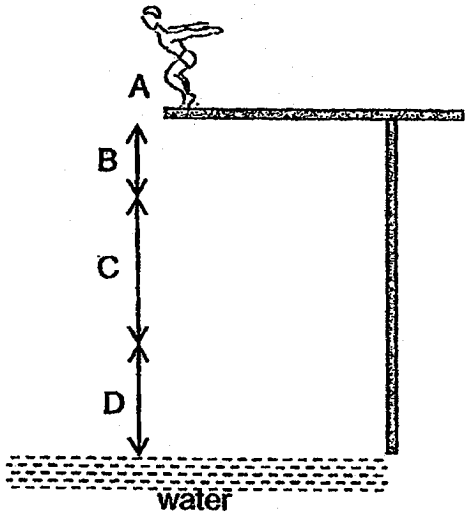
	Volume of water (ml)		
	A	B	C
(1)	200	300	100
(2)	200	100	300
(3)	100	300	200
(4)	300	200	100

27 Which of the following processes do/does not involve energy conversion?

A making food in plants
B burning pieces of paper
C melting of ice on a table
D forming shadows on a wall

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

28 The diagram below shows Imran about to dive into a swimming pool from the diving board at position A. Before reaching the pool of water below, Imran moves from positions B to C then to D.



Which one of the following is correct?

	Potential energy at position A compared to position D	Kinetic energy at position D compared to position A
(1)	less	less
(2)	less	more
(3)	more	less
(4)	more	more

End of Booklet A

CATHOLIC HIGH SCHOOL

PRELIMINARY EXAMINATION (2018)

PRIMARY SIX

SCIENCE

BOOKLET B

Name: _____ ( )

Class: Primary 6 - _____

Date: 28 August 2018

Parent's Signature: _____

Booklet A	56
Booklet B	44
Total	100

12 questions

44 marks

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

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Write your answers in this booklet.

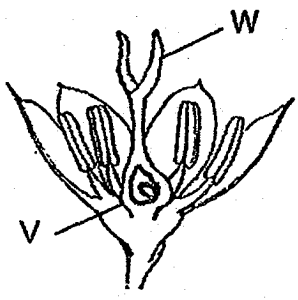
This booklet consists of 14 printed pages, excluding the cover page.

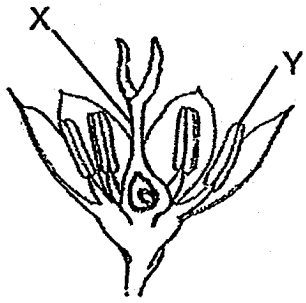
Booklet B (44 marks)

For questions 29 to 40, write your answers in this booklet.
The number of marks available is shown in brackets [ ] at the end of each question or part question. (44 marks)

29 Zhixian observed a plant where many fruit A have developed.

The flowers of the plant have to undergo process Z successfully so that fertilisation can take place for fruit A to develop.





(a) Describe process Z using the diagram above. [1]

Zhixian conducted an experiment to find out how the storage temperature of fruit A affects the time taken for the fruit to ripen. The table below shows the results of his experiment.

Storage temperature (°C)	10	15	20	25
Time taken for fruit A to ripen (days)	22	17	12	7

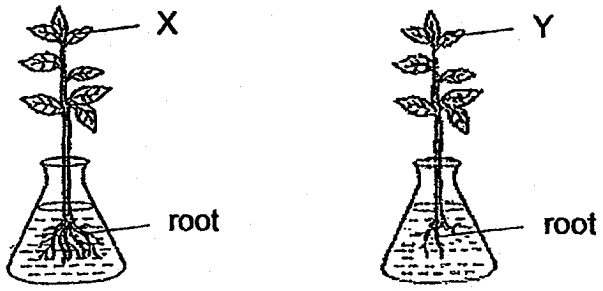
(b) How does the storage temperature of fruit A affect the time taken for the fruit to ripen? [1]

(c) Upon the ripening of fruit A, the fruit splits open to disperse its seeds. Why is it important for the seeds of fruit A to be dispersed far away from the parent plant? [1]

(Go on to the next page)

SCORE	/3

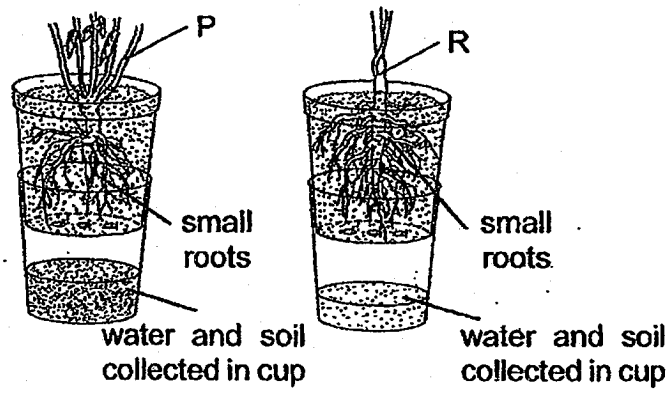
30 A farmer poured the same volume of water into each of the set-ups below. Similar flasks were used in the experiment.



He observed the volume of water in each flask after some time. He realised there was more water left in the flask with plant Y.

(a) Based on the results, explain how having more roots will affect the volume of water in the flask with plant X. [2]

The farmer wanted to grow either plant P or plant R on a hill slope to prevent soil from being washed down by heavy rain.

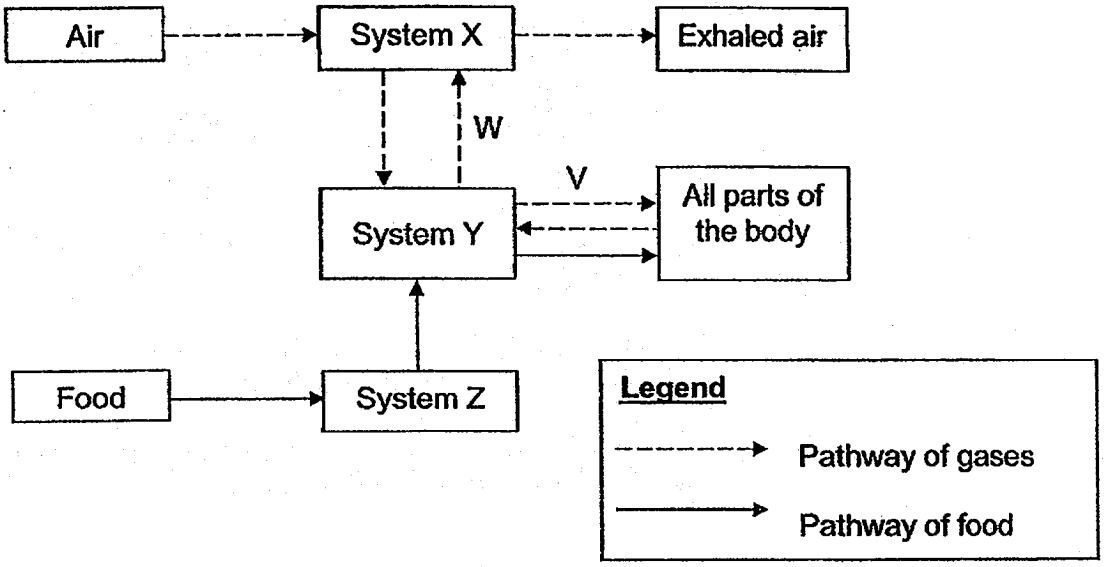


(b) Which plant, P or R, should the farmer grow on the hill? Explain your answer. [1]

(Go on to the next page)

SCORE

31 The diagram below shows how food and air are transported in the human body.



(a) Identify the following systems: [1]

System X: _____

System Z: _____

(b) One of the gases found at W is needed for an important process in plants. Name the process. State how this gas is important to plants. [1]

_____

_____

(c) Explain what happens in System Y when a person exercises. [2]

_____

_____

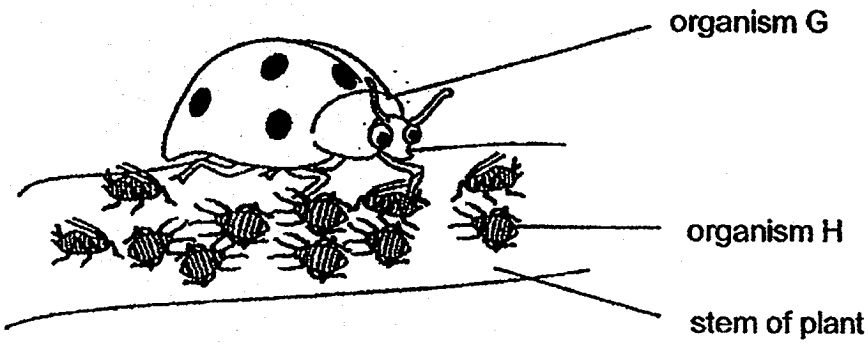
_____

_____

(Go on to the next page)

SCORE /4

32 The diagram below shows organism G feeding on organism H. Organism H feeds on the stem of a plant.



(a) Construct a food chain based on the information given above. [1]

_____

(b) Birds which feed on organism G were introduced to the community mentioned above. How and why would the addition of the bird population affect the population of H? [2]

_____

_____

_____

_____

A farmer realised that there were many organism H found on his crops. He decided to introduce organism G in his farm rather than use pesticide to reduce the population of organism H.

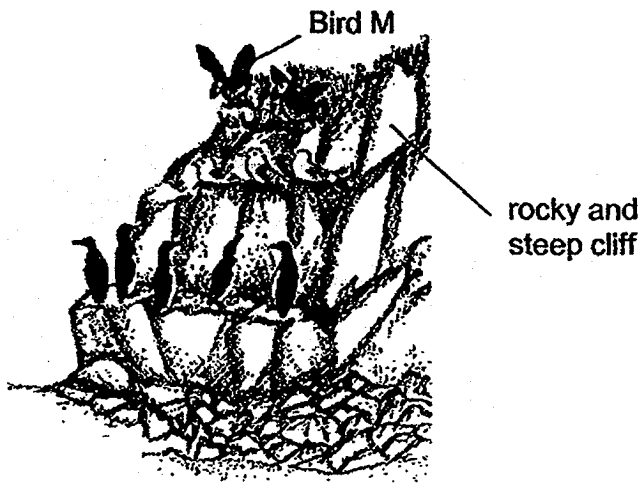
(c) Suggest a reason for the farmer's decision against the use of pesticides. [1]

_____

_____

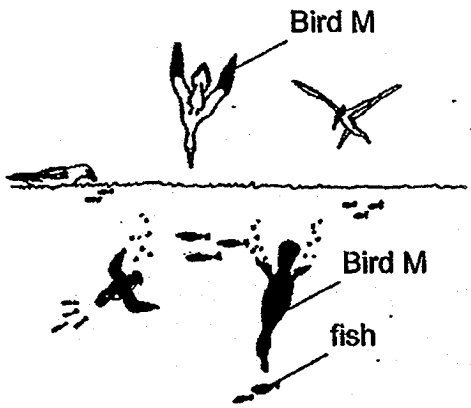
(Go on to the next page)

33 Bird M nests on the bare ledges of cliffs on islands. This is a behavioural adaptation that increases the chances of their young surviving.



(a) Bird M's nesting grounds are rocky and steep. Only Bird M is able to live on this rocky and steep cliff. How does rocky and steep cliffs help to increase Bird M's survival? [1]

Bird M can plunge into the seawater to catch fish and other marine life. The diagram below shows Bird M diving into the seawater for food.



(b) Based on the diagram above, state a structural adaptation of Bird M and suggest how the structural adaptation helps in its hunt for fish and other marine life. [2]

(Go on to the next page)

Continue from Question 33

Aurelius conducted an experiment with a spinning top and a ping pong ball. He spun both the top and the ping pong ball on the table. He observed that the top spun in circles and remained on the table after it stopped spinning while the ping pong ball rolled off the table.

The picture below shows Bird M's egg and the top that Aurelius used for his experiment.

Bird M's egg

top

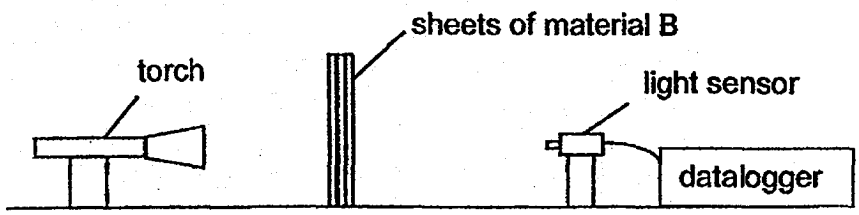
(c) Based on Aurelius's experiment, explain how Bird M's egg is adapted to survive on such rocky and steep cliffs. [1]

_____

_____

SCORE	/4

34 1-cm thick sheets of material B were placed between a light source and a light sensor connected to a datalogger in a dark room as shown in the diagram below.



The table below shows the amount of light detected when different number of sheets of material B were placed between the light source and the light sensor.

Number of sheets of material B	Amount of light detected (units)
0	153
1	119
2	86
3	24
4	0
5	0

(a) State a property of light that is demonstrated in the above experiment. [1]

_____

_____

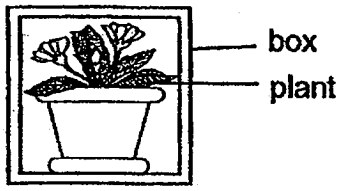
(b) If six sheets of material B were used, state the amount of light detected by the datalogger. [1]

_____ units

(Go on to the next page)

Continue from Question 34

Material B was used to make boxes like the one shown below to store and transport plants.



An experiment was conducted to find the maximum thickness of material B so that sufficient light can enter the box for the plant to carry out photosynthesis.

The plants were kept in the dark for 48 hours before placing them into the boxes. They were then left exposed to light for eight hours.

(c) The size of the box was kept the same to ensure a fair test in the experiment. Why is that so? [1]

_____

_____

(d) Put a tick (✓) in the box(es) below to indicate which plant was unable to carry out photosynthesis when placed in the boxes made of material B. [1]

Thickness of box (cm)	Tick (✓)
1	
2	
3	
4	
5	

(e) When the plant is exposed to light, what substances will it produce? [1]

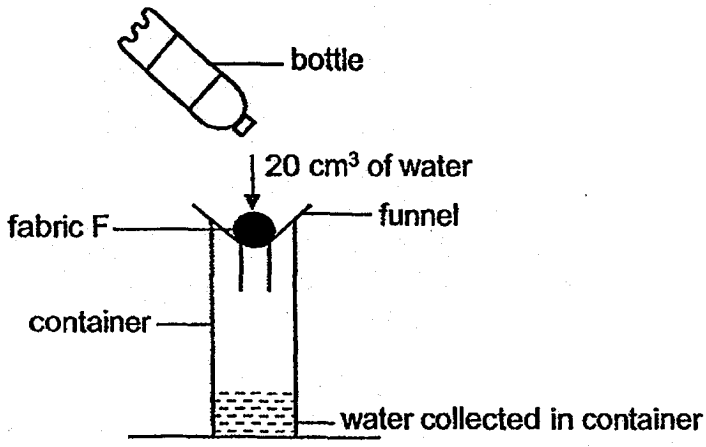
_____

_____

(Go on to the next page)

SCORE /

35 A piece of fabric F, is rolled up and placed into a funnel that covered the mouth of a container as shown in the diagram below. 20 cm^3 of water is then poured onto fabric F. The volume of water collected in the container was recorded.



The experiment was repeated using two other types of fabric, G and H.

The table below shows the recorded results.

Fabric	F	G	H
Volume of water collected in container (cm^3)	18	10	14

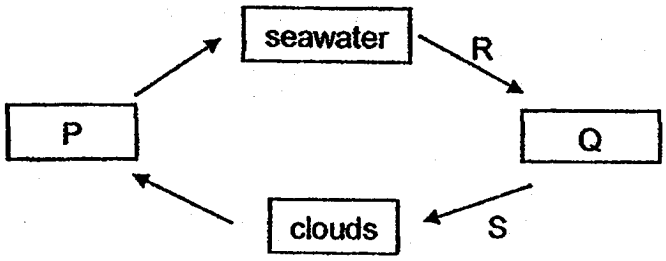
(a) Which piece of fabric is most suitable to make a bath towel? Explain your choice. [2]

(b) State a factor about the fabrics used that needs to be kept constant to ensure a fair test. [1]

(Go on to the next page)

SCORE 3

36 The diagram below shows the water cycle.



(a) Identify processes R and S. [1]

Process R: _____

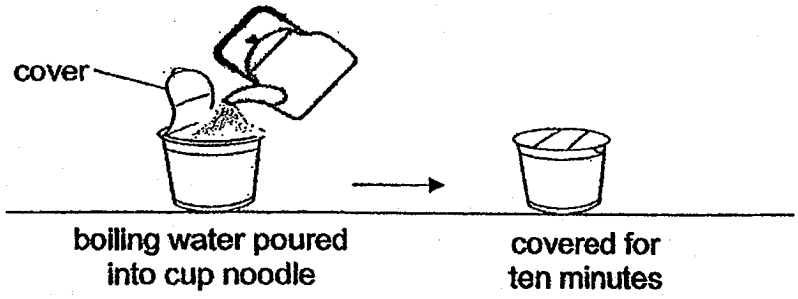
Process S: _____

(b) State a similarity in terms of property of matter of both P and Q. [1]

_____

_____

Siti opened the cover of a cup noodle and poured boiling hot water into it. She then closed the cover and left it aside for ten minutes.



Ten minutes later, when Siti opened the cover of the cup noodle again, she observed a lot of water droplets formed on the underside of the cover of the cup noodle.

(c) Explain how the water droplets were formed on the underside of the cover of the cup noodle. [2]

_____

_____

_____

_____

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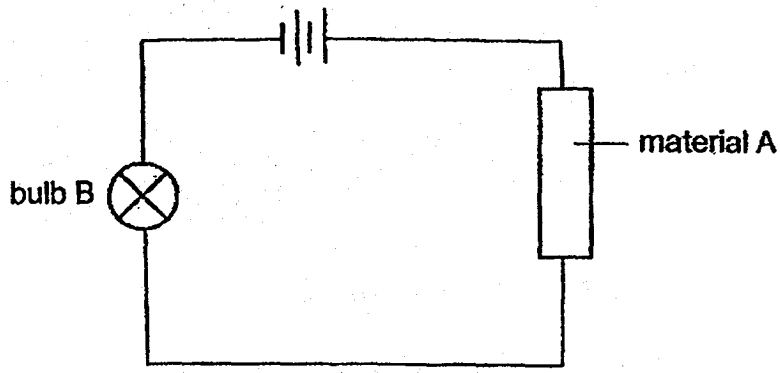
SCORE /4

37 Mei Ling set up the circuit as shown below. Bulb B lighted up when the circuit was closed.

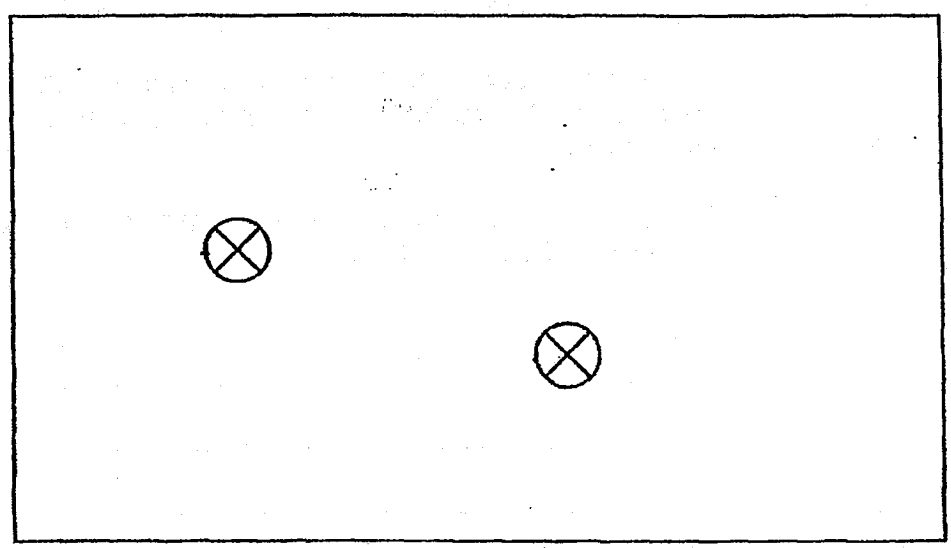


(a) State the property of material A based on the experiment above. [1]

In her second experiment, Mei Ling replaced material A with a bulb similar to bulb B. Both the bulbs in the circuit lighted up when the circuit was closed.

(b) What would happen to the brightness of bulb B now as compared to Mei Ling's first experiment? [1]

(c) Complete the circuit diagram below so that both bulbs would be brighter than the brightness of bulb B in the second experiment. [2]



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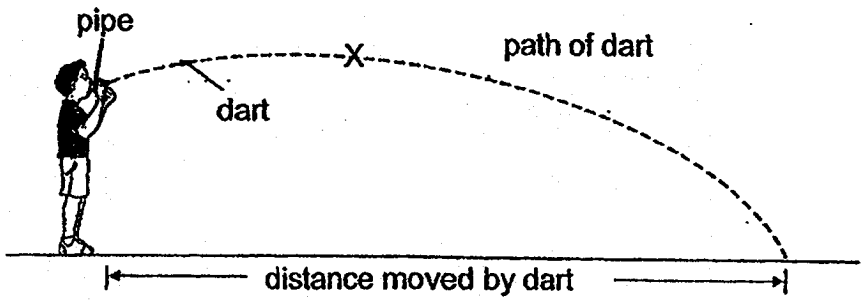
SCORE	/4

38 Peter carried out an experiment on three similar pipes, A, B and C, of different lengths. He blew a dart through the pipes. He measured the distance moved by the dart after each try.



His results are shown in the table below.

	Distance moved by dart (cm)		
	Pipe A (length = 10 cm)	Pipe B (length = 15 cm)	Pipe C (length = 20 cm)
1st try	100	205	315
2nd try	116	202	320
3rd try	112	210	330

(a) Based on his results, state the relationship between the length of the pipe and the distance moved by the dart. [1]

_____

_____

(b) For pipe A, suggest two reasons why the distance moved by the dart was different for each try. [2]

Reason 1: _____

Reason 2: _____

(c) Name the force that caused the dart to move downwards at X. [1]

_____

(d) Peter used the same dart throughout the experiment. Give one reason how using the same dart helps to make the experiment a fair test. [1]

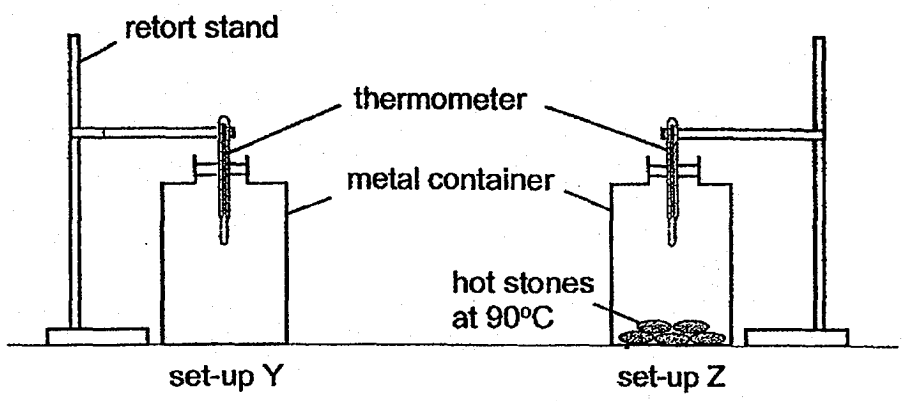
_____

_____

(Go on to the next page)

SCORE	/

39 Cheryl set up an experiment using identical metal containers as shown in the diagram below.



Ten minutes later, Cheryl recorded the temperature of air in both metal containers. The results are shown in the table below.

Set-up	Temperature of air in metal container (°C)
Y	28
Z	50

(a) What is the purpose of set-up Y? [1]

_____

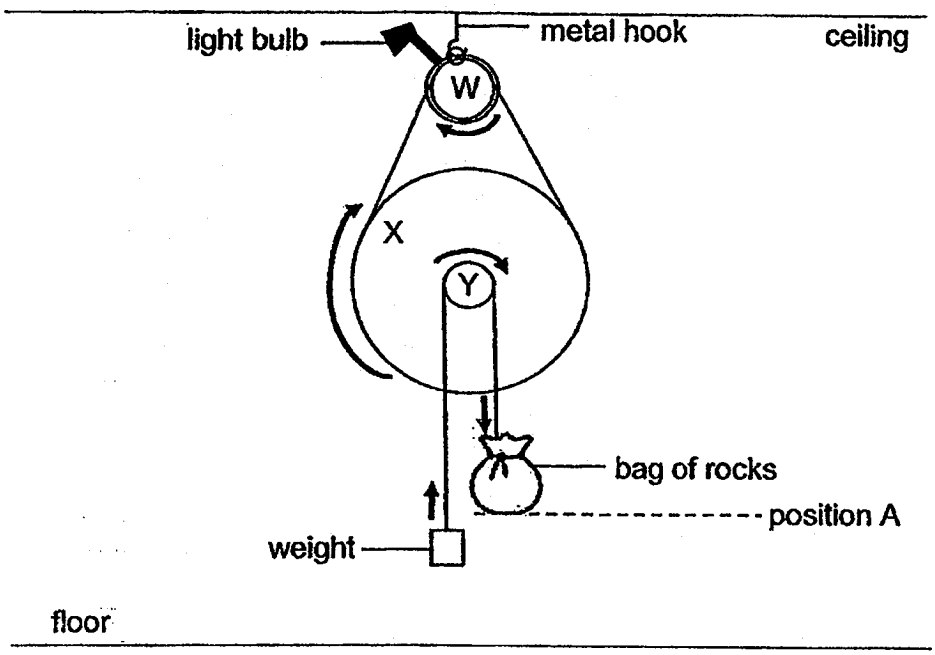
_____

(b) Put a tick (✓) in the boxes below to indicate if heat was gained or lost, resulting in a higher temperature in the metal container of set-up Z. [1]

	Heat gain	Heat lost
Air in metal container of set-up Z		
Hot stones in metal container of set-up Z		

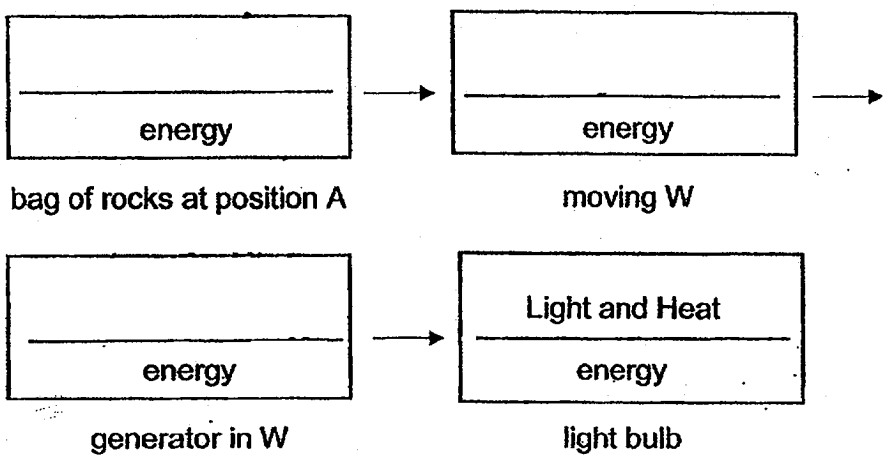
(Go on to the next page)

40 Jing An designed a system as shown below to light up a bulb.



(a) When the bag of rocks moves downwards from position A, it turns wheels W, X and Y clockwise at the same time. When wheel W turns, the generator in W produces electricity to light up the bulb.

Fill in the boxes with the correct forms of energy. [1]



(b) Jing An wanted to increase the amount of electricity produced using the above system. Should he raise the bag of rocks higher than, lower than or remain the same as position A? Explain. [2]

End of Booklet B

SCORE	/2

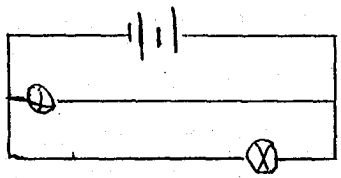
SCHOOL : CATHOLIC HIGH PRIMARY SCHOOL
LEVEL : PRIMARY 6
SUBJECT : SCIENCE
TERM : 2018 PRELIM

SECTION A

Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
3	1	2	2	3	2	1	1	1	2
Q 11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
1	3	2	2	2	1	3	2	4	3
Q 21	Q22	Q23	Q24	Q25	Q26	Q27	Q28		
2	3	4	4	1	1	4	4		

SECTION B

Q29)	a)Pollen grains produced at Y is transferred to W. b)As the storage temperature increases, the time taken for fruit A to ripen decreases. c)This reduces overcrowding so less competition for space water, nutrients and sunlight.
Q30)	a)Having more roots increases the exposed surface area of the roots to the water, thus plant X could absorb more water and has less water than the flask with Y. b)Plant R.The roots of plant R are more widely spread, so it holds the soil more firmly together than P to prevent less soil form being washed away.
Q31)	a)System X: Respiratory system System Z: Digestive system b)Carbon dioxide is needed for plants to make food. c)The heart will pump harder to carry blood faster to transport more oxygen and more digested food around the body to release more energy.

Q32)	a)Stem of plant→organism H →organism G. b)The population of H would increase. When birds feed on G, the population of G would decrease and there would be less G to feed on less it. Thus population of H increase. c)Pesticides could kill other insects that pollinate the plant.
Q33)	a)Rocky and steep cliffs prevent predators of bird M to come close to bird M, thus bird M's chance of survival increases. b)Bird M has a streamlined body shape which reduces the amount of water resistance against bird M, thus bird M can glide into the water easily and catch fish. c)The egg spins in circles and will not roll off the diff.
Q34)	a)Light travels in a straight line. b)0 c)This ensures that the amount of carbon dioxide available to plant for photosynthesis is kept the same. d)4 / 5 e)oxygen, sugar
Q35)	a)Fabric G. There was the least amount of water collected with fabric G, thus Fabric G absorbed the most water. If fabric G was used to make a bath towel, the most water could be absorb from the person and thus the person can dry faster. b)The thickness of the fabric.
Q36)	a)Process R: Evaporation. Process S: Condensation. b)They both take up space. c)The hot water evaporated into warm water vapour. The warm water vapour then came into contact with the cooler surface of the cover, loses heat and condenses into water droplets on the cover.
Q37)	a)Material A conducts electricity. b)The brightness of B would be dimmer. c) 

<table>
<tr><td></td><td></td></tr>
<tr><td>Q38)</td><td>a)As the length of the pipe increases, the distance moved by the dart increases.
b)Reason 1: There was wind blowing against the dart at some time.
Reason 2: Peter blew with a different amount of strength.
c)Gravitational force.
d)To keep the mass of the dart the same.</td></tr>
<tr><td>Q39)</td><td>a)It is a control set-up to compare and confirm that any difference in the temperature of air in the metal container is affected only by the heat given out by the hot stones.
b)
<table>
<tr><td></td><td>Heat gain</td><td>Heat lost</td></tr>
<tr><td>Air in metal container of set-up Z</td><td>√</td><td></td></tr>
<tr><td>Hot stones in metal container of set-up Z</td><td></td><td>√</td></tr>
</table></td></tr>
<tr><td>Q40)</td><td>a)Potential energy →Kinetic energy →
Electrical energy →Light and Heat energy
b)Higher. When the bag of rocks is higher then A, there is more gravitational potential energy converted into more kinetic energy thus the wheels spin faster.</td></tr>
<tr><td></td><td></td></tr>
</table>