CATHOLIC HIGH SCHOOL

MID-YEAR EXAMINATION (2019)

PRIMARY SIX

SCIENCE

BOOKLET A

Name: _____ ( )

Class: Primary 6 - _____

Date: 16 May 2019

28 questions

56 marks

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

INSTRUCTIONS TO CANDIDATES

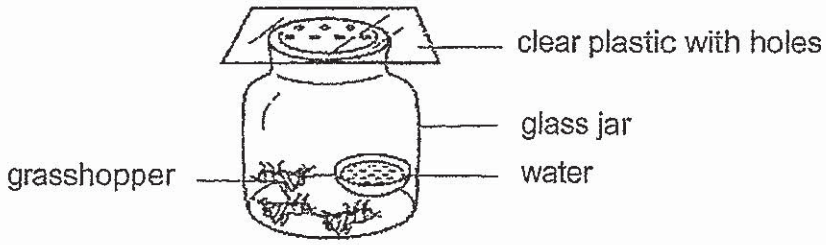
Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Shade your answers in the Optical Answer Sheet (OAS) provided.

This booklet consists of 22 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)

1 Adrian put three grasshoppers and a dish of water in a glass jar. He used a sheet of clear plastic with some tiny holes to cover the jar as shown below. After a week, all the grasshoppers died.



What could Adrian have done so that the grasshoppers would stay alive?

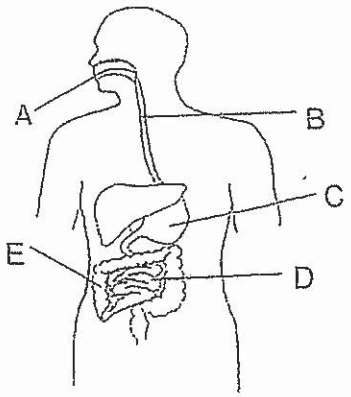
(1) Put some grass into the jar.

(2) Take out two grasshoppers.

(3) Use a clear plastic with more tiny holes.

(4) Place a bigger dish of water into the jar.

2 The diagram below shows parts of a human digestive system.



In which parts A, B, C, D and E are digestive juices added?

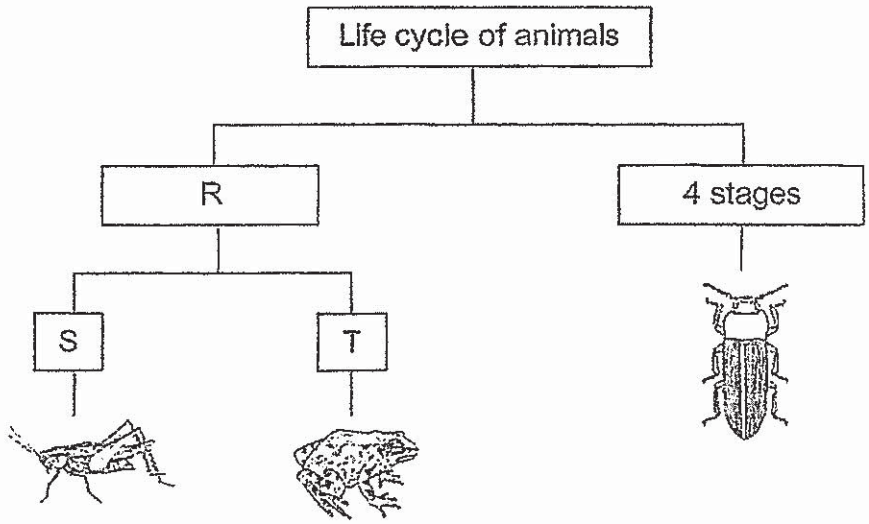
(1) C and D only

(2) A, C and D only

(3) A, B, C and E only

(4) A, B, D and E only

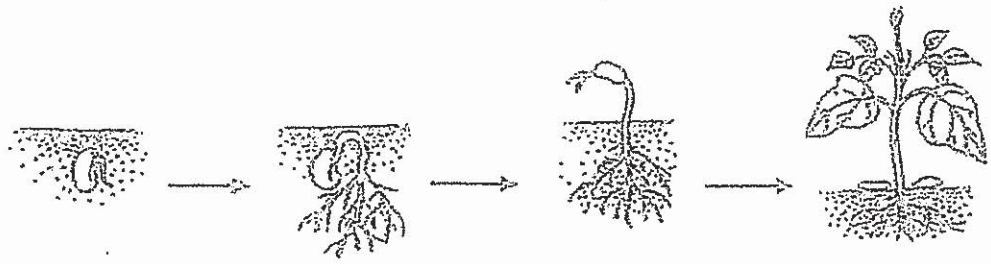
3 Study the diagram below.



Which of the following is represented by R, S and T?

	R	S	T
(1)	2 stages	Young looks like the adult	Young does not look like the adult
(2)	2 stages	Young does not look like the adult	Young looks like the adult
(3)	3 stages	Young looks like the adult	Young does not look like the adult
(4)	3 stages	Young does not look like the adult	Young looks like the adult

4 The diagram below shows the growth of a bean plant.



At which stage(s) is/are sunlight needed for the plant's growth?

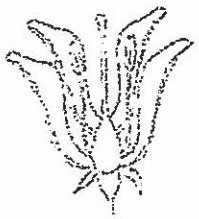
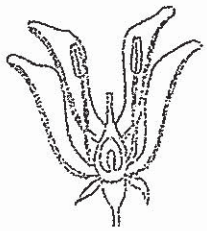
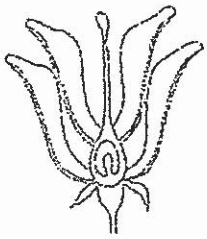
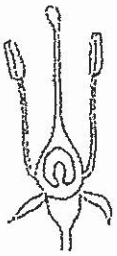
(1) D only

(2) B and C only

(3) A, B and C only

(4) A, B, C and D

5 Bala wanted to find out if a fruit could still develop when a certain part of the flower was removed. The diagram below shows the part of a flower removed from flowers P, Q, R and S from the same plant.

			
ovules removed	stigmas removed	anthers removed	petals removed
flower P	flower Q	flower R	flower S

Pollen grains from the same type of flower were dusted over flowers P, Q, R and S.

Which of the flowers P, Q, R or S will develop into a fruit?

(1) P only

(2) P and Q only

(3) R and S only

(4) Q, R and S only

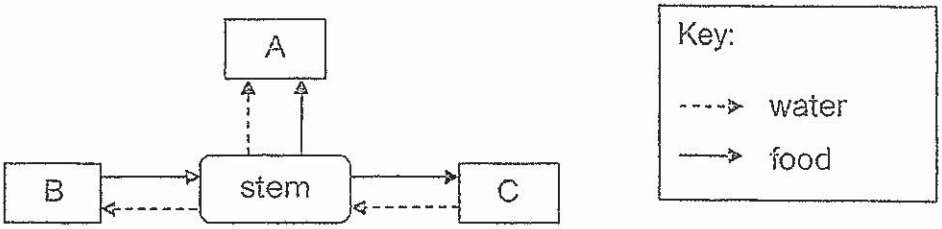
6 The following table shows the comparison between sexual reproduction in plants and humans.

	Plants	Humans
Which part produces the male reproductive cell?	W	X
What is the female reproductive cell?	egg	egg
Where does the fertilised egg develop in?	Y	Z

What do W, X, Y and Z represent?

	W	X	Y	Z
(1)	testis	anther	womb	ovary
(2)	testis	anther	ovary	womb
(3)	anther	testis	womb	ovary
(4)	anther	testis	ovary	womb

7 The diagram below shows how water and food are transported to and from parts A, B and C of a plant.



Which one of the following correctly represents parts A, B and C?

	A	B	C
(1)	flowers	leaves	roots
(2)	flowers	roots	leaves
(3)	leaves	fruits	roots
(4)	roots	flowers	fruits

8 Amin observed three cells under a microscope and made the following observations. A tick (✓) indicates that the cell part is present.

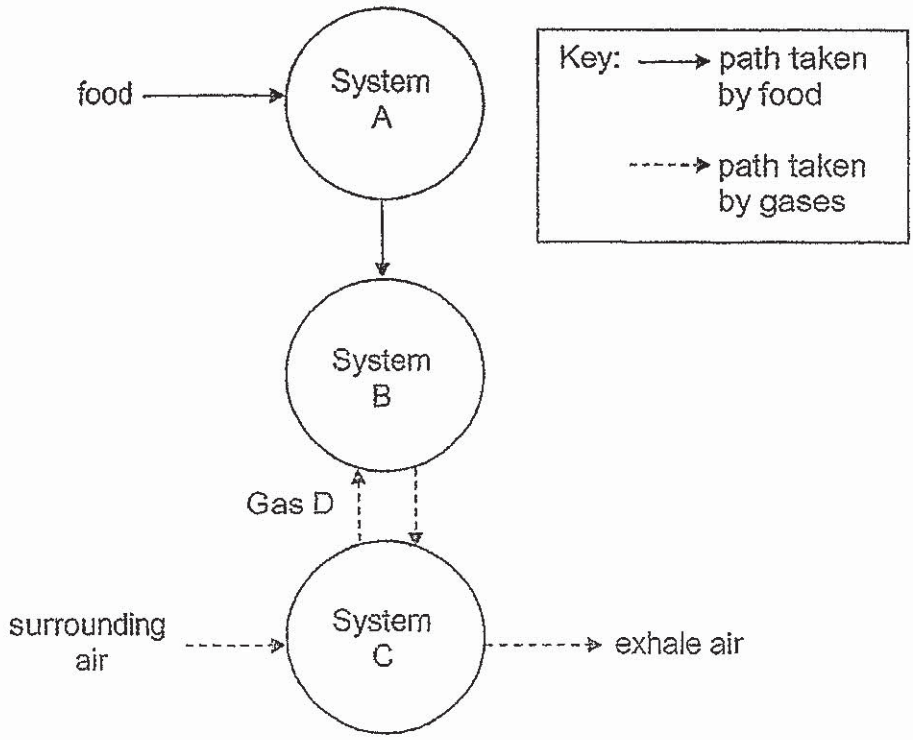
Cell part	Cell X	Cell Y	Cell Z
nucleus	✓	✓	✓
cell wall	✓		✓
cytoplasm	✓	✓	✓
cell membrane	✓	✓	✓
chloroplast	✓		

Which of the following statements is/are correct?

A Cells Y and Z cannot trap light.
B Both Cells X and Z are plant cells.
C Cell Z does not have a regular shape.
D Cell Y is the only cell that cannot make its own food.

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

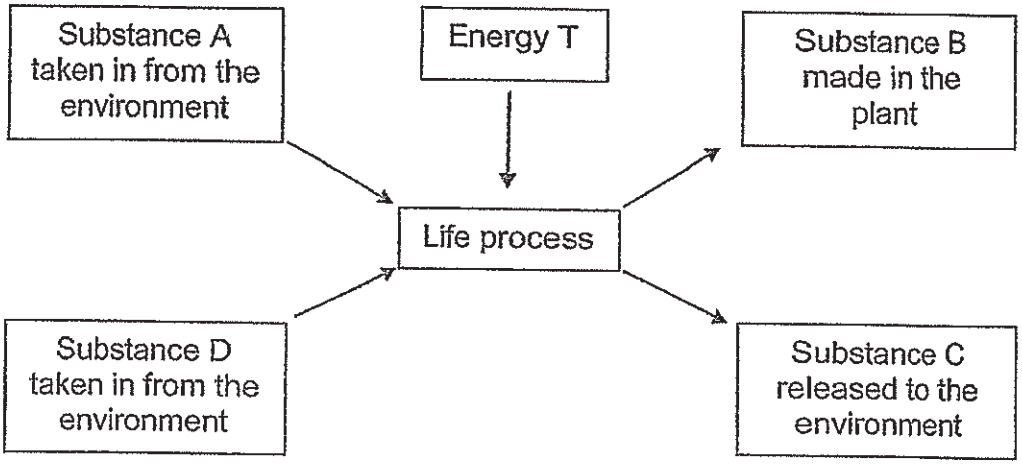
9 The diagram below shows how food and various gases are transported in the human body.



Which systems do A, B and C represent and what is Gas D?

	System A	System B	System C	Gas D
(1)	circulatory	respiratory	digestive	carbon dioxide
(2)	digestive	respiratory	circulatory	carbon dioxide
(3)	circulatory	digestive	respiratory	oxygen
(4)	digestive	circulatory	respiratory	oxygen

10 The diagram below represents a certain life process that takes place in green plants.



Which one of the following correctly represents Substances A, B, C, D and Energy T?

	A	B	C	D	T
(1)	food	water	oxygen	carbon dioxide	light
(2)	oxygen	food	carbon dioxide	water	heat
(3)	carbon dioxide	food	oxygen	water	light
(4)	oxygen	water	food	carbon dioxide	heat

11 The food relationship between three organisms is shown below.

$$X \longrightarrow Y \longrightarrow Z$$

The following took place when a large number of organism Z died.

A The number of organism X decreased.
B The number of organism Y increased.
C The number of organism Y decreased.
D There was insufficient food for Y.

Which of the following shows the correct sequence of events?

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

12 Four pupils came up with the following statements while reading about decomposers.

John Decomposers break down their own food and produce oxygen.

Gabriel Decomposers prevent dead organisms and wastes from piling up.

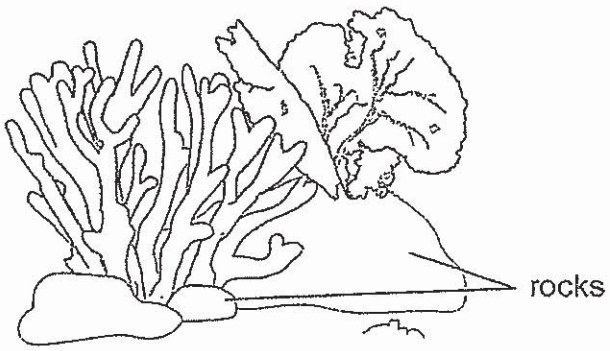
Naomi Decomposers help to break down animal wastes and remains of the plants and animals to make the soil fertile for the food producers.

Amy Decomposers speed up the process of decomposition by breaking down dead plants and animal wastes into smaller pieces.

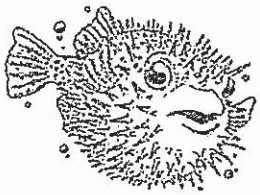
Who had made the correct statements?

(1) Amy and John
(2) Amy and Naomi
(3) Gabriel and Naomi
(4) Amy, Gabriel and Naomi

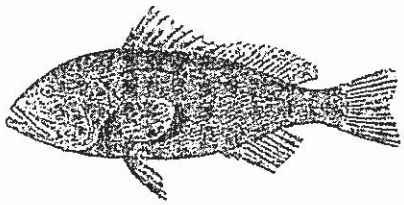
13 The diagram below shows a part of a sea habitat.

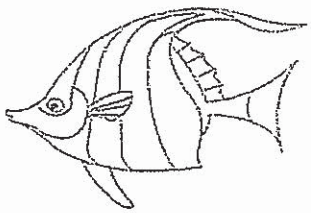


Which of the following fish has a mouth that helps it to get food in between the rocks?

(1) 

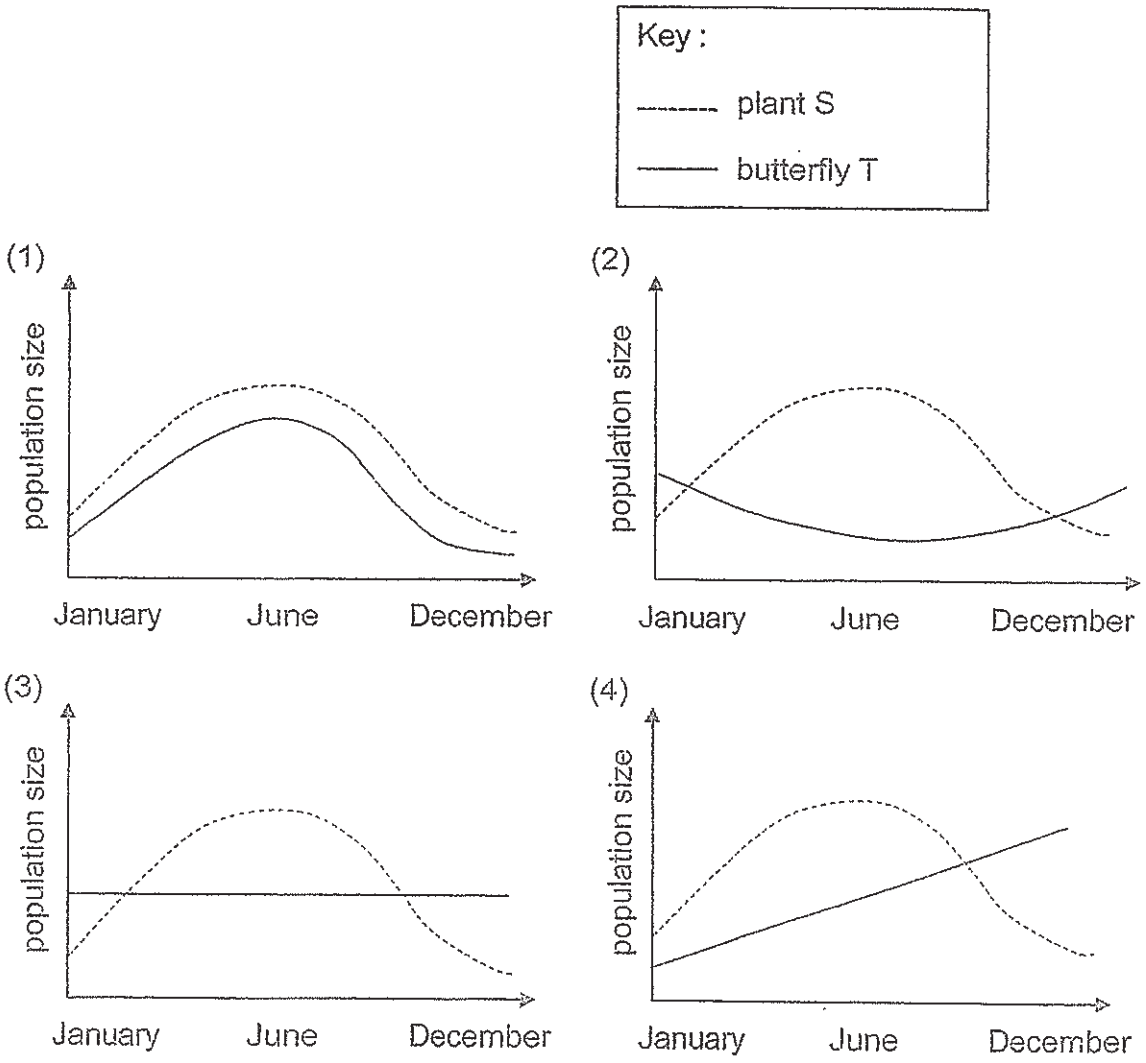
(2) 

(3) 

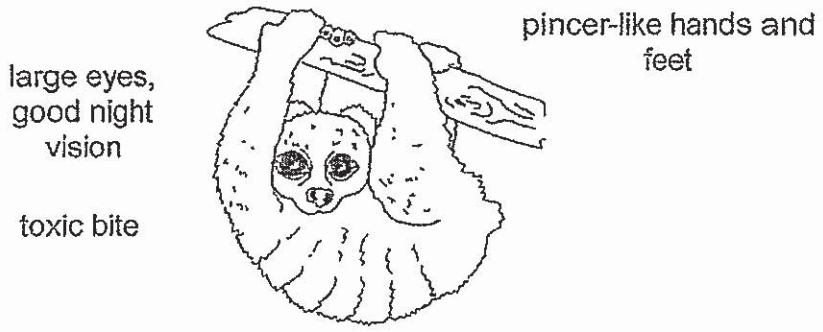
(4) 

14 The graphs below show how the population size of plant S and butterfly T change throughout the year.

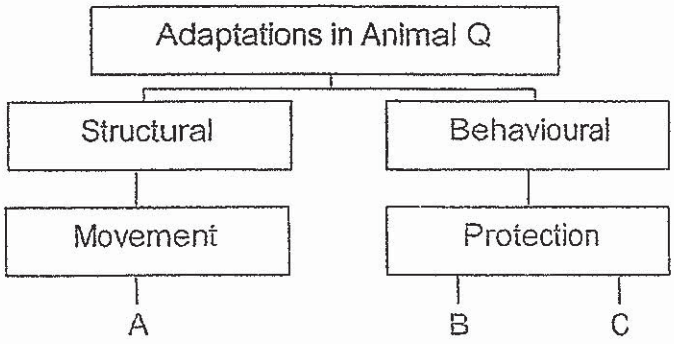
Given that butterfly T only feeds on the nectar of the flowers of plant S, which one of the following graphs is correct?



15 The diagram below shows Animal Q; a nocturnal mammal. Animal Q feeds on plants and insects. It has pincer-like hands to grasp branches for long periods of time. It covers its young with poisonous saliva by licking the toxin onto the baby's fur before heading off to find food.



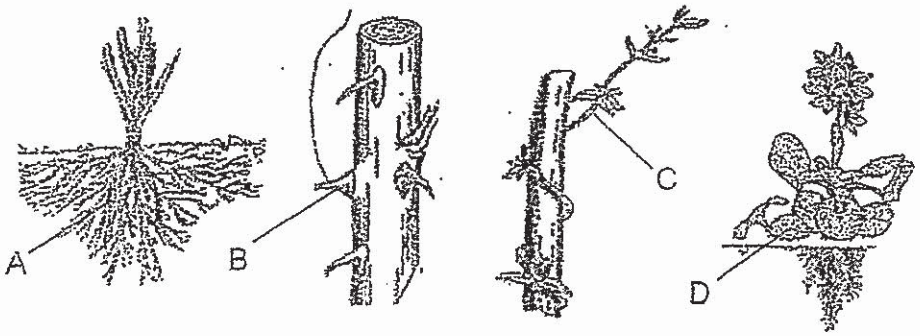
The chart below shows how the adaptations stated above are classified.



Which one of the following correctly represents A, B and C?

	A	B	C
(1)	large eyes, good night vision	pincer-like hands	a toxic bite
(2)	pincer-like hands	a toxic bite	covers her young with poisonous saliva
(3)	covers her young with poisonous saliva	large eyes, good night vision	pincer-like hands
(4)	a toxic bite	covers her young with poisonous saliva	large eyes, good night vision

16 The diagram below shows adaptations of plant A, B, C and D.



Which adaptation(s) help(s) the plant to receive more water?

(1) A only

(2) A and D only

(3) B and C only

(4) B, C and D only

17 Young children are usually given plastic cup rather than glass cup when drinking.

plastic cup glass cup

Which of the following properties of plastic make it a more suitable material for young children to use than glass?

A It is light.
B It floats on water.
C It does not break easily.
D It does not allow light to pass through.

(1) A and B only

(2) A and C only

(3) B and D only

(4) C and D only

18 Siew Teng labelled the ends of three metal bars, X, Y and Z, as shown in the diagram below.

metal bar X metal bar Y metal bar Z

She wanted to find out if the metal bars would repel or attract when they were brought close to each other.

The table below shows the results of Siew Teng's experiment.

		metal bar Y		metal bar Z	
		G	H	J	K
metal bar X	E	attract	attract	attract	attract
	F	attract	attract	attract	attract
metal bar Y	G			attract	repel
	H			repel	attract

Based on the results above, which of the following statements is/are correct?

A Only metal bar Y is a magnet.
B All the metal bars are magnets.
C Only metal bars Y and Z are magnets.
D All the metal bars are made of magnetic materials.

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

19 Guorong measured the mass of a basketball at the beginning of his experiment. After that, he pumped air into the basketball with an air pump. He then recorded the results in the table shown below.

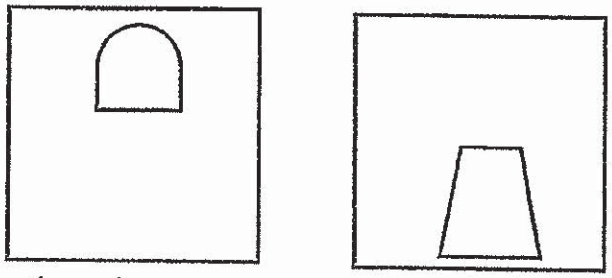
Number of pumps	Mass of basketball (g)
0	600
10	610
20	620
30	630

Based on his results above, what can Guorong conclude?

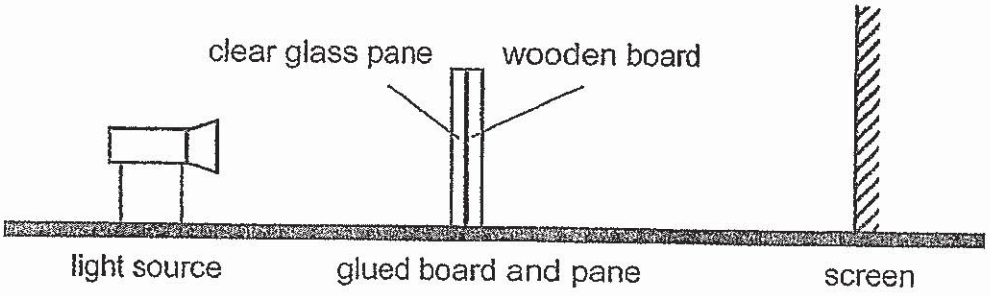
A The mass of the basketball increases with more pumps.
B The volume of the basketball remains the same with more pumps.
C The number of pumps given to the basketball determines the mass of it.
D The number of pumps given to the basketball determines the volume of it.

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

20 Farah took a wooden board and a clear glass pane of similar size and thickness. She cut out shapes from them as shown in the diagram.

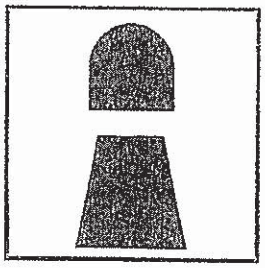


The wooden board and clear glass pane were then glued together and a light source was brought near them.

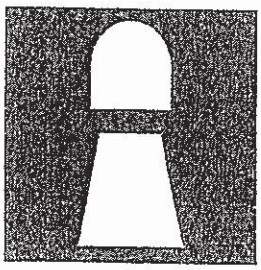


Which one of the following is the shadow formed on the screen?

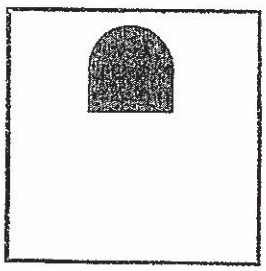
(1)



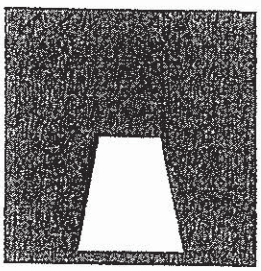
(2)



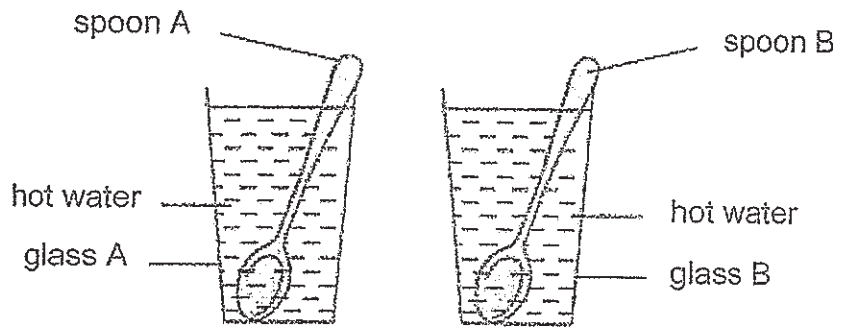
(3)



(4)



21 George filled two identical glasses with the same amount of water of the same temperature. He then placed spoons made of different materials in each glass as shown in the diagram below.



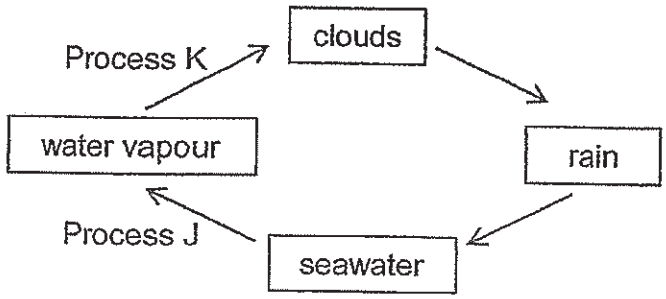
After two minutes, he removed the spoon and measured the temperature of water in both glasses again. He found that the temperature of water in glass A was higher than the water in glass B.

Which of the following statements are correct?

A Spoon A was a poorer conductor of heat.
B Spoon B was a poorer conductor of heat.
C Different materials conducted heat at different rates.
D Heat was transferred faster in spoon B than in spoon A.

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

22 The diagram below shows the water cycle.

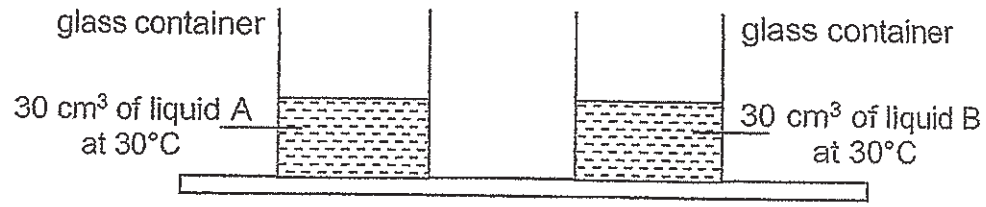


Which of the following correctly describe(s) the processes J and K in the diagram above?

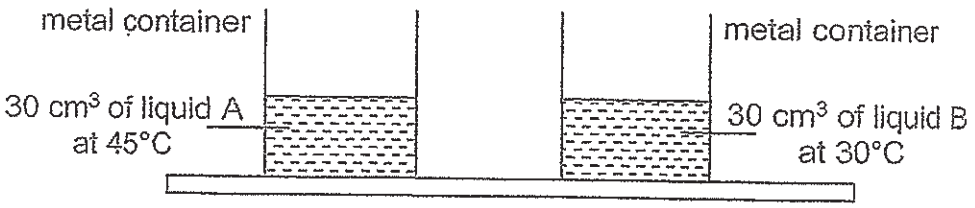
A Process J takes place all the time.
B Process K can occur at any temperature.
C Heat is gained by the water vapour during Process J.

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

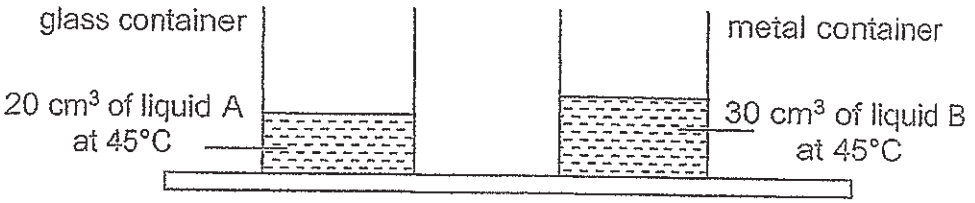
23 Ian set up an experiment to compare the rate of evaporation of two liquids, A and B. The diagrams below show four different set-ups J, K, L and M.



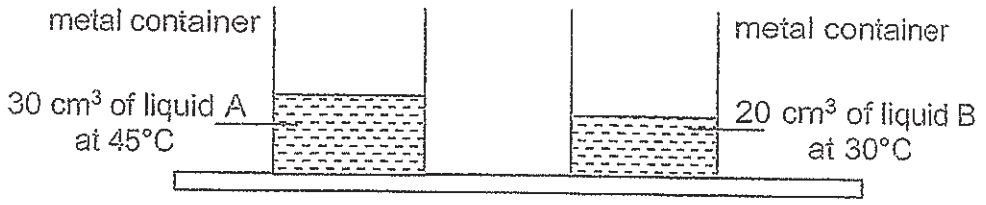
set-up J



set-up K



set-up L



set-up M

Which of the following set-ups will give a fair test?

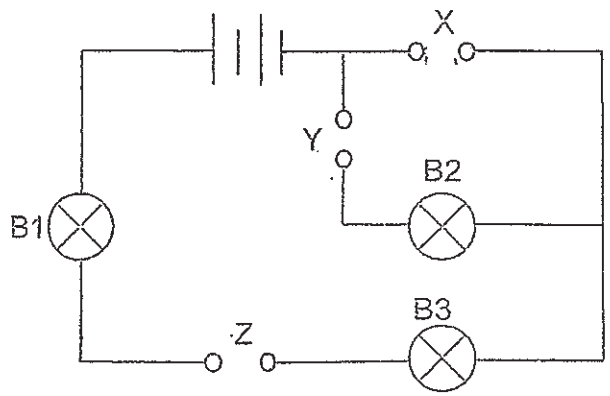
(1) Set-up J

(2) Set-up K

(3) Set-up L

(4) Set-up M

24 Samy wanted to find out the electrical conductivity of three rods, A, B and C, made of different materials. He inserted the rods into the circuit at different position, X, Y and Z as shown below.



The table below shows the results obtained at the end of the experiment.

Positions where rods were placed			Did the bulbs light up?		
X	Y	Z	B1	B2	B3
A	B	C	yes	yes	yes
B	C	A	no	no	no
C	A	B	yes	no	yes

Based on the results above, which statement is correct?

(1) Only Rod A is an electrical insulator.

(2) Only Rod C is an electrical insulator.

(3) Only Rods B and C are electrical insulators.

(4) Only Rods A and B are electrical conductors.

25 The diagram below shows a boy on a sled sliding down the slope.

What could be the reason why the boy is sliding down?

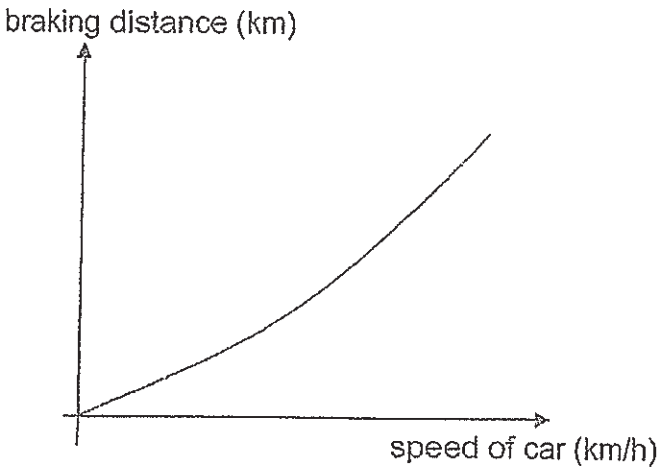
(1) The sled is pulling him down.

(2) Frictional force is acting on him.

(3) Gravitational force is acting on him.

(4) Gravitational force is pushing him down.

26 A group of pupils conducted an experiment to find out the braking distance of a car travelling at a certain speed on a dry road. The braking distance is the distance the car has to cover when the brakes are applied before it comes to a complete stop. The graph below shows the data collected by the pupils.



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

(1) The braking distance is not affected by the mass of the car.

(2) The car will move a longer distance to come to a stop when its speed is higher.

(3) The braking distance will increase when the kinetic energy of the car decreases.

(4) The braking of the car will convert potential energy of the car into heat and sound energy.

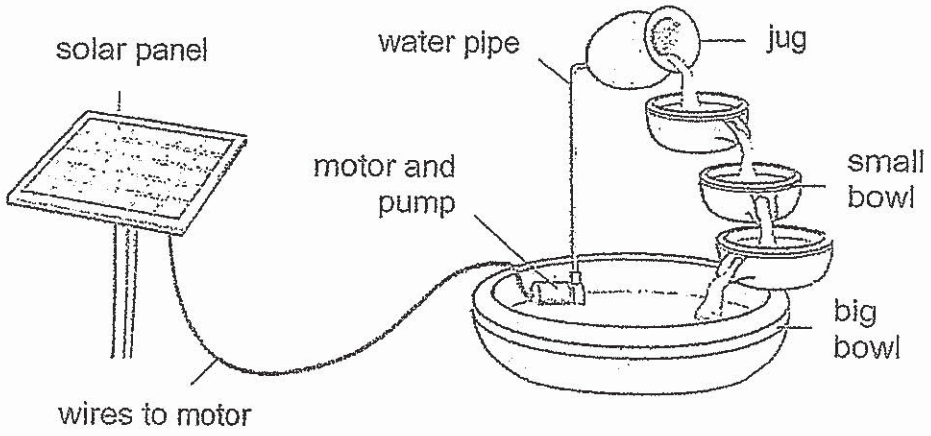
27 A toy car, at Point A, was moving down a slope as shown below.

After some time, the toy car stopped at point B.

Compare the potential energy and kinetic energy of the toy car at points A and B.
Which one of the following is correct?

	potential energy at B compared to A	kinetic energy at B compared to A
(1)	more	more
(2)	more	less
(3)	less	more
(4)	less	less

28 The water garden feature below is solar-powered. The solar panel which absorbs energy from the Sun is connected to a motor in the bowl. The motor pumps water up into the jug through the water pipe. Then the water flows down the bowls.



Which one of the following statements is correct about the water garden feature above?

(1) The water garden feature cannot operate when there is no heat.

(2) The water flowing out of the jug has both potential energy and kinetic energy.

(3) The water in the big bowl has more potential energy than the water in the jug.

(4) Heat energy is converted to potential energy and kinetic energy for the feature to work.

End of Booklet A

CATHOLIC HIGH SCHOOL

MID-YEAR EXAMINATION (2019)

PRIMARY SIX

SCIENCE

BOOKLET B

Name: _____

Class: Primary 6 - _____

Date: 16 May 2019

Parent's Signature: _____

Booklet A	56
Booklet B	44
Total	100

13 questions

44 marks

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

INSTRUCTIONS TO CANDIDATES

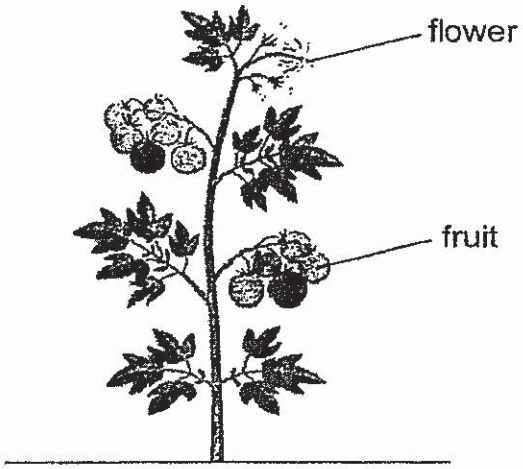
Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Write your answers in this booklet.

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

Booklet B (44 marks)

For questions 29 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. (44 marks)

29 Sarah saw an adult plant with bright and colourful flowers. The fruits were fleshy and had a sweet smell.



(a) Explain how the bright and colourful flowers help the plant to reproduce. [1]

_____

_____

(b) Sarah noticed that the young plants grew far away from the adult plant. Describe how the seeds of the plant above can be dispersed over a wide area. [1]

_____

_____

(c) How does being far away from the adult plants help the young plants to grow well? [1]

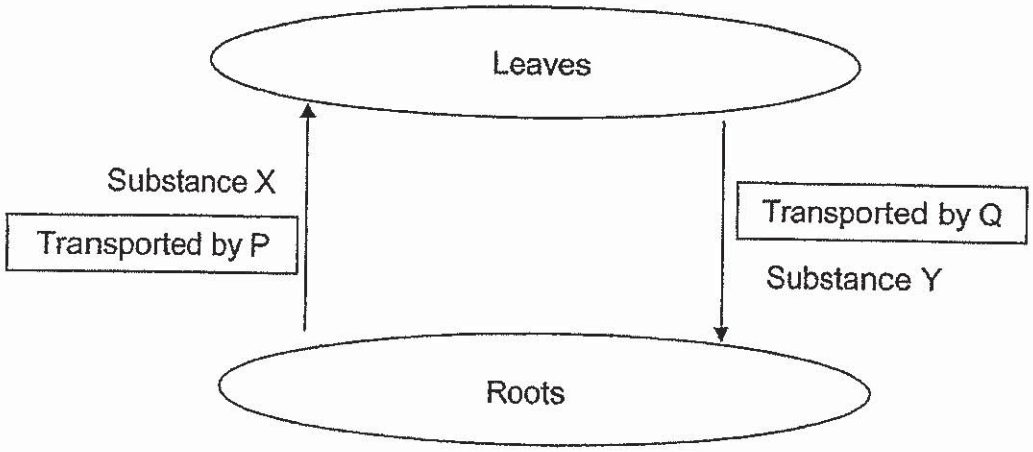
_____

_____

(Go on to the next page)

SCORE	/ 3

30 The diagram below shows the movement of substances in a plant.



(a) Identify P and Q in the stem of the plant. [1]

P : _____

Q : _____

(b) Identify substances X and Y. [1]

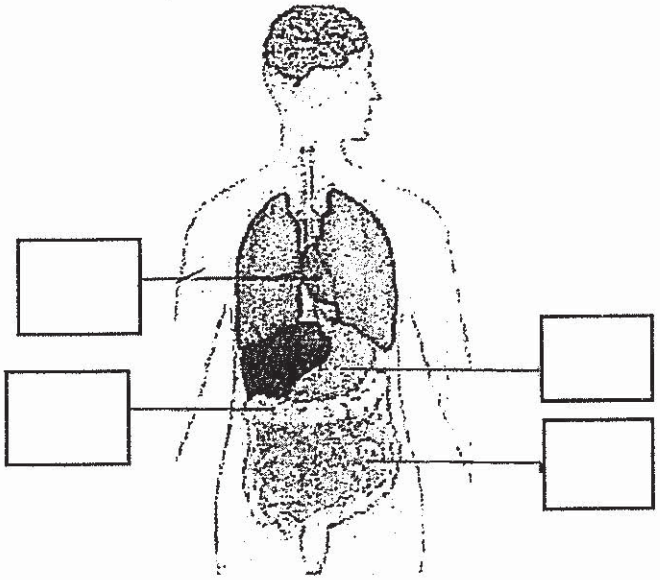
X : _____

Y : _____

(Go on to the next page)

SCORE	2

31 Study the human body system below.



(a) Put the letter 'A' in the box above to identify the organ that pumps blood around the body.

Put the letter 'B' in the box above to show where digested food is absorbed. [1]

James wanted to find out if exercise affects the pulse rate. He measured the pulse rates of three friends when resting and after exercising for 20 minutes.

Friend	Pulse rate when resting (per minute)	Pulse rate after exercising for 20 minutes (per minute)
X	73	85
Y	72	80
Z	80	89

(b) What can James conclude about the effect of exercise on pulse rate? [1]

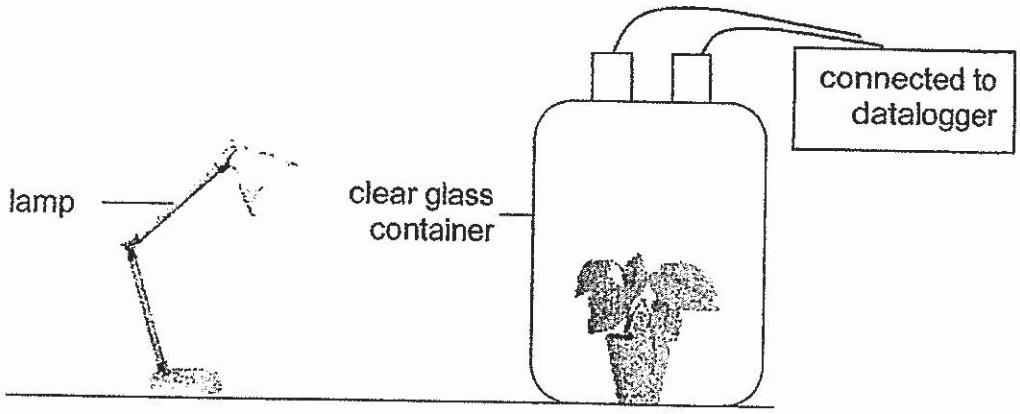
_____

_____

(Go on to the next page)

SCORE	2

32 Meili carried out an experiment in a dark room. She placed a plant in a closed clear glass container as shown below.



(a) Meili switched on the lamp. She observed that the amount of oxygen in the container increased while the amount of carbon dioxide decreased. Name this process. [1]

_____

(b) Explain why she used a clear glass container for her experiment. [1]

_____

_____

(c) Meili switched off the lamp. What would happen to the amount of oxygen and the amount of carbon dioxide after a while? Explain. [1]

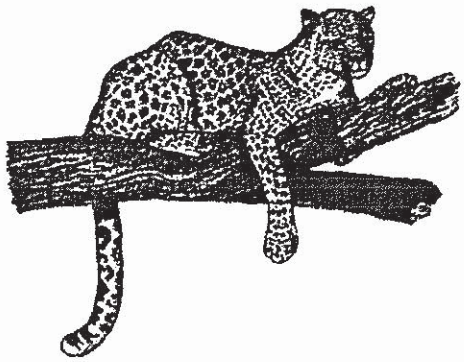
_____

_____

(Go on to the next page)

SCORE	/ 3

33 Organism P lives in the grasslands. It has patterns on its body to blend in with its surroundings. It has strong legs to run fast but can only do so for less than a minute. As such, it usually tries to get closer to its prey before chasing it. It has keen eyesight and hunts during the day.



(a) Based on the information above, state one structural and one behavioural adaptation of Organism P that helps it hunt for food. [2]

Structural adaptation: _____

_____

Behavioural adaptation: _____

_____

(b) After a speedy chase, Organism P will not be able to move much and needs to rest for half an hour. Explain why this could be a disadvantage for Organism P. [1]

_____

_____

(c) Organism P sometimes prey in a group. State one advantage of hunting for food in this manner. [1]

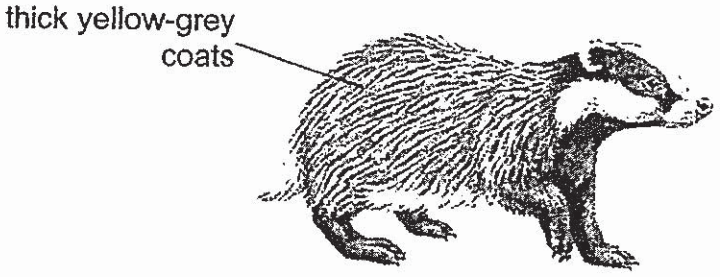
_____

_____

(Go on to the next page)

SCORE	/ 4

The young of Organism P will not be able to run as fast as the adult but it has a thick yellow-grey coat on its back which resembles that of organism Q. Organism Q is known to be aggressive when provoked. The young of Organism P is often left alone when its adults go out to hunt for food.



Organism Q

(d) Suggest a reason why having a thick yellow-grey coat is an advantage for the young of Organism P. [1]

_____

_____

SCORE	/ 1

34 There were five populations of organisms A, B, C, D and E in a pond community. Glenn kept some of the organisms together in containers over a period of time. The table below shows the outcome of the experiment.

Organisms kept together	Outcome of experiment
A, B and C	A and C remaining
D and E	E remaining
A, C and D	D remaining

(a) Based on the results of his experiment, construct a possible food web to show the relationships among the five organisms in the space provided below. [1]

In Glenn's hometown, the period of daylight during the months of July to December is shorter than the first half of the year.

(b) Explain how this would affect the population size of organism A in the food web. [1]

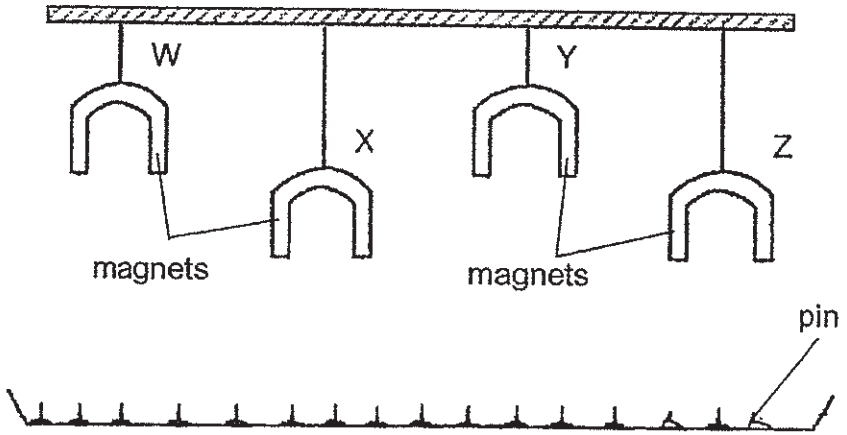
Glenn noticed that the plant population in the pond had been decreasing over the past few months.

(c) Without adding more plants, which one of the organisms, A, B, C, D or E, should Glenn add, to increase the plant population? Explain your answer. [1]

(Go on to the next page)

SCORE 3

35 Zhi Wen conducted an experiment to compare the strength of four U-shaped magnets as shown below. He hung the magnets on strings of different lengths over a tray of pins.



He recorded the number of pins attracted to the magnets in the table below.

Magnet	Number of pins attracted
W	10
X	2
Y	4
Z	6

(a) Which was the weakest magnet? Give a reason. [1]

_____

_____

(b) Based on the set-up above, Zhi Wen was unable to compare the strength of Magnets Y and Z. Give a reason. [1]

_____

_____

(c) Magnet Y was replaced by a very strong magnet. Besides attracting more pins, state another possible observation that could happen. [1]

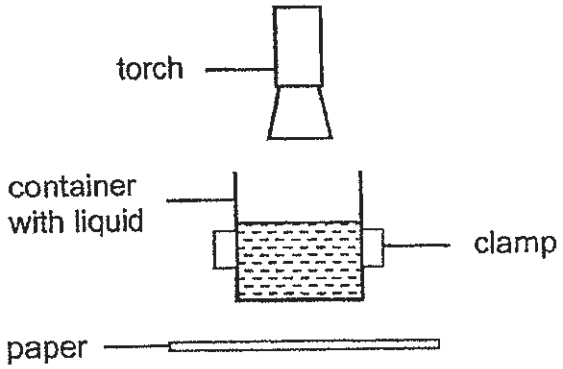
_____

_____

(Go on to the next page)

SCORE	/ 3

36 Yaakob collected three samples of liquids R, S and T from different sources. He placed each liquid in a container. He shone a torch through each container of liquid and placed a sheet of paper below the container as shown in the diagram below.



Yaakob observed how much light fell on the sheet of paper when each of the three liquid samples R, S and T was in the container. He recorded his observations in the table below.

Liquid Sample	Observation
R	Bright patch of light on paper
S	No light on paper
T	Dim patch of light on paper

(a) What was the aim of Yaakob's experiment? [1]

_____

_____

(b) Based on Yaakob's observation, which liquid sample was the muddiest? Give a reason for your answer. [1]

_____

_____

(c) State one variable which must be kept constant for the experiment to be a fair test. [1]

_____

(Go on to the next page)

SCORE	/ 3

37 After a soccer game, Benny's friend used water mist to cool him. Tiny droplets are produced in the form of mist as shown below.

(a) Explain how the water mist is able to cool Benny after his soccer game. [2]

_____

_____

_____

Benny stands in front of a fan as shown.

(b) Explain how standing in front of the fan would help Benny cool more effectively. [2]

_____

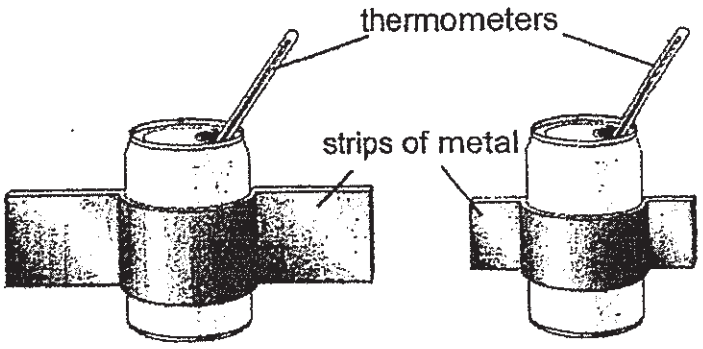
_____

_____

(Go on to the next page)

SCORE	/ 4

38 Xavier filled two identical metal cans with 200 cm^3 of hot water and wrapped strips of metal of different sizes around them as shown below.



He recorded the temperature of the water in each can every five minutes. The results are shown in the table below.

Time (minutes)	Temperature (°C)	
	Can X	Can Y
0	90	90
5	84	88
10	78	82
15	72	78
20	66	72

(a) Based on the experiment above, explain why the water in Can X cooled faster than the water in Can Y. [2]

_____

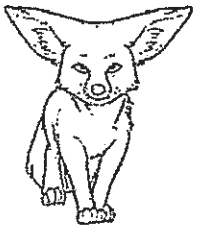
_____

_____

(Go on to the next page)

Continue from Question 38

Foxes keep cool by losing heat from their ears.



Fox A

Fox B

(b) Which fox can lose more heat through its ears? Give a reason for your answer. [1]

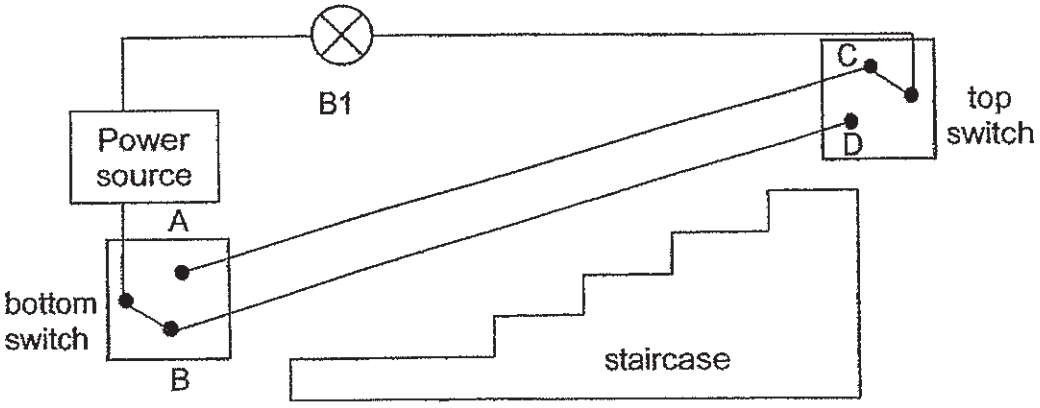
_____

_____

(Go on to the next page)

SCORE	/ 1

39 The diagram below shows a two-way switch installed at the staircase. The bulb can be switched on or off from either ends of the staircase.



At the moment, the bulb is switched off. The bottom switch is connected to point B while the top switch is connected to point C.

(a) David is at the bottom of the staircase.
What can he do to switch on the bulb at the bottom of the staircase? [1]

_____

_____

(b) David walks up the staircase after he has switched on the bulb at the bottom of the staircase. What can he do to switch off the bulb at the top of the staircase? [1]

_____

_____

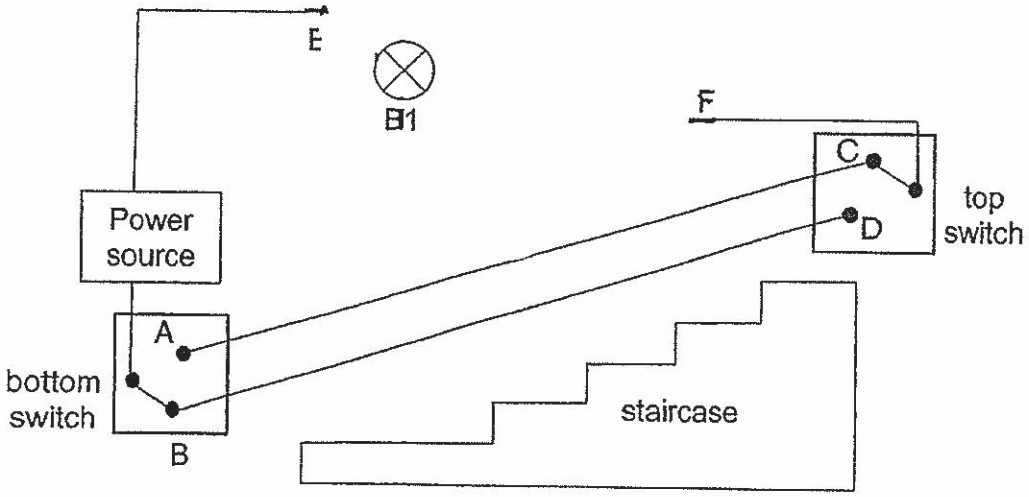
(Go on to the next page)

SCORE 2

Continue from Question 39

(c) David wants to install two more bulbs for the stairway while maintaining the same brightness as before for each bulb.
Draw two more bulbs and show the connections in the diagram below.

[1]



(d) Other than having the same brightness as before, what is the advantage of having the bulbs connected in the way you have drawn in (c)?

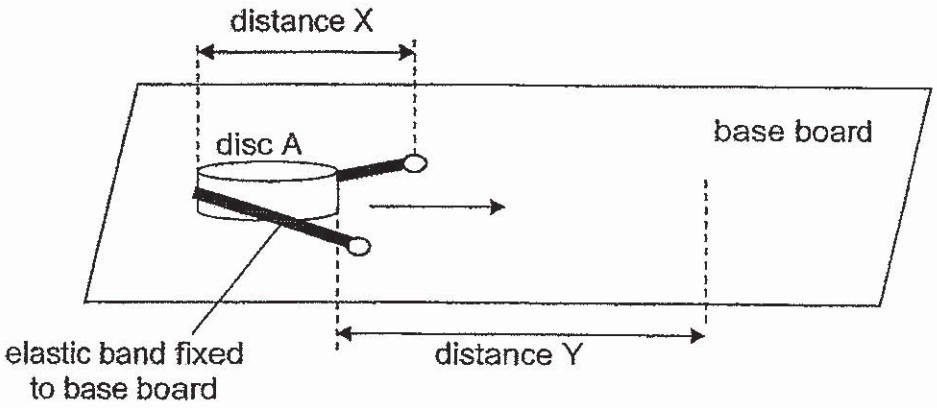
[1]

_____

_____

(Go on to the next page)

40 Hailey conducted an experiment with the set-up shown below.



She pulled disc A and the elastic band back at different distances (X) and released it to find out how far disc A will travel (Y). She then recorded her results in the table shown below.

distance X (cm)	distance Y (cm)
2	3.5
4	6
6	9.5
8	12

(a) Explain, in terms of energy conversion, how distance Y is affected by distance X. [2]

_____

_____

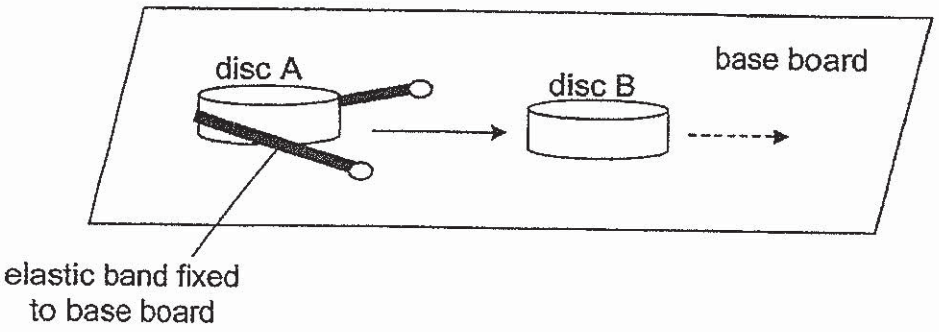
_____

(Go on to the next page)

SCORE	2

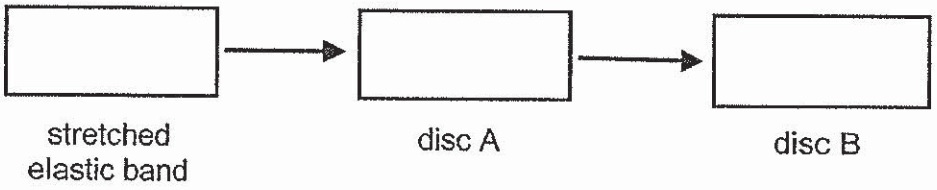
Continue from Question 40

Hailey then added disc B to the set-up as shown below.



She used disc A to hit disc B.

(b) Fill in the boxes to show the main energy changes during the experiment. [1]



(c) Hailey noticed that disc B travelled at a slower speed as compared to disc A. Explain, in terms of energy. [2]

_____

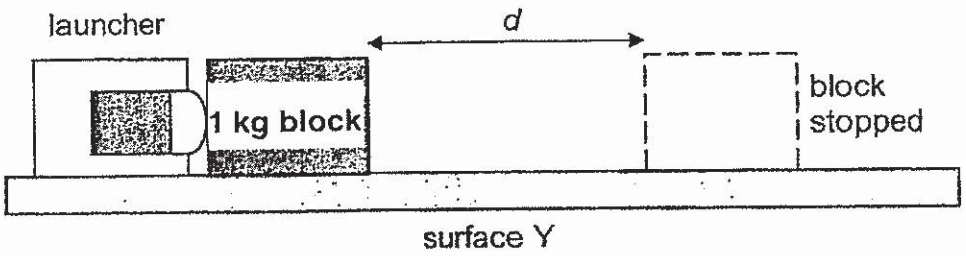
_____

_____

(Go on to the next page)

SCORE	/ 3

41 Ahmad conducted an experiment using the set-up below. He used the launcher to give the 1 kg block a push. The block moved a distance, *d*, along surface Y before stopping.



(a) Name the force that caused the block to stop moving. [1]

_____

Ahmad repeated the experiment using a different surface, X. His results are shown in the table below.

surface	mass of block (kg)	*d* (cm)
Y	1	20
X	1	60

(b) In Ahmad's experiment, the launcher always pushed the block with the same amount of force. Why must the amount of force be the same? [1]

_____

_____

(c) Explain why the block moved a shorter distance along surface Y than X. [1]

_____

_____

(Go on to the next page)

SCORE 3

Continue from Question 41

(d) Ahmad repeated the experiment using a 2-kg block instead of a 1-kg block. He obtained the results shown below.

surface	mass of block (kg)	*d* (cm)
Y	2	10
X	2	30

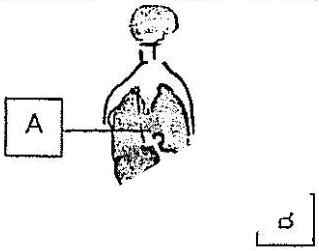
Based on Ahmad's results, how does the mass of the block affects the distance, *d*? [1]

_____

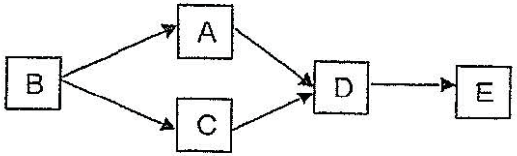
_____

END OF BOOKLET B

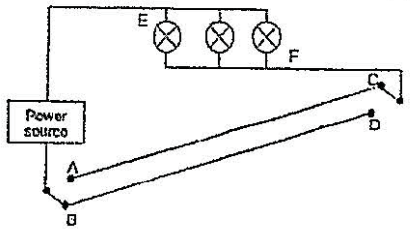
SCORE	1

Qn	Acceptable Answer	Feedback
29a	Pollinators are attracted to the flowers ***(bright and colourful)*** hence they help to pollinate the flowers ***(reproduce)***.	*Two hints in question* *1. bright and colourful flowers (asking for the function)* *2. reproduce*
b	Two acceptable answers - Animals will feed on the fruit and pass out the seeds in their droppings ***(how seeds are dispersed)*** when they move to other locations ***(wide area)***. - Animals feed on the fruit and discard the seeds ***(how seeds are dispersed)*** when they move to other locations ***(wide area)***.	*Two hints in question* *1. how seeds are dispersed* *2. wide area*
c	To reduce overcrowding ***(far away from parent plant)*** hence there is less competition for sunlight, water, nutrients and space ***(young plants grow well)*** between the adult and young plants.	*Two hints in question* *1. far away from adult plant* *2. young plants grow well*
30a	P: water-carrying tubes / xylem Q: food-carrying tubes / phloem	
b	X: water (and mineral salts) Y: sugar / food / glucose	*Starch is not accepted as it is excess food stored in different parts of the plant.*
31a		
b	Exerc ases the pulse rate.	*CONCLUSION always ANSWERS the AIM.* *These are not conclusions* *1. Exercise increases the pulse rate of Friends X, Y and Z.* *(It is incorrect to conclude that exercise increases the pulse rate of the above three people and no one else.)* *2. Exercising for 20 minutes increases the pulse rate.* *(It is incorrect to conclude that the pulse rate increases for only 20 minutes of exercise.)*

32a	photosynthesis	*Two hints in question* *1. switched on the lamp (there is light)* *2. amount of oxygen increased and amount of carbon dioxide decreased*
b	The container allowed most light to pass through it ***(clear glass container)*** so that the plant could trap maximum light to make food ***(explain purpose)***.	*Two hints in question* *1. clear glass container* *2. EXPLAIN purpose*
c	The lamp was switched off ***(Cause)*** ↓ so there was no light. ↓ The plant was not able to photosynthesise but it could respire. ↓ So the plant took in oxygen and gave off carbon dioxide. ↓ Hence the amount of oxygen decreased while amount of carbon dioxide increased. ***(Effect)***	
33a	Three acceptable answers for Structural Adaptation - Patterns on Organism P's body - Strong legs - Keen eyesight Behavioural Adaptation: Organism P will get closer to its prey before chasing it.	
b	Two acceptable answers - Organism P's prey would have escaped and Organism P would have to wait for its next [illegible] - Organism P's prey [illegible]e escaped and Organism P would have no food.	*Please take note* *1. Some pupils only answered that the prey would have escaped but did not tackle how the prey escaping was a disadvantage to Organism P.* *2. Some pupils answered that the predators would take the opportunity to attack Organism P. The question did not mention that the organism is injured or at its most vulnerable so it is not possible for Organism P to remain without making an attempt to escape.*
c	It increas[illegible] chances of catching its prey.	*(HOW) Hunting prey in a group* *(PURPOSE) ??*
d	(How) By having a thick yellow-grey coat, the young of P will be mistaken as the young of Q. (Purpose) Predators will not feed on the young of P.	

34a		
b	There would be less sunlight. **(Cause)** ↓ Organism B being a producer would make less food ↓ so the population of Organism B would decrease. ↓ Since Organism A depends on Organism B for food, ↓ population of Organism A would decrease. **(Effect)**	*For every population increase or decrease, it should always be supported with a reason.*
c	Add Organism D. **(Cause)** ↓ Since there is more Organism D feeding on Organisms A and C, ↓ the population of Organisms A and C decreases. ↓ Hence there will be less Organisms A and C to feed on the plant population. ↓ Population of plants will increase. **(Effect)**	*For every population increase or decrease, it should always be supported with a reason.*
35a	**(Choice)** Magnet **(Evidence)** I[illegible]st number of pins even though it was the near[illegible]ns.	*The reasoning has been given in the question – weakest magnet.*
b	They [illegible] at different heights / distance from the tray of pins.	
c	Acceptable answers - It would repel / attract Magnet X. - It would repel / attract Magnet Z. - It would repel / attract Magnet X and Z. - It would repel / attract other magnets.	

36a	Three acceptable answers - To find out which liquid sample is the clearest / muddiest. - To find out which liquid sample allows the most light to pass through.	
b	**(Choice)** Liquid Sample S **(Evidence)** It does not allow light to pass through.	*The reasoning has been given in the question – muddiest liquid sample.*
c	Acceptable answers - Amount / Volume of liquid sample - Size of container / Thickness of container - Light intensity of torch - Distance of base of container to paper - Distance of torch to surface of liquid sample	
37a	Two acceptable answers - Heat is lost from Benny's body to the mist / water droplets when it evaporates. - The mist / water droplets gained heat from Benny's body and evaporates.	*Do apply the concepts to other situations, e.g. stepping out from a shower or a swimming pool, fans with mist spraying from them at coffee shops, etc.* *Do apply the concepts of condensation to real-life situations, e.g. warm bananas becoming soggy and wet in a closed container, white mist appearing above ice cubes placed on a plate, white mist appearing from a person's mouth in a cold country, etc.*
b	With the fan blowing at Benny, **(Cause)** ↓ the presence of wind increased the rate of evaporation. ↓ Hence heat was lost from his body to the mist / water droplets faster. ↓ This helps to cool Benny more effectively. **(Effect)**	
38a	Two acceptable - As the me as a greater surface area, heat is lost fro metal strip faster. - As t Can X has a greater surface area, heat is conduc rom the water to the metal strip faster.	*Analysis of diagrams and table of results* *1. From the table of results, the temperature of water in Can X is lower for the same duration. This means that the water in Can X is losing heat faster.* *2. From the diagrams, the only difference is the larger metal strip wrapping Can X.*
b	**(Choice)** Fox A **(Evidence)** Its (large) ears have a larger surface area exposed to the surroundings. **(Reasoning)** Heat is lost from the body of Fox A to the surroundings faster.	*From part a, find a relationship (similar to Q34 in PSLE Specimen Paper)* *The larger the metal strip, the greater the surface area, the faster heat is lost from the water in the can to the metal strip.*

39a	Connect the bottom switch to point A.	
b	Connect the top switch to point D.	
c		
d	If one bulb fuses, the other bulbs will still light up.	
40a	As distance X increases, **(Cause)** ↓ the band is stretched more so there is more elastic potential energy in the band. ↓ This is converted to more kinetic energy in disc A, ↓ so distance Y increases. **(Effect)**	
b	(elastic) potential energy → kinetic energy → kinetic energy	
c	Some of the kinetic en[illegible]v in disc A is converted to heat and sound energy. Her[illegible]'kinetic energy of disc A is transferred to disc B, so it m[illegible]	
41a	frictio[illegible]	
b	To en[illegible]. the distance moved by the block is only due to the type of [illegible]aces and not due to the amount of force used to push the block.	
c	Surface Y is rougher hence would be more frictional force between Surface Y and the block.	*Frictional force is a contact force so do ensure that the contact surfaces are mentioned in your answer.*
d	As the mass of the block increases, the distance, *d*, decreases.	

CATHOLIC HIGH

		Paper Type:	MCQ Paper 1
Class	Level Name:	Assessment:	MidYear
Total Score:	Class Name:	Subject:	SCIENCE
Total Scan:			

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

16-May-2019 1' ?