CATHOLIC HIGH SCHOOL

SEMESTRAL ASSESSMENT (2018)

PRIMARY SIX

SCIENCE

BOOKLET A

Name: _____ ( )

Class: Primary 6 - _____

Date: 11 May 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 20 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 Which of the following organisms, A, B, C and D, can be grouped as an insect? A tick (√) indicates the presence of that characteristic.

Characteristics	Organisms			
	A	B	C	D
6 legs			√	√
feelers				√
3 body parts			√	√
more than 6 legs	√	√		
less than 2 body parts		√		

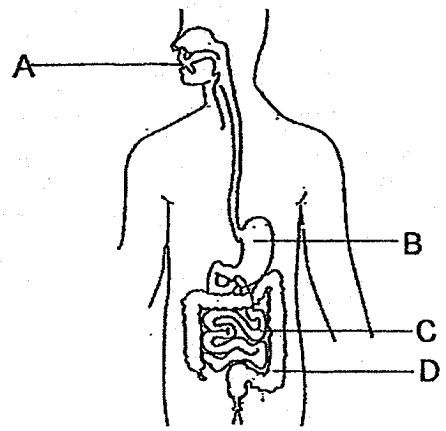
(1) A only

(2) C only

(3) B and D only

(4) C and D only

2 The diagram below shows the human digestive system.



Which of the following about the human digestive system is correct?

	Organ mainly involved in the absorption of food	Organ mainly involved in the digestion of food
(1)	A	C
(2)	B	D
(3)	C	B
(4)	D	A

3 John conducted an experiment and concluded that light is not needed for seed germination. He recorded his results in the table below.

Set-up	Conditions				Observation
	light	warmth	air	water	
A	absent	present	present	present	seeds germinated
B	present	present	present	present	seeds germinated
C	present	absent	absent	absent	seeds did not germinate
D	absent	absent	present	present	seeds did not germinate

Which one of the following set-ups will support John's conclusion?

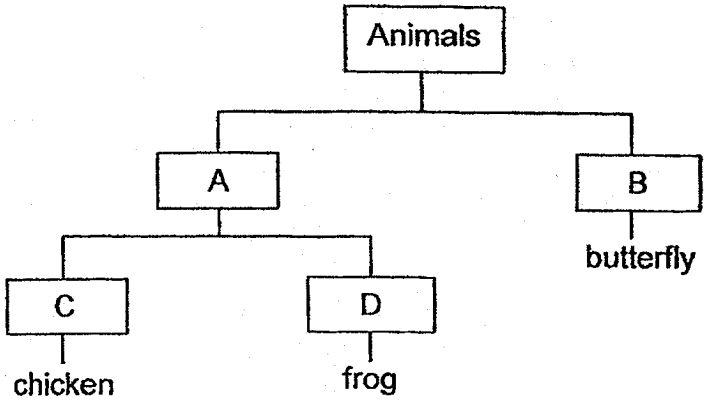
(1) A and B

(2) A and C

(3) B and D

(4) C and D

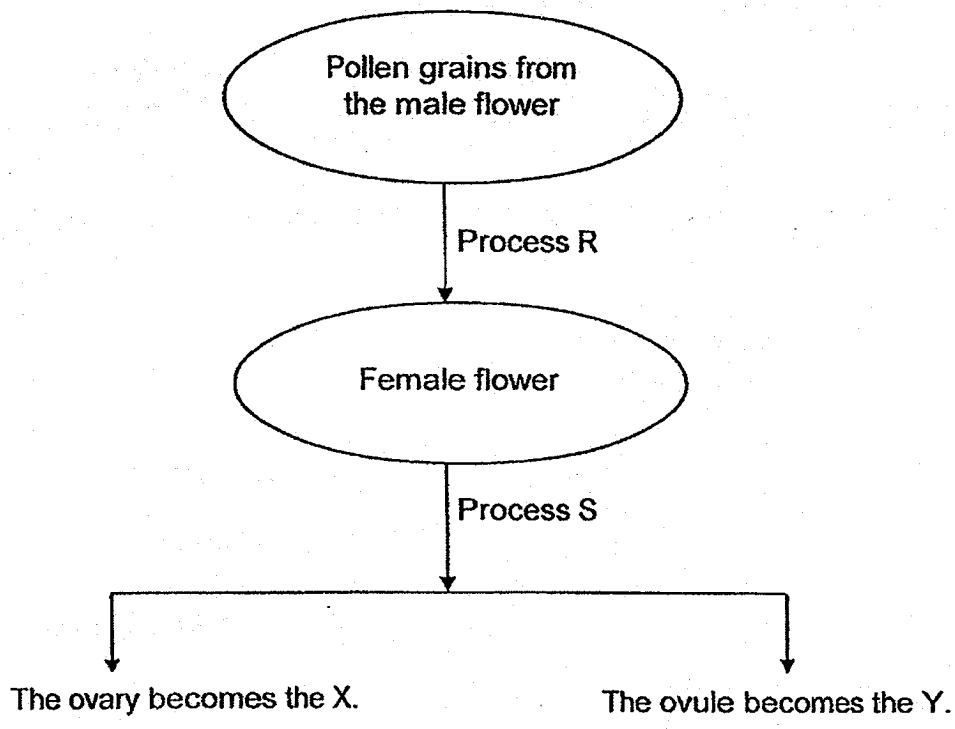
4 Lucy drew the diagram below based on the life cycle of animals.



What are the suitable headings for A, B, C and D?

	A	B	C	D
(1)	4-stage life cycle	3-stage life cycle	Young looks like the adult	Young does not look like the adult
(2)	4-stage life cycle	3-stage life cycle	Young does not look like the adult	Young looks like the adult
(3)	3-stage life cycle	4-stage life cycle	Young does not look like the adult	Young looks like the adult
(4)	3-stage life cycle	4-stage life cycle	Young looks like the adult	Young does not look like the adult

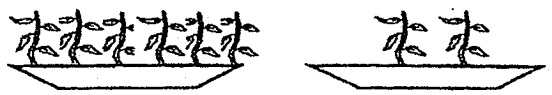
5 Study the diagram below.



Which of the following represent R, S, X and Y?

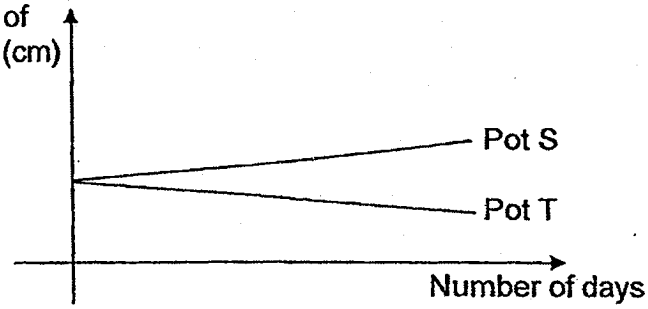
	R	S	X	Y
(1)	fertilisation	pollination	seed	fruit
(2)	pollination	fertilisation	fruit	seed
(3)	pollination	fertilisation	seed	fruit
(4)	fertilisation	pollination	fruit	seed

6 Some seedlings were planted in two identical pots, S and T, for two weeks. The pots had the same amount of soil and water. The pots were given the same amount of sunlight.

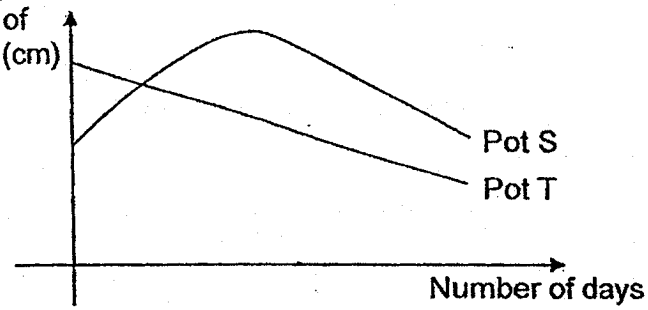


Which graph below shows the average heights of the plants in Pots S and T?

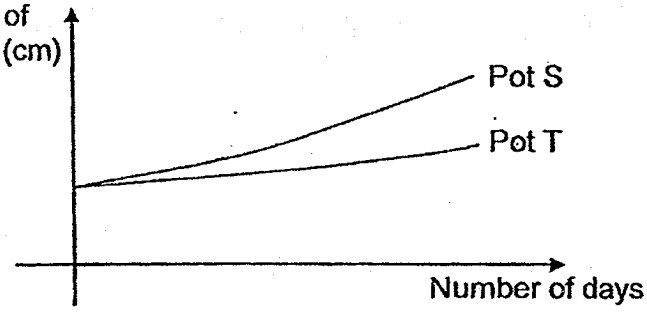
(1)



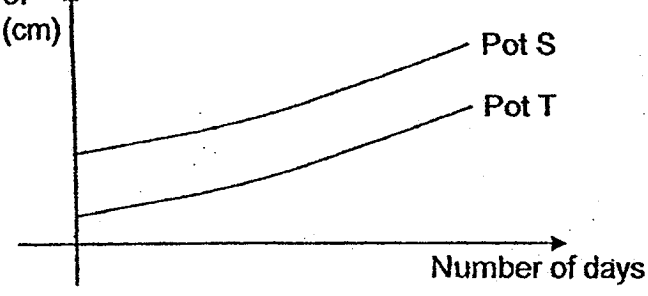
(2)



(3)



(4)



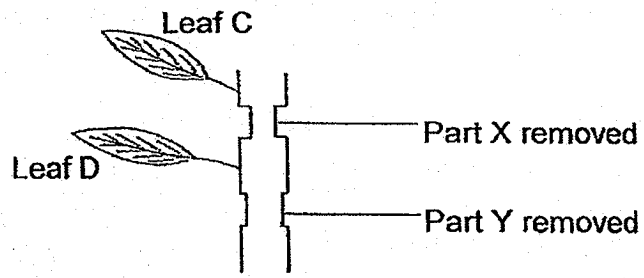
7 The table below shows the differences in sexual reproduction between humans and flowering plants.

	Humans	Plants
Male sex cell	sperm	X
Female sex cell	egg	Y
Formed after fertilisation	baby	Z

Which of the following correctly identifies X, Y and Z?

	X	Y	Z
(1)	anther	stigma	flower
(2)	sperm	ovary	fruit
(3)	filament	style	seed
(4)	pollen grain	egg	seed

8 Dan cut two rings of different thickness, Part X and Part Y, from a stem and removed them from a plant as shown below.



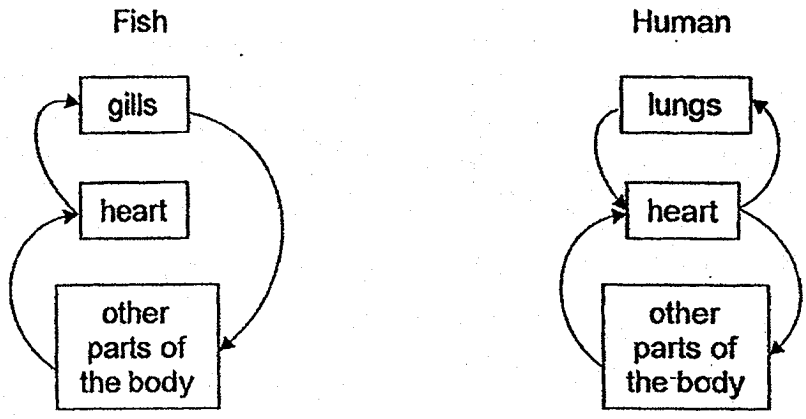
She recorded her observation of Leaves C and D after one week in the table below.

Leaf	Observations
C	Turned brown and wilted
D	Remained green and healthy

Which of the following correctly shows the parts removed?

	Part X	Part Y
(1)	Food-carrying tubes and water-carrying tubes	Food-carrying tubes only
(2)	Food-carrying tubes and water-carrying tubes	Water-carrying tubes only
(3)	Food-carrying tubes only	Food-carrying tubes and water-carrying tubes
(4)	Water-carrying tubes only	Food-carrying tubes only

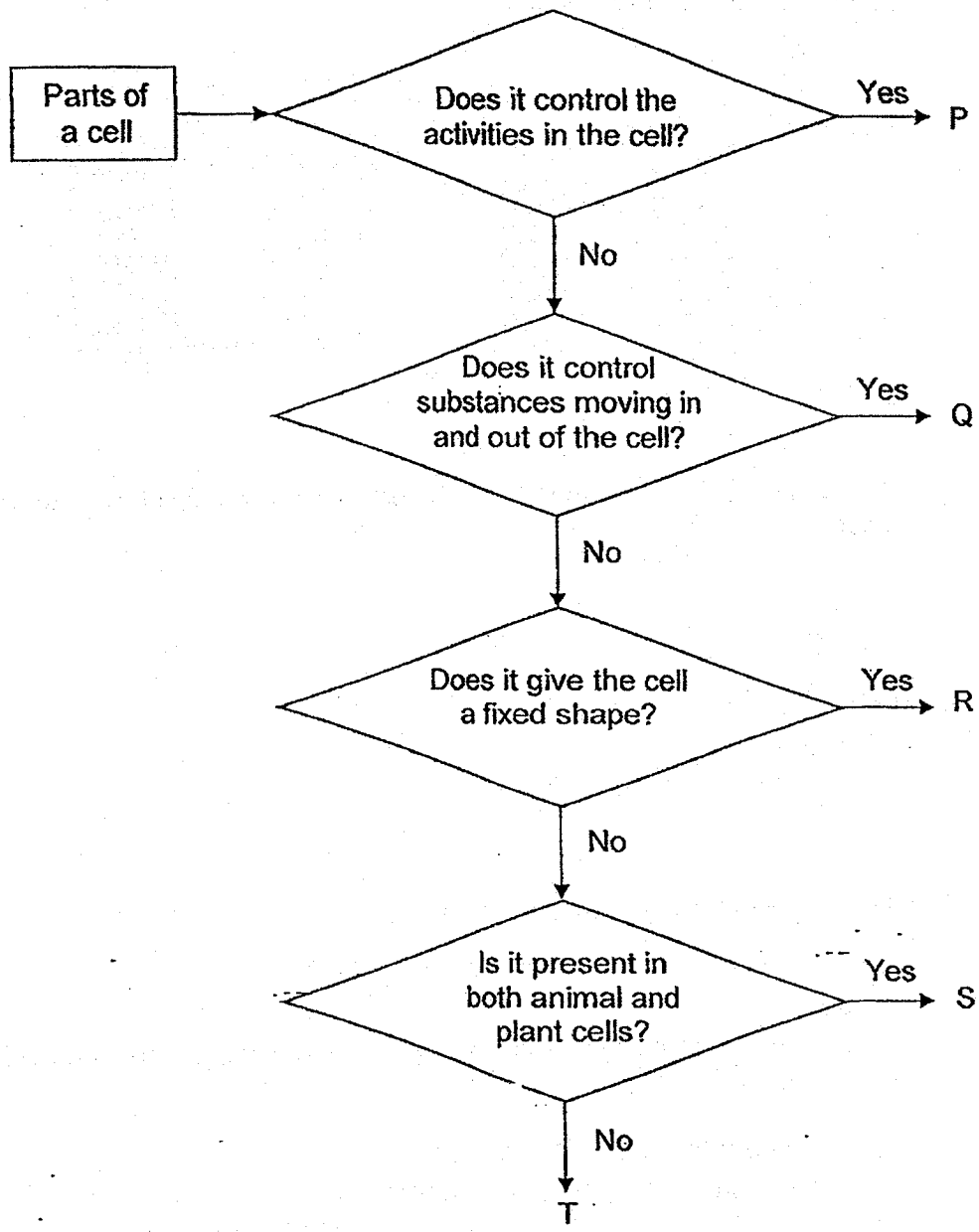
9 The diagrams of the circulatory systems of a fish and a human are shown below.



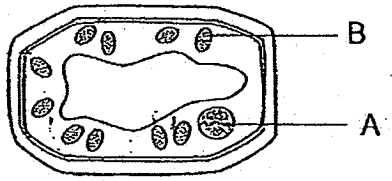
Which of the following comparisons is correct?

	Blood flow in the circulatory systems of a fish and a human	
	Similarity	Difference
(1)	Blood is transported in blood vessels.	Blood flows through the heart twice in a human and once in a fish.
(2)	The heart pumps blood to the rest of the body.	Blood is transported in blood vessels to the lungs but not to the gills.
(3)	Blood from the lungs and gills flows back to the heart.	The heart pumps blood to the lungs but not to the gills.
(4)	Blood from the rest of the body flows back to the heart.	Oxygen from the air is taken in by both lungs and gills.

10 Study the diagram below.

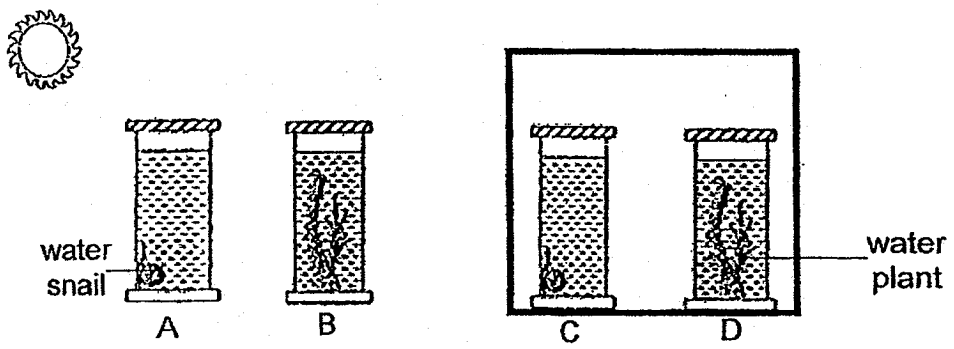


Which parts, P, Q, R, S and T, matches parts A and B of the cell below?



	A	B
(1)	R	Q
(2)	P	T
(3)	T	S
(4)	Q	P

11 Four air-tight jars, A, B, C and D, contained either water plants or water snails. Jars A and B were placed under the sun. Jars C and D were placed in a black box in a room.



At the end of the experiment, which jar would have the least amount of carbon dioxide?

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

12 The diagram below shows a food chain.

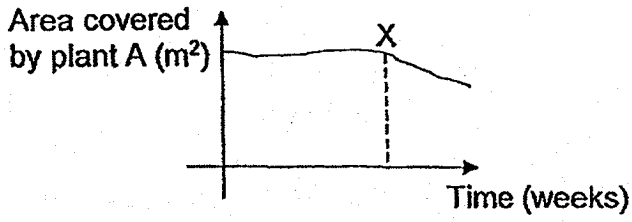
X ⟶ Y ⟶ Z

Which of the following would cause a decrease in the population of organism Y?

A Hunters kill most of organism Z.
B A disease outbreak kills all of organism X.
C The introduction of new organisms which organism Y feeds on.

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

13 The graph below shows the change in the area covered by plant A in a garden. Animal B was introduced into the garden community at point X.



Which one of the following best explains the change in the area covered by plant A?

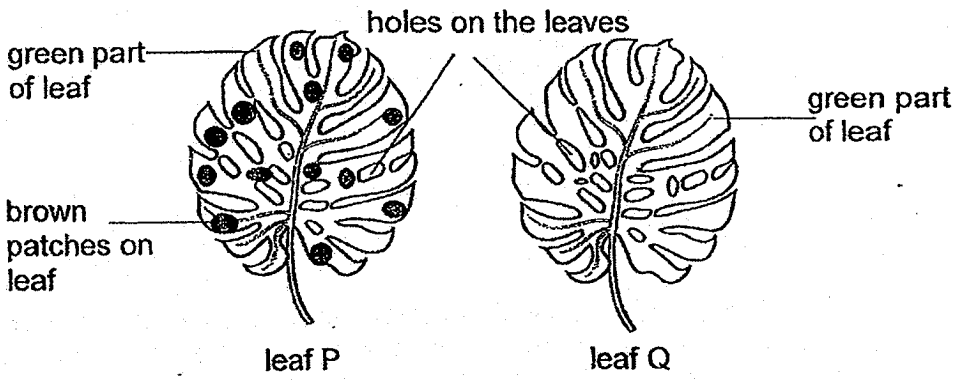
(1) Animal B feeds on plant A.

(2) Plant A provides shelter for animal B.

(3) Plant A and animal B compete with each other for food.

(4) The waste matter of animal B helps plant A to grow better.

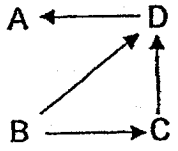
14 The difference in appearance between leaf P and leaf Q is caused by different organisms acting on the leaves as shown below.



Which one of the following shows correctly the type of organisms that caused the appearance of leaf P and leaf Q?

	leaf P	leaf Q
(1)	plant eater	plant eater
(2)	plant eater	decomposer
(3)	decomposer	decomposer
(4)	decomposer	plant eater

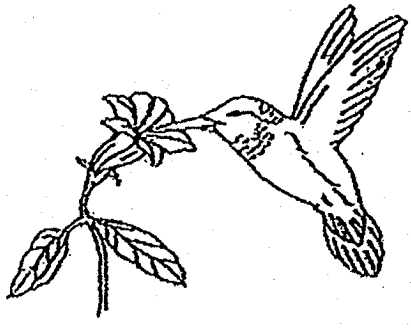
15 The diagram below shows a food web involving organisms, A, B, C and D.



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

	Producer	Prey	Predator	Prey and Predator
(1)	A	B	C	D
(2)	B	D	A	C
(3)	B	C	A	D
(4)	C	A	D	B

16 The diagram below shows bird Q and flower A.

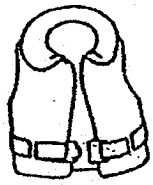


Bird Q has several adaptations to enhance its survival. It depends on flower A and some insects for food. During the cold weather, its body temperature drops. During the non-breeding months, its reproductive organs shrink.

Which one of the following about the adaptations of bird Q is most likely **not** correct?

(1) It has a long and narrow beak to reach for nectar deep in the flowers.
(2) It feeds on more than one type of food source to ensure sufficient food supply.
(3) Its reproductive organs shrink during the non-breeding months to decrease its body mass for flight.
(4) Its body temperature drops during the cold weather to reduce heat gain by its body from the surrounding.

17 The diagram below shows a life jacket which is useful to keep a person afloat when he is engaged in water activities.



The table below shows the physical properties of Materials, A, B, C and D. A tick (√) indicates the physical property of the material.

Material	Physical Property		
	Strong	Flexible	Waterproof
A	√		√
B			√
C		√	
D	√	√	√

Based on the information given in the table, which one of the following materials is best used for making the life jacket?

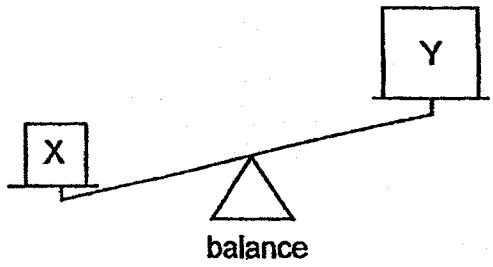
(1) A

(2) B

(3) C

(4) D

18 Carl placed two objects, X and Y, made of different materials, on a balance. He observed that the balance tilted as shown below.

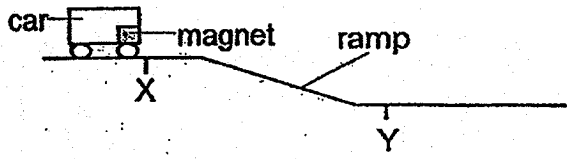


Based on his observations, which of the following statements is/are correct?

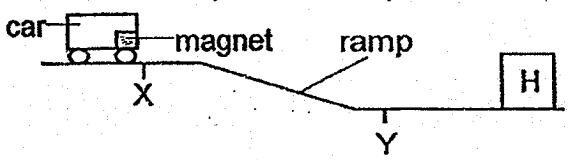
A X has a greater mass than Y.
B Y occupies more space than X.
C Both do not have a definite shape.
D X is heavier than Y because it is smaller.

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

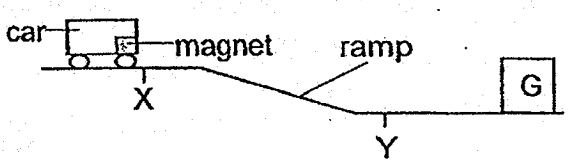
19 Meiling set up an experiment as shown below. When she pushed the car from X, the car moved down the ramp and moved a distance after point Y before coming to a stop.



She repeated the same experiment with object H placed near Y as shown below. She pushed the car from X and the car moved down the ramp and moved backward before stopping at Y. The car did not touch object H.



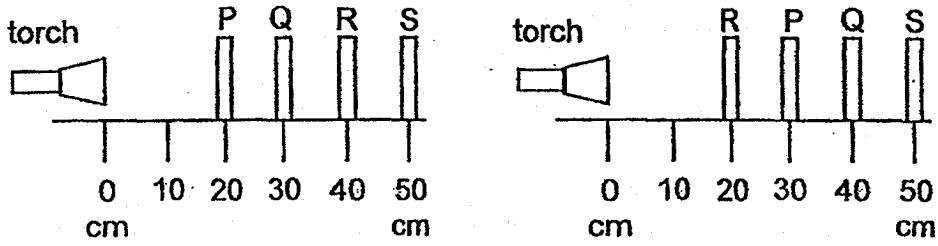
When she replaced object H with object G and pushed the car from X with the same force, the car moved towards object G, touched it and stopped at G.



What could objects G and H possibly be?

	G	H
(1)	iron block	magnet
(2)	glass block	iron block
(3)	copper block	steel block
(4)	magnet	copper block

20 An experiment was conducted to investigate if light can pass through four different materials, P, Q, R and S. Each material was of the same size. The materials were arranged in two different set-ups, X and Y, as shown below.



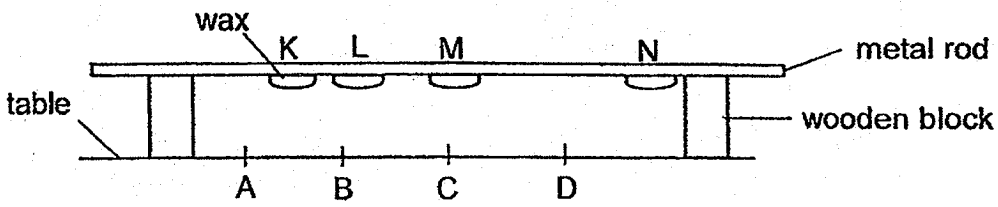
The distance travelled by light for each set-up was measured and recorded in the table below.

Set-up	Distance travelled by the light (cm)
X	30
Y	40

Which one of the following correctly describes P, Q, R and S?

	Allows light to pass through	Does not allow light to pass through	Not possible to tell
(1)	Q	P, R	S
(2)	S	Q	P, R
(3)	P, R	S	Q
(4)	P, R	Q	S

21 The diagram below shows a metal rod being supported by two wooden blocks. Four similar pieces of wax, K, L, M and N, were attached to the rod. A heat source was then placed on the table below the metal rod.



The order in which the wax pieces fell from the rod was recorded in the table below.

Wax	Time taken for the wax pieces to fall from the rod (s)
K	40
L	28
M	17
N	63

At which position, A, B, C or D, on the table was the heat source placed?

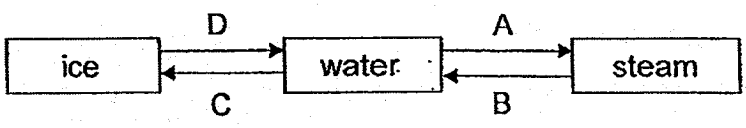
(1) A

(2) B

(3) C

(4) D

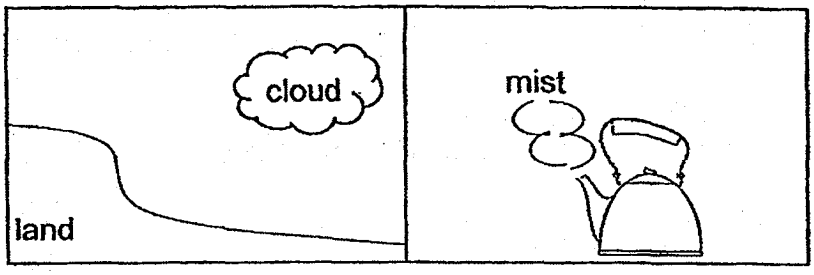
22 The diagram shows the changes of states of water.



Which processes, A, B, C or D, involve heat loss or heat gain?

	Heat loss	Heat gain
(1)	A and B	C and D
(2)	B and D	A and C
(3)	B and C	A and D
(4)	C and D	A and B

23 Study the two diagrams below.



Which two statements describe the similarity between how the clouds in the sky are formed and the mist that is formed around the spout of a kettle of boiling water?

A Both are made up of water vapour.
B Both are made up of water droplets.
C Both are formed by the evaporation of water.
D Both are formed by losing heat to the surrounding.

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

24 Xiaoming had four different set-ups, W, X, Y and Z, each with a different number of bulbs connected in series in a circuit. All the bulbs were similar and the number of batteries used were the same in the circuit.

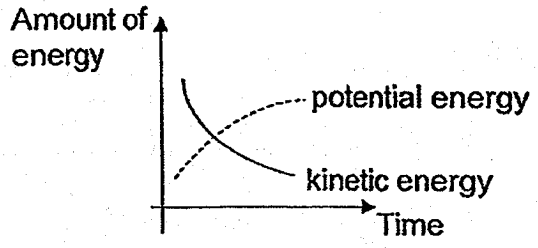
He recorded the brightness of each bulb as shown in the table below.

Set-ups	W	X	Y	Z
Brightness of each bulb (units)	3	7	2	5

Which of the following shows the arrangement of the set-up with the most number of bulbs to the set-up with the least number of bulbs?

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

25 Study the graph below.



Which one of the following actions would show the same energy conversions as the graph above?

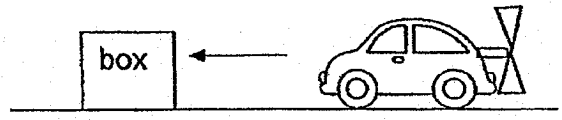
(1) Getting off a bus

(2) Running down a slope

(3) Throwing a ball upward

(4) Pushing an eraser off a table

26 A wound-up toy car which was released from the starting position moved along the ground until it hit a box in its path. The toy car stopped moving while the box moved a short distance away.



Which one of the following shows the conversion of energy that took place?

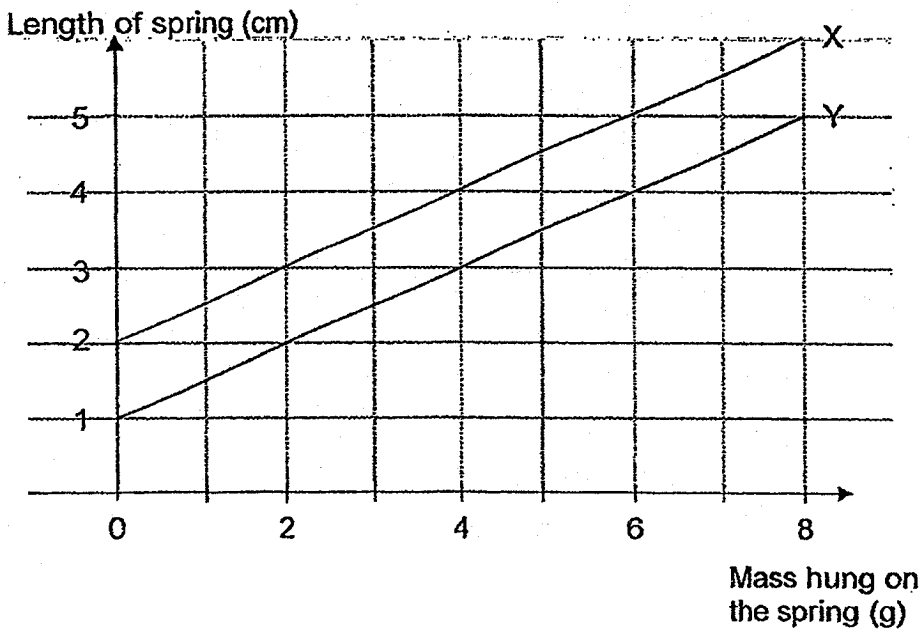
(1) elastic potential energy (car) → kinetic energy (car) → kinetic energy (box)

(2) elastic potential energy (car) → sound energy (car) → potential energy (box)

(3) chemical potential energy (car) → kinetic energy (car) → potential energy (box)

(4) chemical potential energy (car) → sound energy (car) → kinetic energy (car) → kinetic energy (box)

27 The graph below shows how the length of two springs, X and Y, are affected by the mass hung on each of them.



Which of the following statements about the graph above is/are correct?

A The original length of spring X is longer than the original length of spring Y.

B For the same amount of mass hung on the spring, spring X extends more than spring Y.

C. The greater the mass hung on the spring, the greater the extension of spring for both spring X and spring Y.

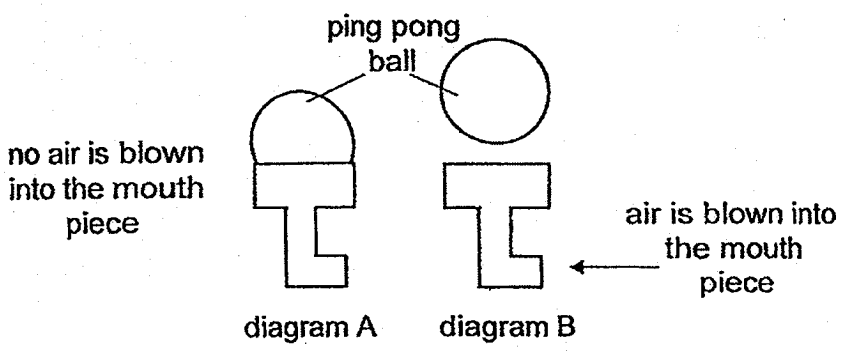
(1) A only

(2) B only

(3) A and C only

(4) B and C only

28 Lenny placed a ping pong ball on a mouth piece as shown in diagram A. He then blew into the mouth piece and observed that the ping pong ball was able to hover in mid-air for a short while as shown in diagram B.



Which of the following statements explained why the ping pong ball was able to hover in midair?

A The warm air exhaled from the mouth heated up the ping pong ball and caused it to rise.

B The force exerted by the moving air was able to overcome the weight of the ping pong ball.

C The gravitational force acting on the ping pong ball was greater than the force exerted by the moving air.

(1) A only

(2) B only

(3) B and C only

(4) A, B and C

End of Booklet A

CATHOLIC HIGH SCHOOL

SEMESTRAL ASSESSMENT (2018)

PRIMARY SIX

SCIENCE

BOOKLET B

Name: _____ ( )

Class: Primary 6 - _____

Date: 11 May 2018

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

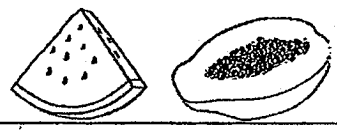
Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Write your answers in this booklet.

This booklet consists of 15 printed pages, excluding the cover page.

Booklet B (44 marks)

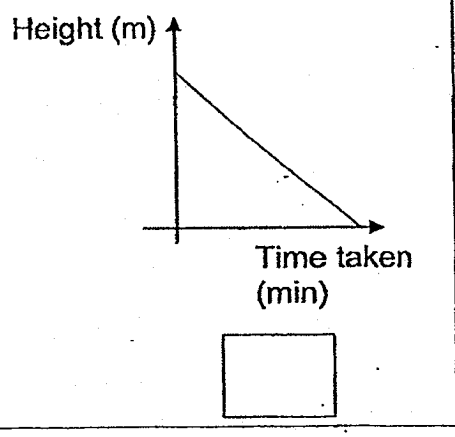
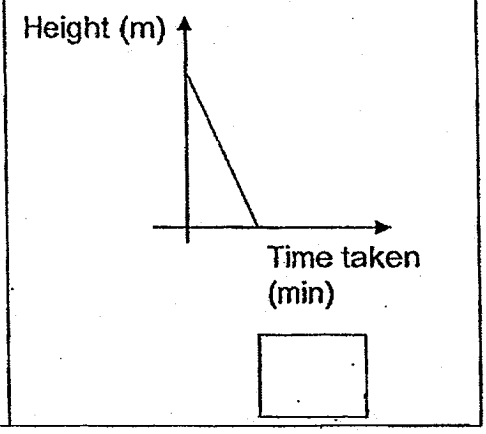
For questions 29 to 41, write your answers in this booklet.
The number of marks available is shown in brackets [ ] at the end of each question or part question. (44 marks)

29 Bala had two groups of seeds, A and B, as shown below.

Group A	Group B
	

Bala dropped both groups of seeds from a height of 10 metres from the ground. He then plotted two graphs, D and E, to show the time taken for the seeds to fall to the ground.

(a) In the boxes below, indicate the group of seeds, A or B, that each graph represents.

Graph D	Graph E
	

[1]

(b) Explain how the seeds in Group B are dispersed away from their parent plants. [1]

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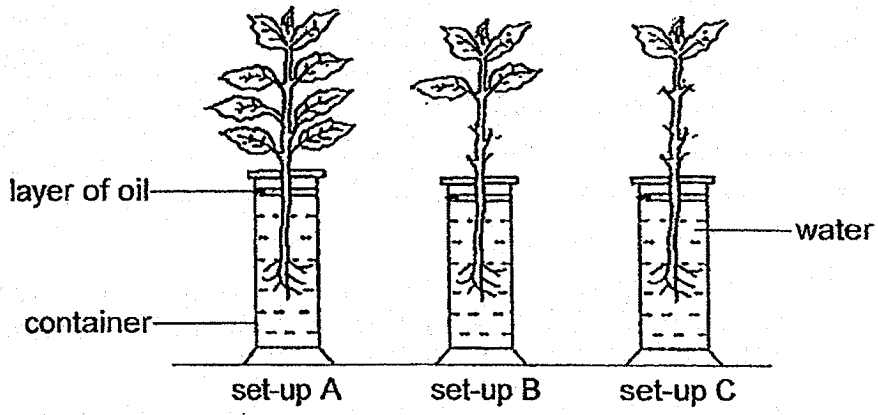
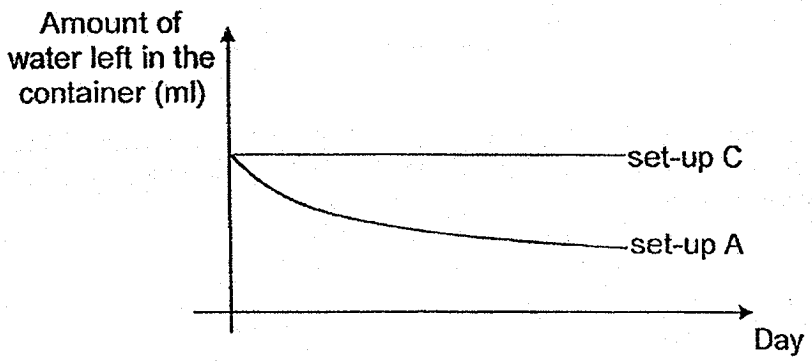
30 Ali conducted an experiment as shown below. Equal amounts of water and oil were added into each container. The set-ups were placed next to a window.



The amount of water left in all the containers were recorded daily over a period of one week. The results were plotted in the graph as shown below.



(a) Ali plotted the graph for set-up C incorrectly. Explain why. [1]

_____

_____

(b) Draw and label the graph for set-up B. [1]

(c) Give a reason how placing all the set-ups at the same place helps to make her experiment a fair test. [1]

_____

_____

(Go on to the next page)

SCORE / 3

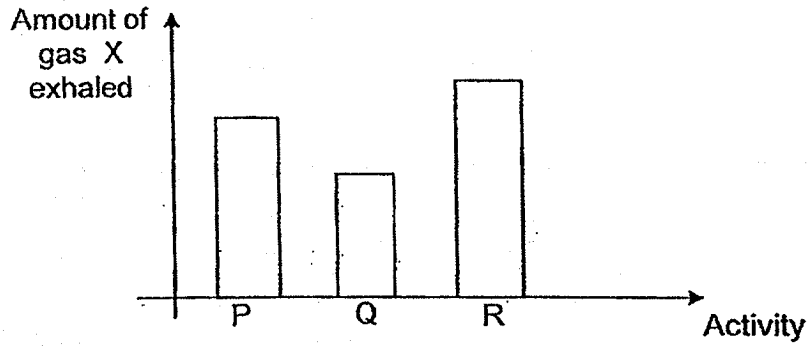
31 Ken carried out different activities and measured his breathing rate and pulse rate for each activity. He recorded his observations in the table below.

Activity	Breathing rate (breaths/min)	Pulse rate (pulses/min)
P	50	70
Q	30	50
R	90	110

(a) Ken rested at first, walked and then ran for a short distance. Complete the table of activities below by writing P, Q, or R to match the activity to the results in the table above. [1]

Activities	Letter representing the activity
rest	Q
walk	
run	

Ken measured the amount of a certain gas, X, exhaled immediately after each activity that he had done for 10 minutes and plotted a graph as shown below.



(b) Name gas X that Ken had measured above. [1]

_____

(c) Explain why Ken's breathing rate decreased when his pulse rate decreased. [1]

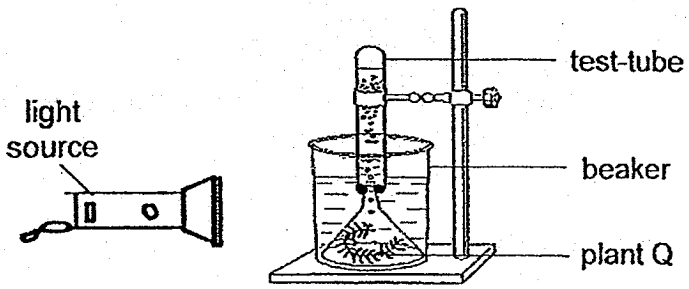
_____

_____

(Go on to the next page)

SCORE /

32 Ross wanted to find out how the temperature affects the rate of photosynthesis of plant Q. He carried out the experiments with water at different temperatures in the set-ups, A, B, C, D and E. The set-ups were exposed to a light source for 2 hours in a dark room.



Ross then measured the amount of oxygen collected in each set-up after 2 hours and recorded in the table below.

Temperature of water in each set-up (°C)	Amount of oxygen collected (cm^3)
25	7
30	10
35	15
40	13
45	5

Based on the graph, what is the effect of temperature on the rate of photosynthesis of plant Q? [1]

_____

_____

(b) The light source was brought closer to the set-up and the experiment was repeated at 30°C. Would the amount of oxygen increase, decrease or stay the same? Explain. [2]

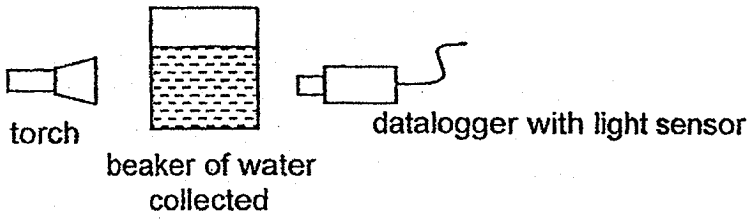
_____

_____

_____

(Go on to the next page)

33 Li Hua collected three samples of water from three different ponds, X, Y and Z. Using the set-up below, she placed each sample of water in front of the light sensor of the datalogger. She recorded the amount of light that passed through the samples of water.



Her results are shown below.

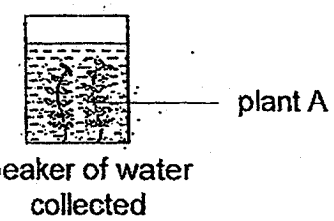
Sample of water from pond	Amount of light measured by the sensor (units)
X	1
Y	143
Z	266

(a) If a coin is dropped into the three beakers containing samples of water from pond, X, Y and Z, in which beaker will the coin be most visible? Explain. [1]

_____

_____

(b) Li Hua placed some plant A in the water from pond Z. She observed that plant A grew very well.



Give a reason for her observation. [1]

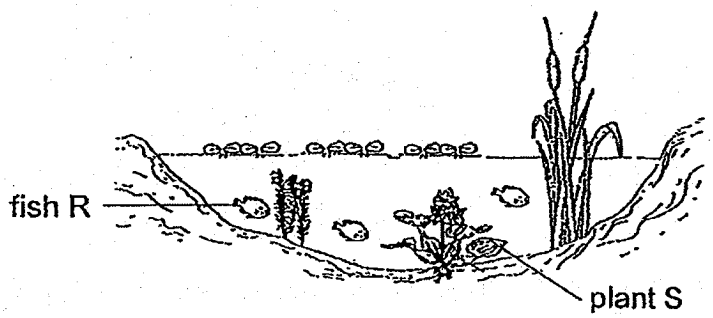
_____

_____

(Go on to the next page)

Continue from question 33

(c) The diagram below shows Pond Z with some organisms.

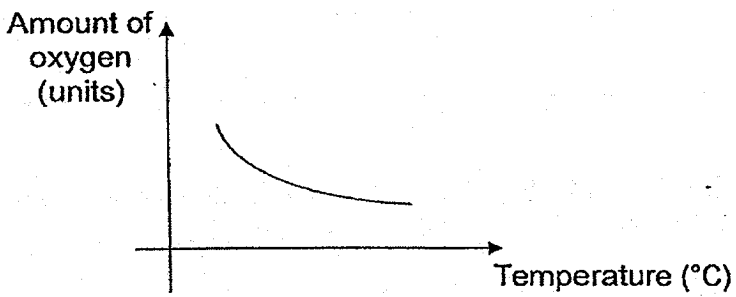


How does plant S benefit fish R?

_____

_____

(d) In another experiment, Li Hua conducted an experiment to measure the amount of oxygen present in the water of her fish tank at different temperatures. The results are shown in the graph below.



Li Hua observed some fish in the tank. She noted that the breathing rate of the fish increased when the temperature of the water in the fish tank increased. [2]

Using the results of the experiment, explain this observation.

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_____

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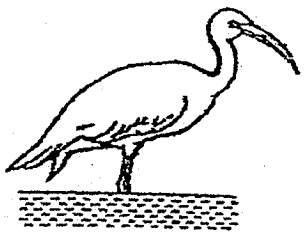
_____

(Go on to the next page)

34 The diagram below shows a water bird A with long legs standing in the water. It feeds on fish.



water bird A

(a) Based on the diagram above, explain why having long legs is an advantage of bird A. [1]

_____

_____

(b) Bird A stands very still in the water to wait for its prey before catching it.
Explain how this behavioural adaptation helps bird A to catch its prey. [1]

_____

_____

(c) Bird B is short and feeds on fish. It is also found in the same habitat as bird A in which there are tall water plants.

bird B

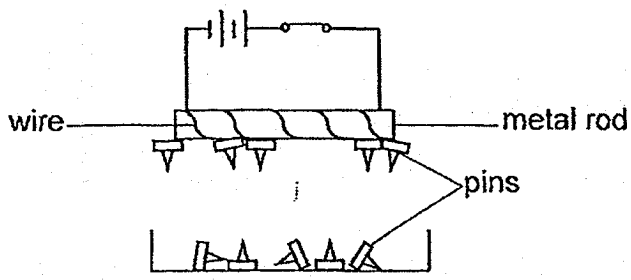
Explain why being short could be an advantage for its survival. [1]

_____

_____

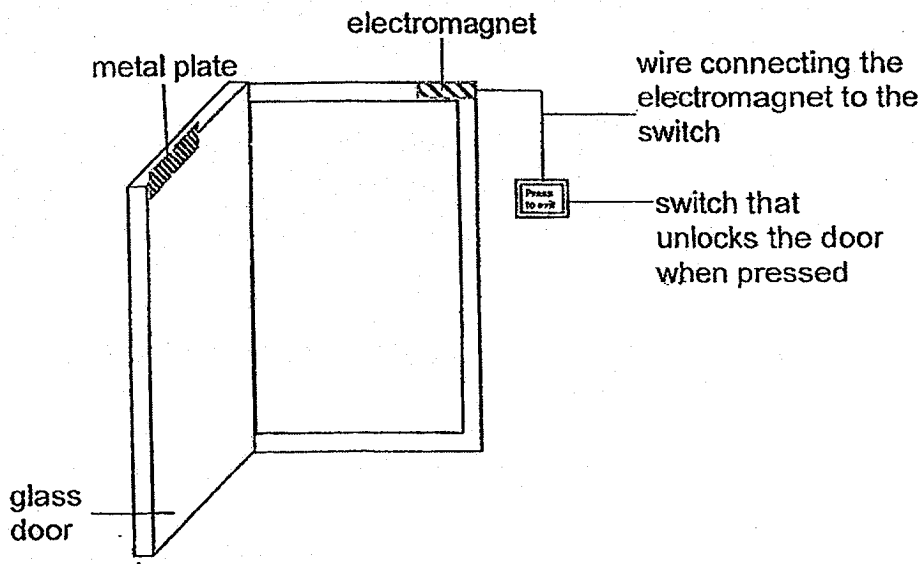
(Go on to the next page)

35 Zainal conducted an experiment by coiling some wires around a metal rod connected to a circuit as shown below. When the switch was closed, he observed that some pins were attracted to the rod as shown below.



(a) What would he observe when the switch was open? [1]

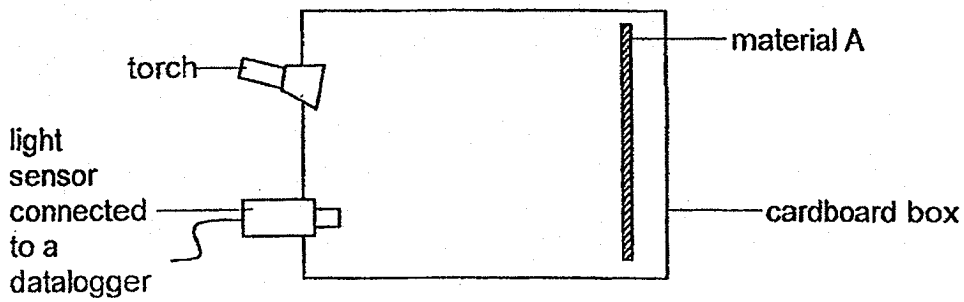
Zainal's father installed an electromagnet door-lock system as shown below. When the switch was pressed, the door unlocked.



(b) Based on the experiment conducted by Zainal earlier, explain how pressing the switch allows the door to be unlocked. [2]

(Go on to the next page)

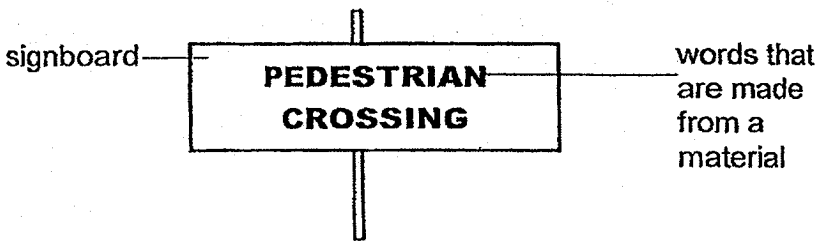
36 Amanda wanted to find out which material, A, B or C, reflects the most amount of light. She set up her experiment as shown below.



She recorded her results for materials A, B and C in the table below.

Material	Readings on datalogger (units)
A	20
B	60
C	35

Amanda wanted to use a material for the words of a signboard on a road for motorists to see well in the dark.



(a) Based on Amanda's results, which material, A, B or C, should she use? Explain. [2]

_____

_____

_____

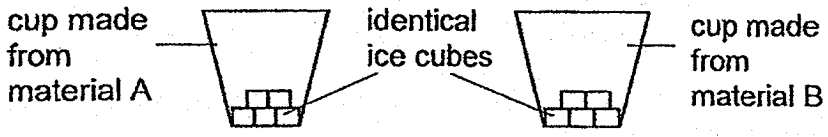
(b) Explain why Amanda should not use a clear glass box for this experiment. [1]

_____

_____

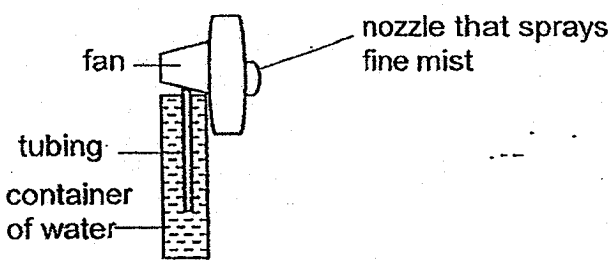
(Go on to the next page)

37 Kal used two similar cups made of different materials, A and B, to carry out the following experiment. She noted that cup B felt much colder than cup A at room temperature. She placed an equal number of identical ice cubes into each cup and recorded the time taken for the ice cubes in each cup to melt completely.



(a) In which cup, A or B, would the ice cubes melt faster? Explain. [2]

On a hot day, Kal made a fan that can spray fine mist to cool herself. Water in a container is being transported through the tubing to the nozzle to spray out water in the form of fine mist when the blades of the fan turns.



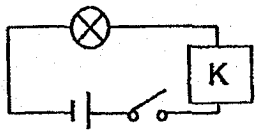
(b) When the fine mist is being sprayed into the air, the surrounding air becomes cooler. Explain why this is so. [1]

(c) Explain how turning the fan blades will help to make the surrounding air cool faster. [1]

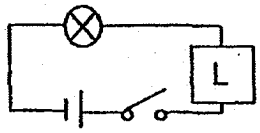
(Go on to the next page)

SCORE

38 Ahmad set up two similar circuits using identical bulbs and batteries. The objects, K and L, are of the same size but made of different materials.



Circuit X



Circuit Y

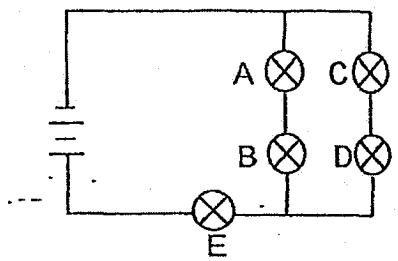
He made the following observations when the switches of both circuits were closed at the same time.

Circuit	Observation
X	Bulb lighted up
Y	Bulb did not light up

(a) Based on the observations above, state a difference in the property between objects K and L. [1]

_____

Ahmad set up another circuit shown below with identical bulbs and batteries.



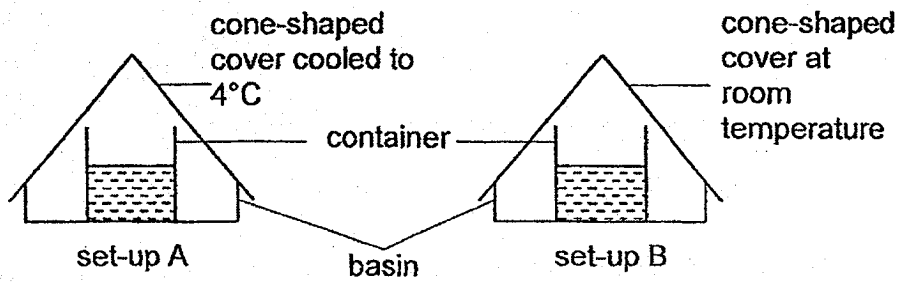
(b) Ahmad removed one of the bulbs from the above circuit and none of the bulbs lit up. Which bulb did he remove? [1]

_____

(c) Ahmad wanted all the bulbs, A, B, C, D and E, to light up the brightest. Draw the circuit diagram in the box provided. [1]

(Go on to the next page)

39 Sam had two identical set-ups, A and B, to find out the rate of condensation of water. He poured equal amounts of boiling water into both containers and put each on a basin. Then he covered the basin each with a cone-shaped cover.



Both set-ups are identical. However, the cone-shaped cover for set-up A was cooled to 4°C before the start of the experiment while the cone-shaped cover in set-up B was left at room temperature. He then observed the set-ups for 10 minutes.

(a) What must Sam measure to find out which set-up allows a faster rate of condensation? [1]

_____

_____

(b) Which set-up will allow a faster rate of condensation? Explain. [1]

_____

_____

(c) Why did Sam used a cone-shaped cover for this experiment? [1]

_____

_____

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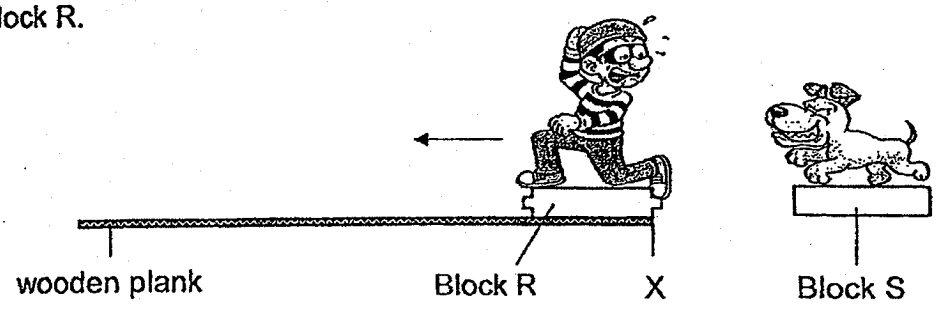
SCORE /

40 Sally attached two toys to Blocks R and S. Block R was placed at one end of a wooden plank as shown below. She then held Block S 5 cm behind Block R.



When she moved Block S to point X, Block R moved forward by 4 cm.

(a) State the main type of force that is acting on both blocks when Block S did not touch Block R [1]

_____

(b) Explain why Block R was able to move forward even though Block S did not touch Block R. [1]

_____

_____

(c) Next, Sally applied a layer of oil onto the surface of the plank and repeated the experiment.
Would the distance moved by Block R across the plank be greater, less or same as 4 cm? Why? [2]

_____

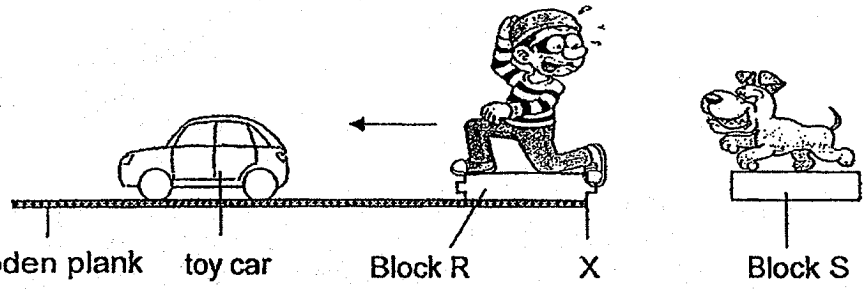
_____

_____

(Go on to the next page)

Continue from question 40

(d) Sally placed a toy car in front of Block R. When Block R moved forward, it hit the toy car. The toy car rolled forward over a short distance.



What is one effect of forces that is being described above? [1]

_____

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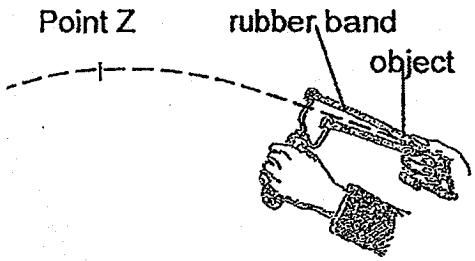
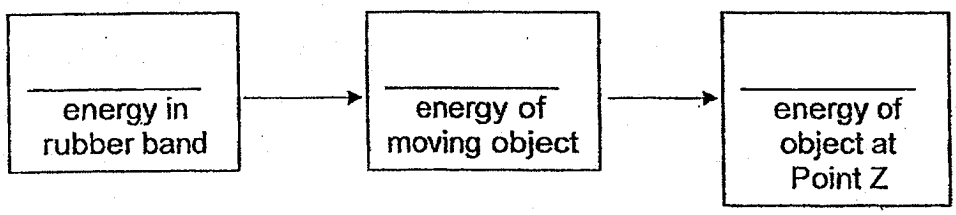
41 The diagram below shows a slingshot which was made of a Y-shaped stick and a rubber band. An object was placed in front of the rubber band and pulled.

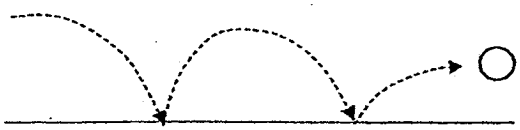


(a) When the rubber band was released, the object was observed to move upwards until it reaches Point Z before it started falling.
Fill in the blanks below to show the main form of energy conversion. [1]



(b) Without changing the items used in the experiment or adding any new ones, suggest one other way to make the object move a longer distance. Explain your suggestion. [2]

(c) When the object landed on the ground, it bounced a few times before it finally stopped. It was observed that the object's new height became less after each bounce.



Give a reason for his observation. [1]

End of Booklet B

SCORE	/ 4

SCHOOL : CATHOLIC HIGH (JUNIOR)
LEVEL : PRIMARY 6
SUBJECT : SCIENCE
TERM : 2018 SA1

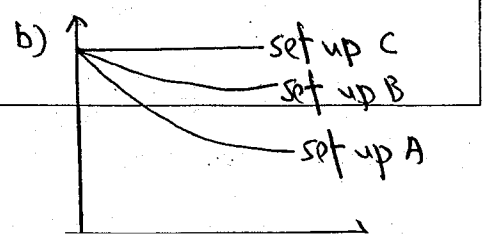
SECTION A

Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
4	3	1	4	2	3	4	1	1	2

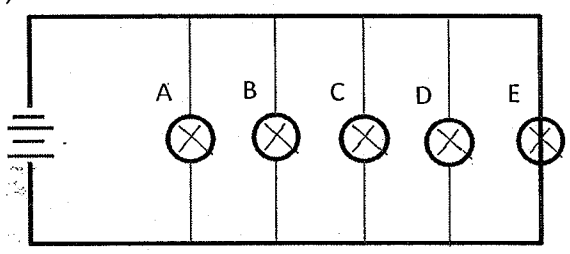
Q 11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
2	2	1	4	3	4	4	1	1	4

Q 21	Q22	Q23	Q24	Q25	Q26	Q27	Q28
3	3	4	3	3	1	3	2

SECTION B

Q29)	a) A, B b) The animals would eat the fruits together with the indigestible seeds. When it moves a distance away from the parent plant, it passes out the seeds with its waste.
Q30)	a) The plant in Set-up C has roots to take in water for photosynthesis and there are leaves to make food for the plants. c) This ensures that each set-up has only one changed variable which is the number of leaves. Each set-up will also receive the same amount of sunlight. b) 

Q31)	a) Walk → P Run → R b) Carbon dioxide c) Less energy is used to exchange less gases.
Q32)	a) As temperature increases to $35^{O}C$, the rate of photosynthesis increases but from $40^{0}C$ onwards, the rate of photosynthesis increases. b) The amount of oxygen will increase. The plant would be able to absorb more light from the light source for more photosynthesis to make more oxygen.
Q33)	a) Z. The amount of light received by the light sensor is the greatest so water from pond Z is the clearest. b) Plant A can get the most amount of light so the rate of photosynthesis is the highest. c) Plant S provides oxygen for fish R. When it carries out respiration. Plant S provides shelter for fish R so that it will not be be spotted and eaten up by its predators. Plant S also provides shade for fish R. d) As the temperature of the water increased, the amount of oxygen dissolved in the water decreased. Thus the fish breathed faster to take in more oxygen..
Q34)	a) Long legs enable bird A to go deeper waters to catch more fish. b) When bird A stands very still, it will not alert the prey and will have a higher chance to catch its prey. c) Being short would allow bird B to hide behind the plant so that the predators cannot spot it easily.
Q35)	a) The pins would fall back down. b) When the switch is pressed, the circuit is open. So electric current cannot pass through the circuit and the electromagnet loses its magnetism and cannot attract the metal plate.

Q36)	a) Material B. Material B reflects the most amount of light compared to A and C. This allows the light from the vehicle's light to be reflected on the words, and into the motorist's eyes and thus enabling him to see the words clearly. b) The clear glass box would allow light to pass through and interfere with the results.
Q37)	a) Cup B. Material B is a better conductor of heat than A. So the ice cubes would gain heat faster from the surroundings and the ice in cup B melt faster. b) The surrounding air loses heat to the mist droplets. Or the fine mist gains heat from the surroundings. c) When the fan blades turn, it increases the exposed surface area of the mist. Thus the mist gains more heat from the surroundings and making it cooler.
Q38)	a) Object K is a conductor of electricity but L is not. b) Ahmad removed bulb E c) 
Q39)	a) The amount of water collected in each basin. b) Set-up A. The inner surface of cover A is cooler so water vapor that has evaporated from the hot water will lose heat faster and form water droplets faster. c) The side of the cone are slanted so the water droplets flow into the basin.

Q40)	a) Magnetic force of repulsion b) Both blocks are magnets. The like poles of both magnets are facing each other and repelled. c) Block R would be greater than 4 cm as oil acts as a lubricants, reducing the frictional force and allowing the larger drop of oil to reduce friction between the surface of the plank and block R. d) Forces can cause a stationary object to move.
Q41)	a) Elastic potential → kinetic → gravitational potential b) The person can pull the rubber band further back. This allows more elastic potential energy to be converted into more kinetic energy, allowing the object ti fly further. c) Some of the potential energy is converted into heat and sound energy when it hit the ground.