2019 PRIMARY 6 SEMESTRAL ASSESSMENT 1

Name: _____ ( )

Class: Primary 6 ( )

Parent's Signature: _____

Date: 14 May 2019

Time: 8.00 a.m. - 9.45 a.m.

Duration: 1 hour 45 minutes

Marks: _____ / 56

SCIENCE

BOOKLET A

INSTRUCTIONS TO CANDIDATES

1. Write your name, class and register number.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Shade your answers on the Optical Answer Sheet (OAS) provided.

Booklet A (28 x 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) and shade your answer on the Optical Answer Sheet. (56 marks)

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1. Study the table below. A tick (✓) shows that the characteristic is present.

	Has legs	Makes its own food	Able to reproduce	Able to move freely from place to place
W			✓	
X	✓		✓	✓
Y	✓			
Z		✓	✓	

Which of the statements is true of W, X, Y and/ or Z?

(1) W is a plant.
(2) Z is a fungus.
(3) X and Y are animals.
(4) W, X and Z are living things.

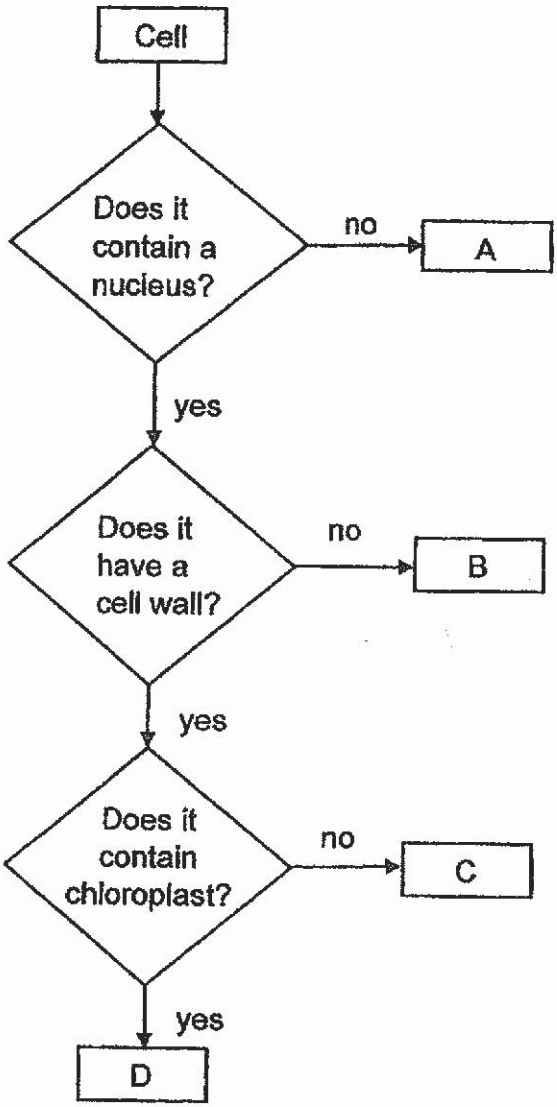
2. Wendy counted the number of organisms in a habitat. She recorded her observations in the table below.

Type of organism	Number of organisms
Butterfly	2
Fish	2
Frog	2
Caterpillar	4
Tadpole	5
Water lily	3
Hydrilla	4
Water hyacinth	2

Based on Wendy's table, which of the following statements is correct?

(1) There are 3 communities.
(2) There are 7 water plants.
(3) There are 5 populations of animals.
(4) There are 6 populations of plants and animals.

3. In a flow chart below, A, B, C and D are cells taken from a plant.

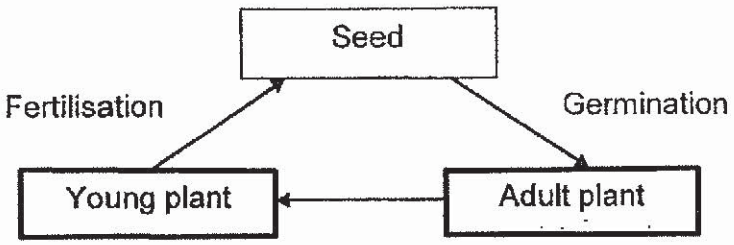


From which parts of the plant are the above cells taken from?

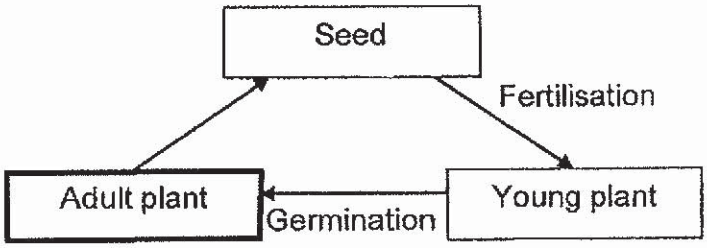
	Leaf	Root
(1)	A	B
(2)	D	A
(3)	D	C
(4)	C	B

4. Which the following diagrams shows the correct order in the life cycle of a flowering plant?

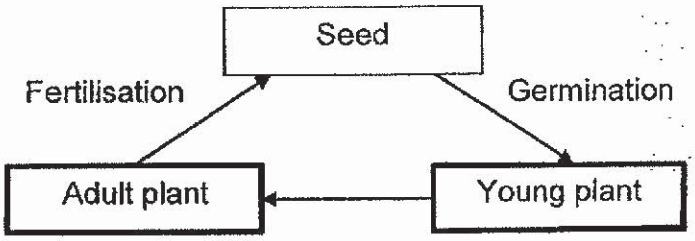
(1)



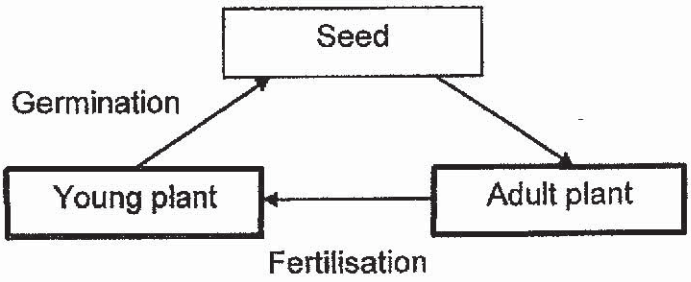
(2)



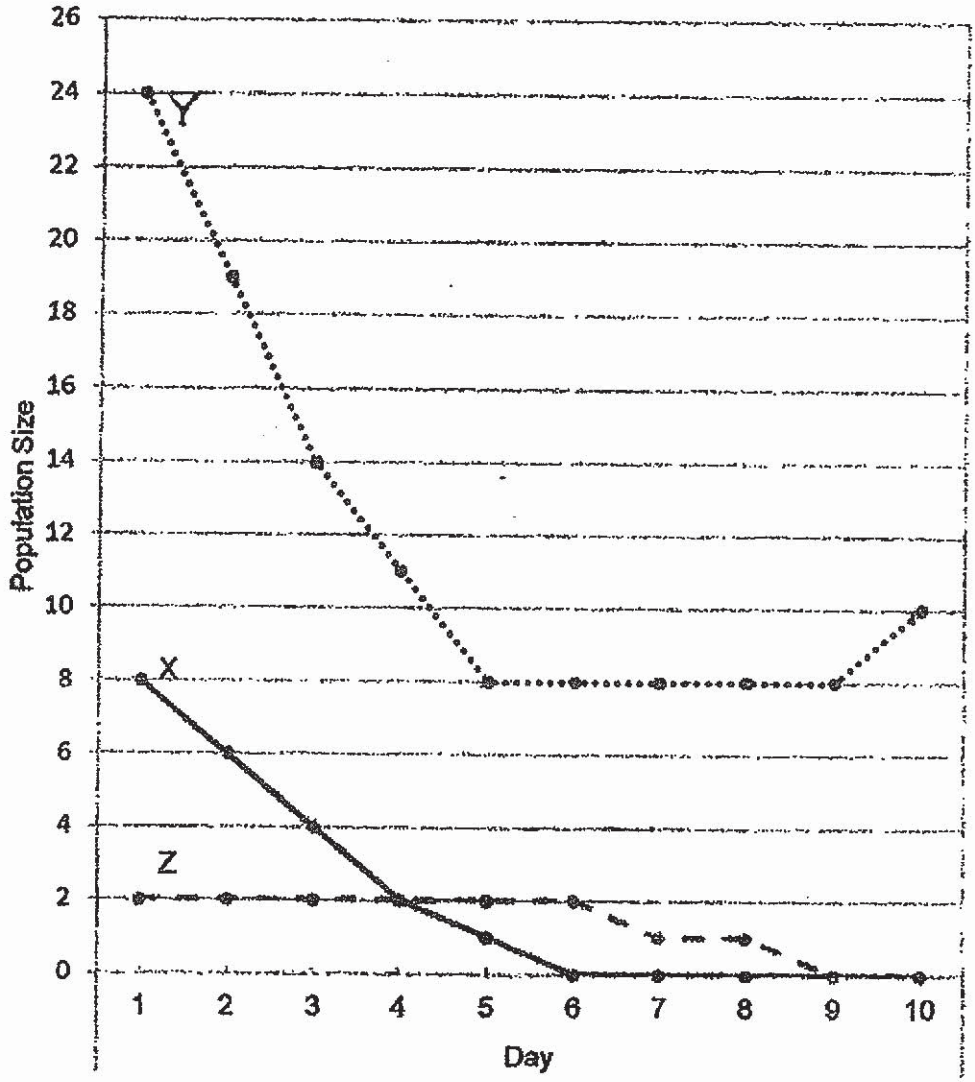
(3)



(4)



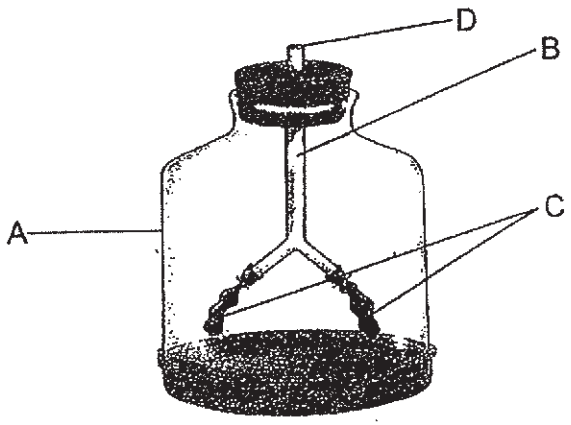
5. Darius placed three populations of aquatic organisms X, Y and Z into a tank. The living conditions were suitable for all the organisms. He did not add or take any organism out during the ten days. He recorded and plotted their numbers over ten days in a graph below.



Which of the following food chains correctly shows the relationship among the three organisms?

(1) X → Y → Z
(2) X → Z → Y
(3) Y → X → Z
(4) Z → Y → X

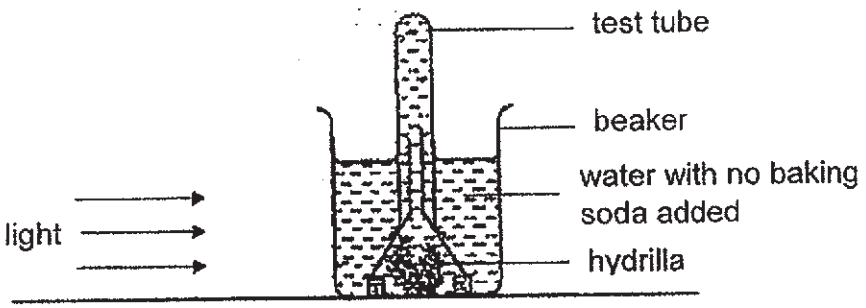
6. The diagram shows a model of the human respiratory system.



Which the following correctly represents A, B, C and D, in the human respiratory system?

	A	B	C	D
(1)	chest	nose	lungs	ribcage
(2)	ribcage	windpipe	lungs	nose
(3)	nose	windpipe	lungs	chest
(4)	chest	lungs	ribcage	nose

7. The set-up below is used to find out how the rate of photosynthesis is affected by the amount of carbon dioxide in the water.



Set-up A

Different amounts of baking soda is added to three other set-ups, B, C and D, to increase the amount of carbon dioxide dissolved in the water.

Which of the following should be measured to show how the rate of photosynthesis in each set-up is affected?

(1) the mass of baking soda added
(2) the volume of water added in each test tube
(3) the volume of oxygen trapped in each test tube
(4) the number of bubbles of carbon dioxide released by the hydrilla

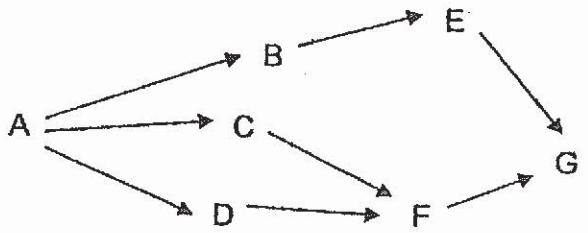
8. Study the food chain of a fish tank.

water weed ⟶ snail ⟶ fish

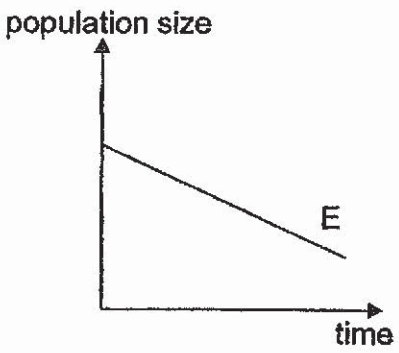
Based on the food chain above, which of the following statements is true about these living things?

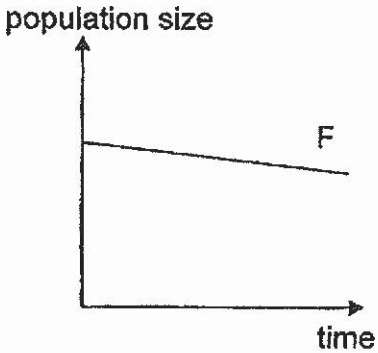
(1) The fish is a prey of the snail.
(2) The fish eats the water weeds and the snails to survive.
(3) Energy is transferred from the water weeds to the snails and then to the fish.
(4) All the living things in the fish tank depend directly on the water weeds for survival.

9. Study the food web below.



The two graphs below show the change in the populations of organisms E and F over six months.





Based on above food web, which of the following is the most likely cause for the change in the populations of organisms E and F?

(1) A decrease in both populations of B and C.
(2) An increase in both populations of B and D.
(3) A decrease in the population of G and an increase in the population of C.
(4) An increase in the population of A and a decrease in the population of G.

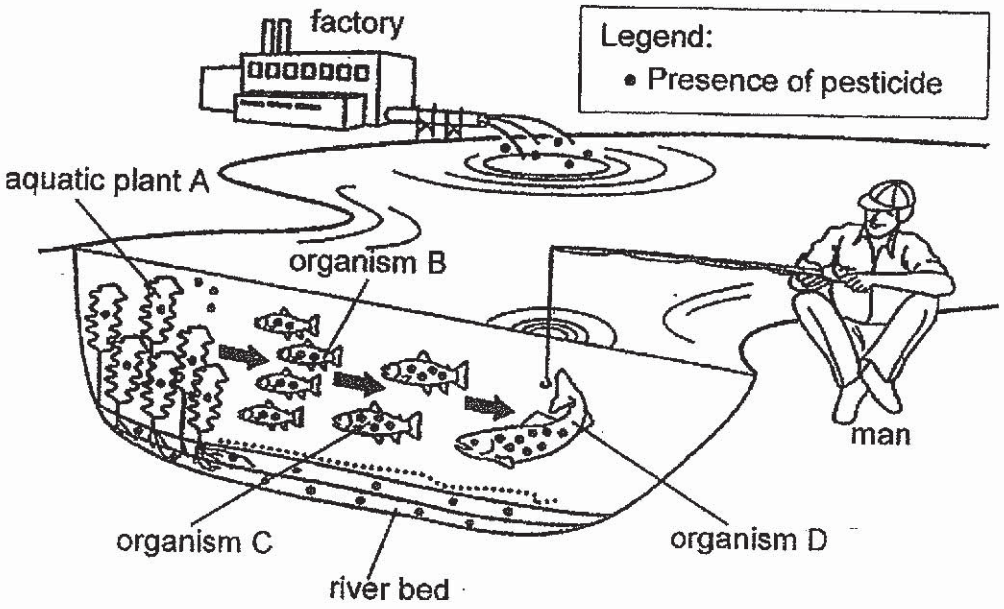
10. The information below describes the physical factors at two habitats S and T within a day.

Physical factor	Habitat	
	S	T
Amount of light	changes throughout the day	remains dim throughout the day
Temperature	changes throughout the day	fairly constant throughout the day
Air movement	changes throughout depending on presence of wind	little air movement at certain parts even when there is wind

Based only on the information above, which locations are most likely to be habitats S and T respectively?

	S	T
(1)	rotting log	leaf litter
(2)	open field	leaf litter
(3)	pond	open field
(4)	rotting log	pond

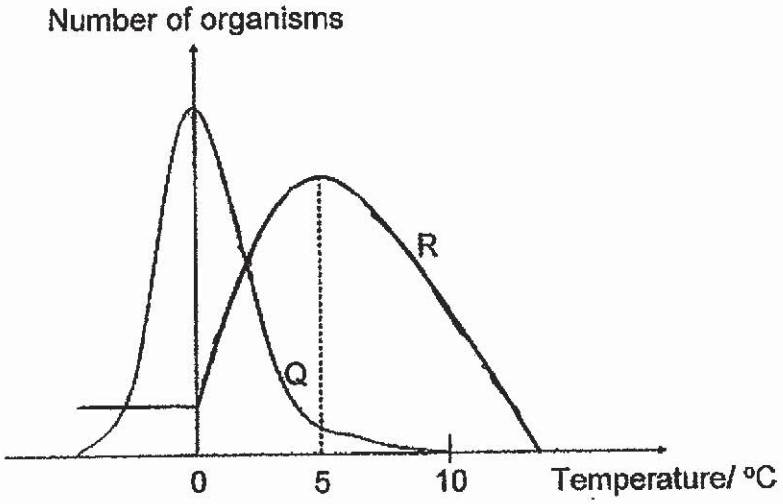
11. The diagram below shows the transfer of pesticide from one organism to the next along the food chain in the river. The pesticide cannot be removed from the bodies of the organisms.



Which of the following statements is false?

(1) Each plant absorbs some of the pesticide.
(2) Organism B gets the pesticide when it eats the plants.
(3) Organism B has the most amount of pesticide because it depends directly on the plants for food.
(4) The man will have more pesticide in his body when he eats one organism D as compared to one organism C.

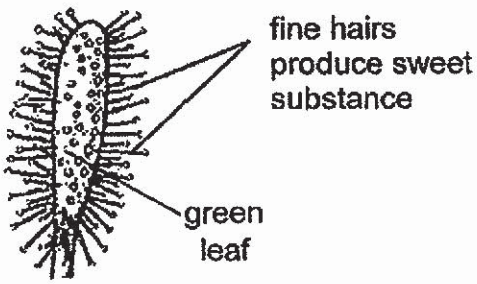
12. The graph below shows how the populations of organisms Q and R are affected by the temperature of the surroundings they live in.



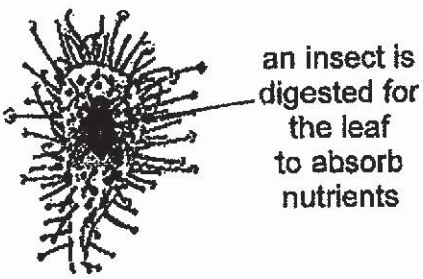
Which of the following can be concluded based on the graph above?

(1) Organism R depends on organism Q to survive.
(2) Organism R can survive well at temperatures above 0°C.
(3) Number of organism R decreases at temperatures below 0°C.
(4) Number of organism Q decreases at temperatures above 0°C.

13. Plant X has many tiny fine hairs on its green leaf surface. Insects are attracted to the sweet substance produced by the fine hairs.



leaf of plant X

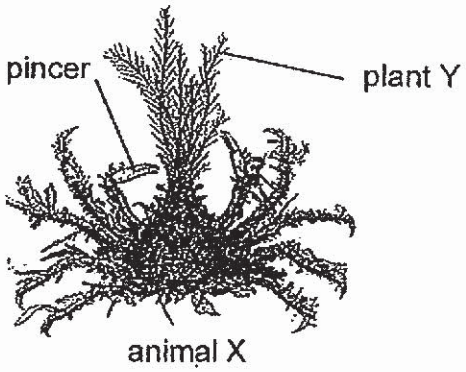


leaf of plant X capturing an insect

Based on the information and the diagrams above, which of the following statements is true about plant X?

(1) Plant X grows in soil low in nutrients.
(2) The fine hairs attract insects for pollination.
(3) The fine hairs protect the plant from predators.
(4) Plant X cannot make its own food and so it traps insects for food

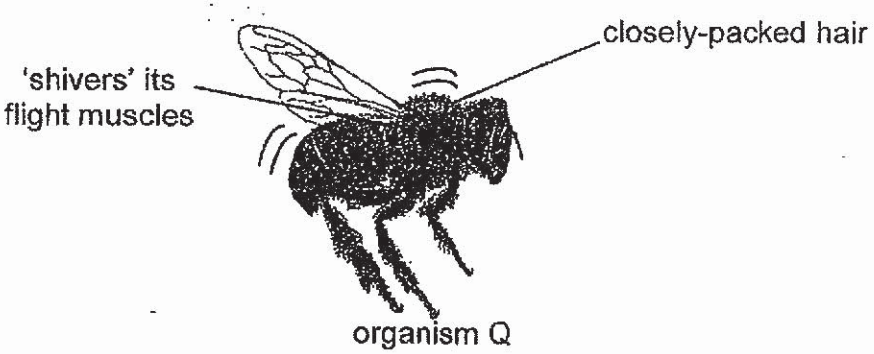
14. The diagram below shows animal X. It lives on the seabed with many plant Y. Animal X is an animal eater. It has many tiny 'hooks' on its back to carry plant Y.



Which of the following statements states how this behavioural adaptation helps the survival of animal X?

(1) Plant Y helps to keep animal X warm.
(2) Plant Y helps to make food for animal X.
(3) Plant Y helps animal X to move faster in water.
(4) Plant Y helps animal X not to be spotted by its predator easily.

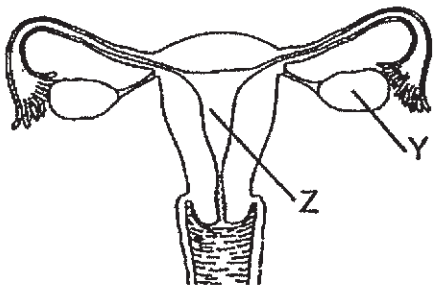
15. The diagram below shows the adaptations of organism Q. Organism Q lives in cold places. It has dense hair on its body to trap air. It also 'shivers' its flight muscles to generate heat.



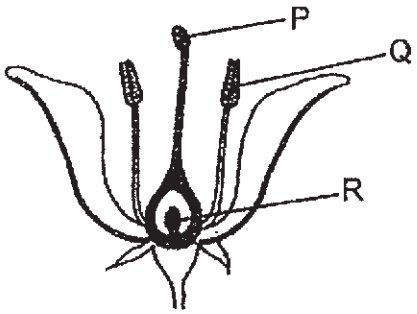
Based on the information, how do both adaptations help organism Q to survive in the cold?

(1) To look for its mate.
(2) To pollinate the flowers.
(3) To keep warm during winter.
(4) To slow down heat gain from the surrounding air to organism Q's body.

16. The diagrams below show the reproductive systems of a human and a plant.



parts of a human reproductive system

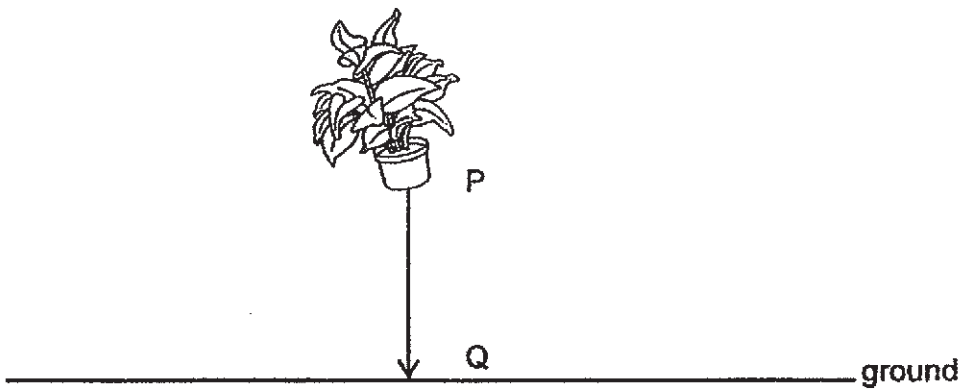


parts of a plant reproductive system

Which of the following statements is true?

(1) Part P stores reproductive cells
(2) Fertilised eggs develop at parts Z and R.
(3) Male sex cells are produced in parts Y and Q.
(4) Part Q usually releases one reproductive cell at a time.

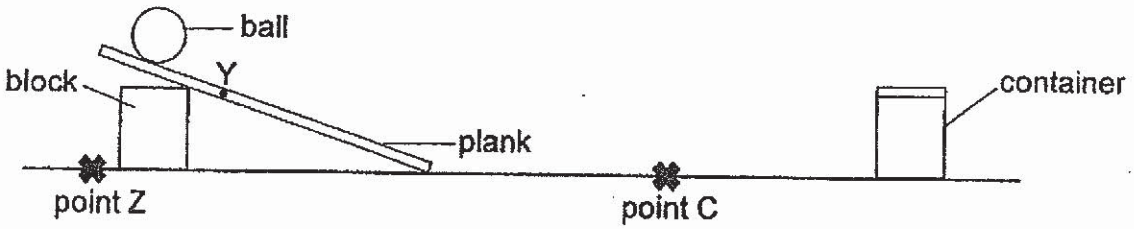
17. A potted plant fell from point P to point Q as shown in the diagram below.



Which of the following is correct?

	Potential energy of the potted plant from P to Q	Kinetic energy of the potted plant from P to Q
(1)	decreases	increases
(2)	decreases	decreases
(3)	increases	remains the same
(4)	remains the same	decreases

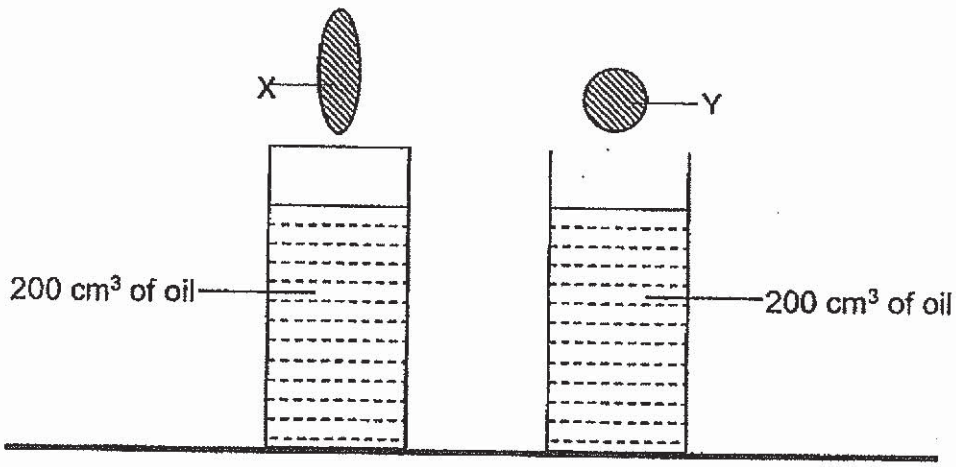
18. Sandra set up the following experiment. When she released the ball, it travelled down the ramp and stopped at point C.



Without changing any of the apparatus, which of the following would most likely allow the ball to travel further in order to hit the container?

(1) Apply oil on the ball.
(2) Move the block to point Z.
(3) Release the ball from point Y.
(4) Wrap the plank with sandpaper.

19. Melissa made objects, X and Y, with the same mass of clay. She filled two identical containers with 200 cm^3 of oil and dropped the shapes into the containers as shown.

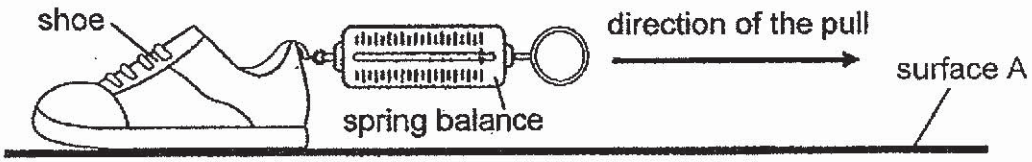


She then measured the time taken for the shapes, X and Y, to travel from the surface of the oil to the bottom of the containers. She observed that shape X took a shorter time to reach the bottom of the container.

Which of the following correctly explains her observation?

(1) There was less gravity acting on object X.
(2) There was more gravity acting on object X.
(3) There was less friction between object X and the oil.
(4) There was more friction between object X and the oil.

20. Jasmine conducted an experiment to compare the texture of four different surfaces, A, B, C and D. She placed a shoe on surface A and pulled the spring balance in the direction as indicated by the arrow shown in the diagram below.



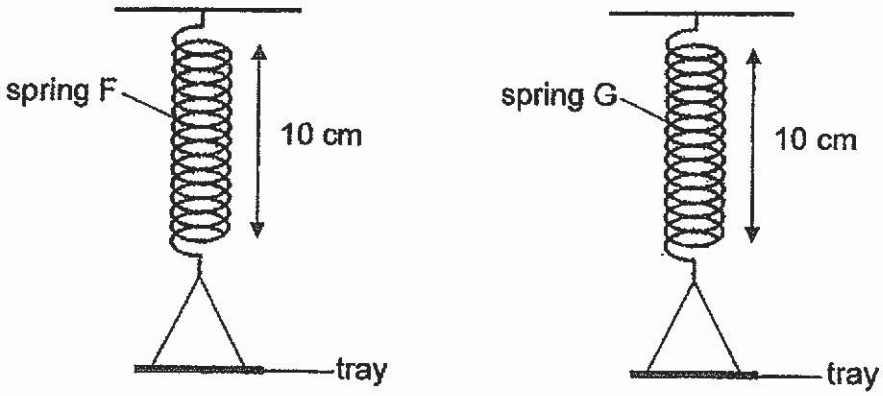
The experiment was repeated for surfaces, B, C and D. Jasmine's readings are as follows.

Type of surface	Amount of force needed to pull the shoe (units)
A	1.6
B	2.1
C	2.3
D	1.2

Based on the results above, what can she conclude?

(1) The smoothest surface is surface C.
(2) The friction between the shoe and surface D is the most.
(3) The gravitational force exerted on the shoe when it was on surface D was the least.
(4) The friction between the shoe and surface A was less than that between the shoe and surface B.

21. Karen recorded the length of two springs, F and G, as shown in the diagram below.



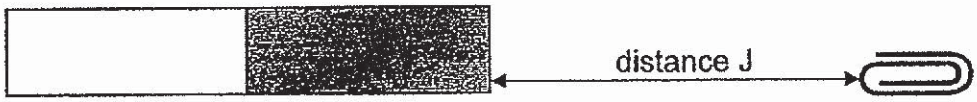
She put loads of different masses on both trays and recorded the length of the springs in the table below.

Mass of load (g)	Length of spring F (cm)	Length of spring G (cm)
0	10	10
100	15	12
200	20	14
300	25	14

Which of the following statements is definitely true?

(1) Spring G was damaged when a mass of 100 g was put on the tray.
(2) Spring G stretched to a longer length with a 300 g mass than Spring F.
(3) Spring F stretched longer than spring G with the same mass put on the tray.
(4) Spring F and G would extend to the same length when a 200 g mass put on the tray.

22. Danielle placed magnet R and a paper clip 15 cm away from each other.



Danielle moved the paper clip slowly towards magnet R. She recorded distance J, the greatest distance the magnet could attract the paper clip. She repeated the experiment with three other magnets, S, T, and U, as shown below.

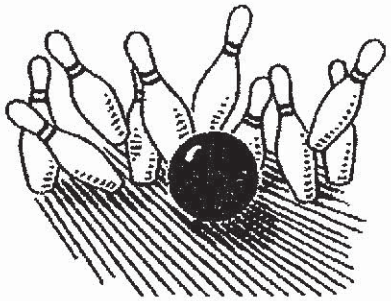
The table below shows the results of her experiment.

Magnet	R	S	T	U
Distance J (cm)	2	7	5	8

Based on the results, which of the following statements is true?

(1) Magnet U is the weakest.
(2) Magnet S is stronger than magnet R.
(3) The bigger the magnet, the stronger the magnetic force.
(4) Only magnet T can attract paper clips that are placed 5 cm away.

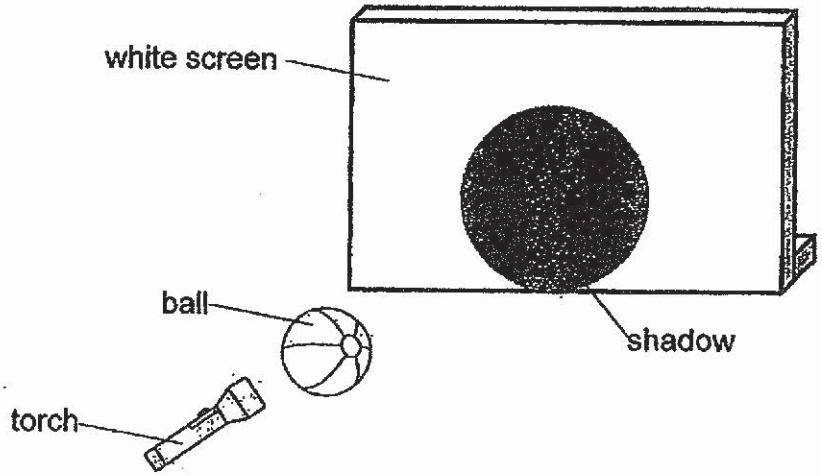
23. The diagram below shows bowling pins falling after being hit by a bowling ball.



Which of the following best shows the energy conversions when the bowling ball is rolling and hits the bowling pins?

(1) Kinetic energy → Heat energy → Kinetic energy
(2) Kinetic energy → Kinetic energy + Sound energy +Heat energy
(3) Potential energy →Kinetic energy + Sound energy + Heat energy
(4) Potential energy → Kinetic energy → Sound energy + Heat energy

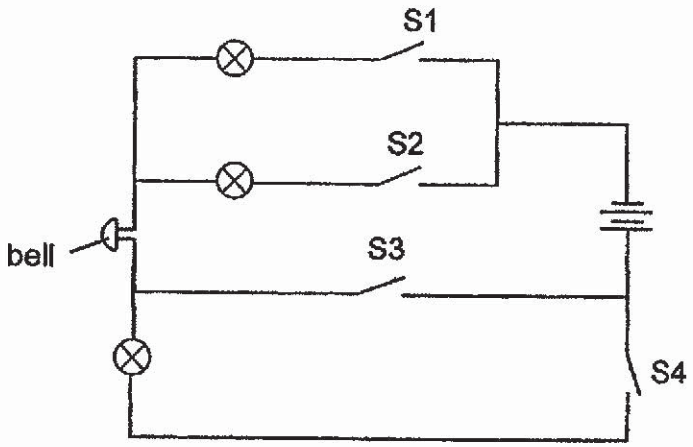
24. When Oliver placed a ball between the torch and a white screen, a shadow of the ball was cast on the white screen as shown below.



Which of the following changes should Oliver make to the set-up so that he could observe a bigger shadow of the ball?

(1) Move the torch nearer to the ball.
(2) Move the ball nearer to the screen.
(3) Move the white screen nearer to the ball.
(4) Move the ball further away from the torch.

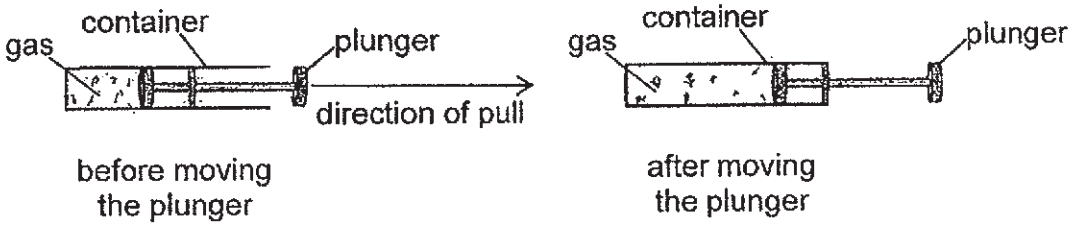
25. Study the electrical circuit below.



Which of the following actions to the switches, S1, S2, S3 and S4, will result in the bell ringing and only one bulb being lit up?

	S1	S2	S3	S4
(1)	closed	closed	closed	opened
(2)	opened	closed	opened	closed
(3)	opened	closed	closed	opened
(4)	closed	opened	opened	closed

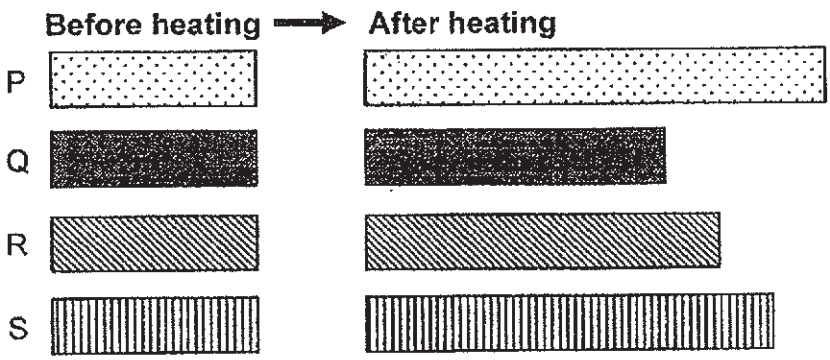
26. David trapped some gas in a container. He pulled the plunger towards the open end of the container as shown below.



How was the volume and mass of the gas in the container affected by the movement of the plunger?

	Volume of gas	Mass of gas
(1)	decrease	decrease
(2)	increase	increase
(3)	decrease	remains the same
(4)	increase	remains the same

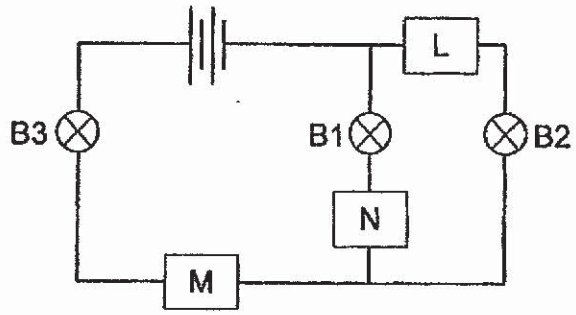
27. Carla had four different metal strips, P, Q, R and S, of the same length. She heated each strip with the same amount heat for the same period of time.



Based on the information above, which of the following shows the correct arrangement of metals, P, Q, R and S, from the lowest to the greatest rate of expansion?

	Lowest rate of expansion →			Greatest rate of expansion
(1)	P	R	Q	S
(2)	Q	R	S	P
(3)	S	Q	R	P
(4)	P	S	R	Q

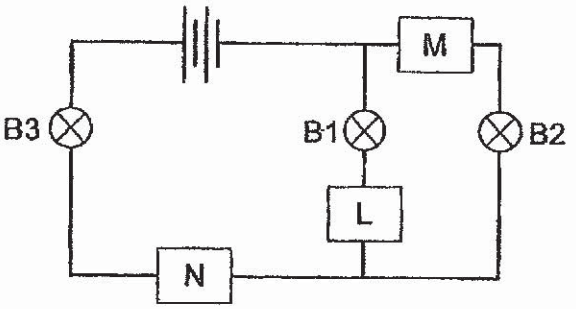
28. Hariz had 3 bars, L, M and N, each made of different materials. He placed them at positions as shown in the circuit below.



His results are shown in the table below.

Bulb	Did the bulb light up?
B1	Yes
B2	No
B3	Yes

He then repeated the experiment by placing the bars at different positions in the electrical circuit as shown below.



Which of the following correctly shows the bulbs that will light up?

	B1	B2	B3
(1)	no	yes	yes
(2)	yes	yes	no
(3)	yes	no	yes
(4)	no	no	no

End of Booklet A

2019 PRIMARY 6 SEMESTRAL ASSESSMENT 1

Name : _____ ( )

Class : Primary 6 ( )

Parent's Signature : _____

Date: 14 May 2019

Time: 8.00 a.m. – 9.45 a.m.

Duration: 1 hour 45 minutes

SCIENCE

BOOKLET B

INSTRUCTIONS TO CANDIDATES

1. Write your name, class and register number.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Write your answers in the booklet.

Booklet A	56
Booklet B	44
Total	100

Booklet B (44 marks)

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

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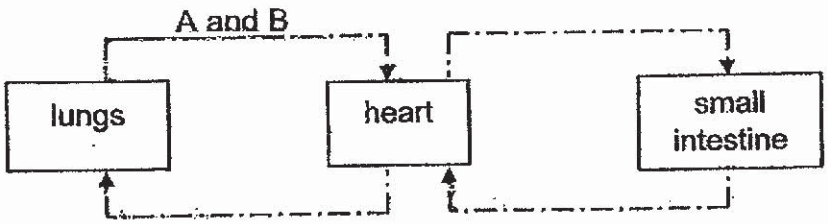
29. The diagram below shows how substances A and B are transported in the plant transport system.

a) What do substances A and B represent? [1]

A: _____

B: _____

The human circulatory system also transports A and B as shown below.



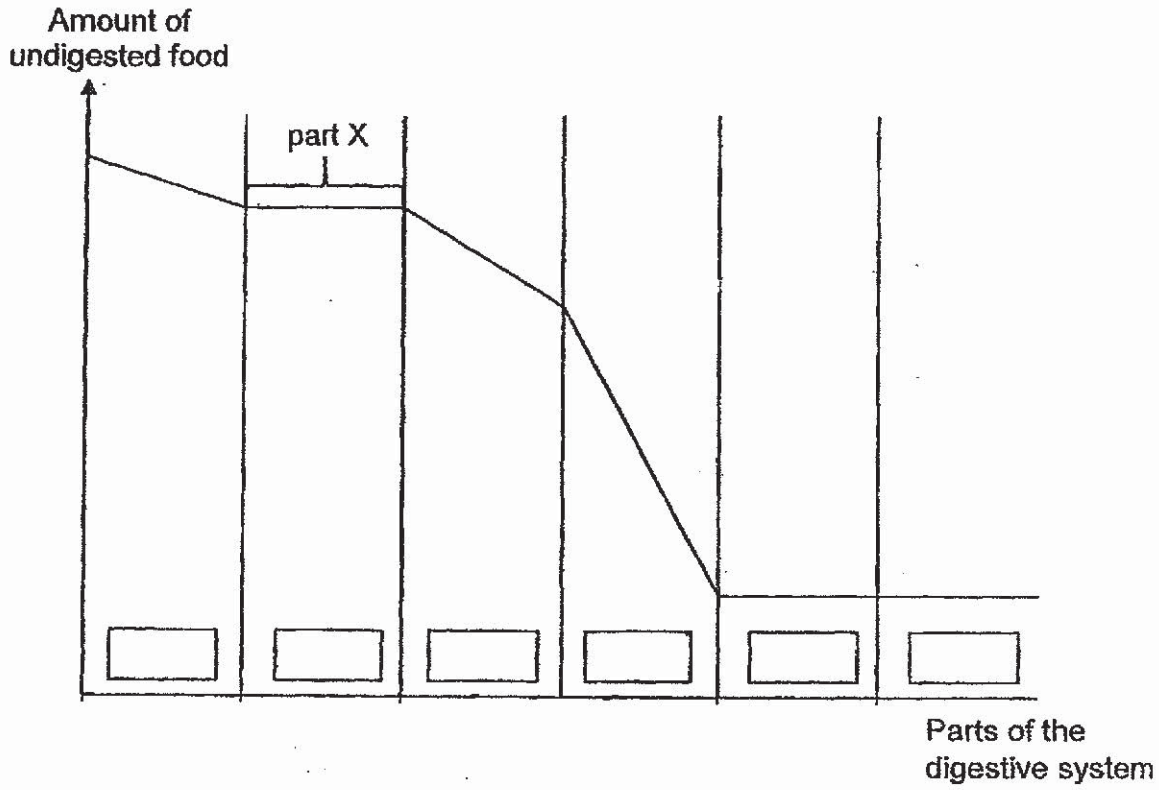
b) Based on the diagrams above, state one difference on how substances A and B are transported in plant and in human. [1]

_____

_____

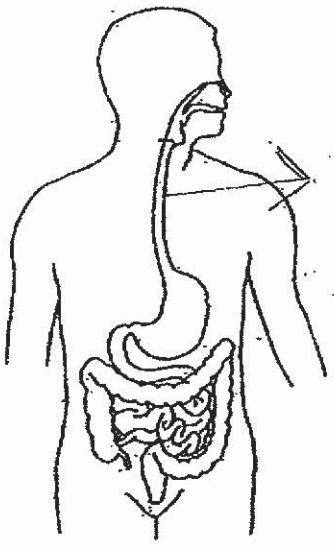
Score / 2

The diagram below shows how the amount of undigested food changes as it passes through the human digestive system, beginning from the mouth.



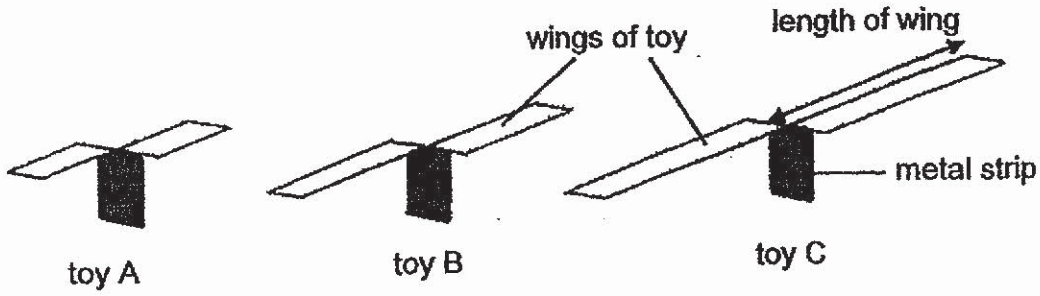
c) (i) Put a tick in the box(es) in the graph above to indicate where digestion takes place. [1]

(ii) Identify part X by <u>labelling</u> and <u>naming</u> it in the diagram below. [1]



Score	/ 2

30. An experiment was conducted to find out how the length of the wings of a toy affects the length of time the toy could remain in the air. Toys A, B and C were made using the same type of paper, as shown in the diagram below. A metal strip was attached to each toy.



The toys were released, one at a time, from a height of 5m and the time taken for each toy to reach the ground was recorded in the table below.

	Time taken for toy to reach the ground (s)			
Toy	1st reading	2nd reading	3rd reading	Average reading
A	3.5	3.3	3.4	3.4
B	4.5	4.7	4.3	4.5
C	5.4	5.8	5.9	5.7

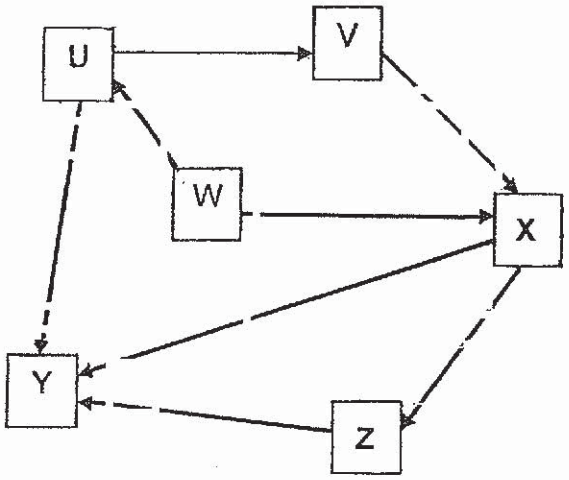
a) State another variable that needs to be kept constant to ensure a fair test. [1]

b) Based on the results, how does the length of wings affect the time taken for the toy to reach the ground? [1]

c) Some fruits in nature have large wing-like structures. Using your answer in (b), explain how this benefits the reproduction of plants. [1]

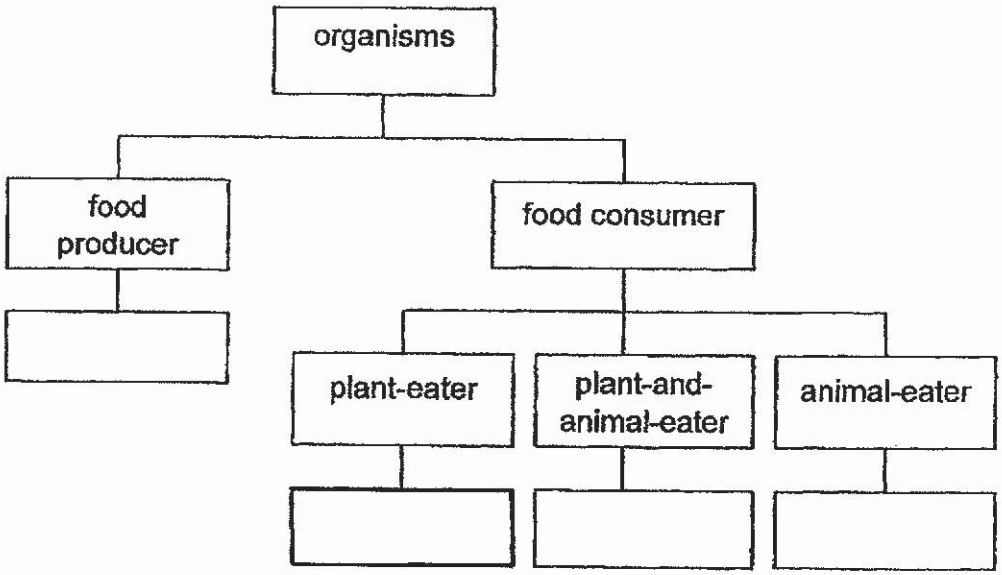
Score	
	3

31. Study the food web below.



a) How many food chains are there in the food web above? [1]

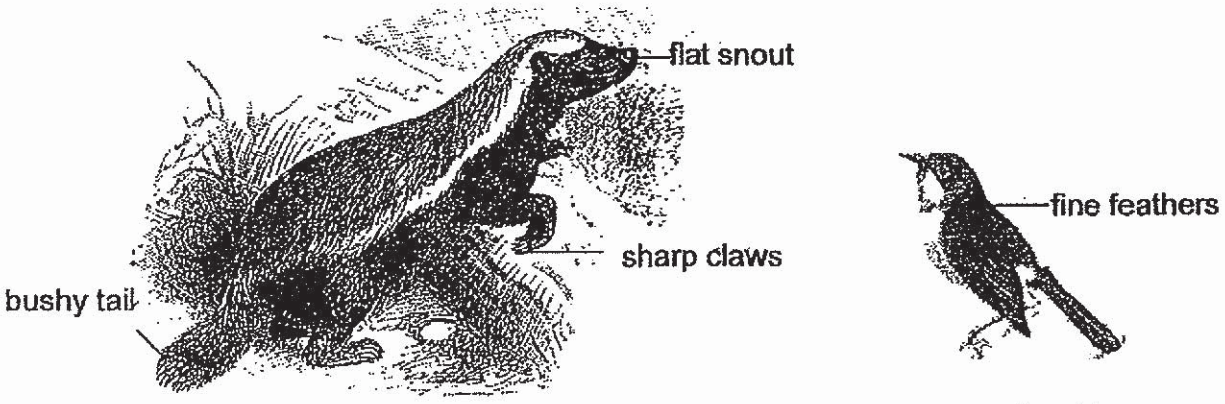
b) Classify all the organisms in the food web by writing the correct letter, U, V, W, X, Y and Z, in the boxes of the chart below. You may write more than one letter for each box. [2]



c) If a disease has wiped out organisms U, X and Z in the community, what can organism Y do to survive? [1]

Score / 4

32. Organism H and organism R live in the same habitat. Both organisms look for food in beehives found close to the ground. The organisms are not shown to scale.



organism R

organism H

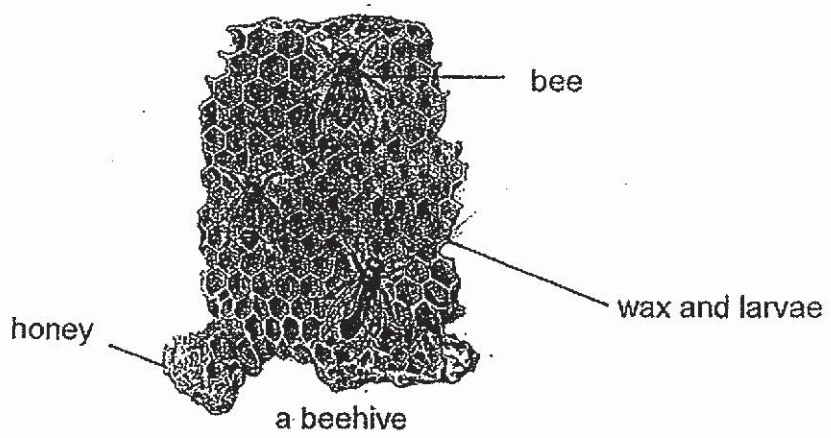
a) Based on the pictures above, identify a structural adaptation in organism R that helps it to break open beehives. [1]

_____

_____

Score / 1

Organism R feeds on the honey and organism H feeds on the wax and the larvae found in the beehive.



Organism R cannot find beehives easily while organism H is not able to break open the beehives to feed on the wax and larvae. Organism H has a keen sense of smell.

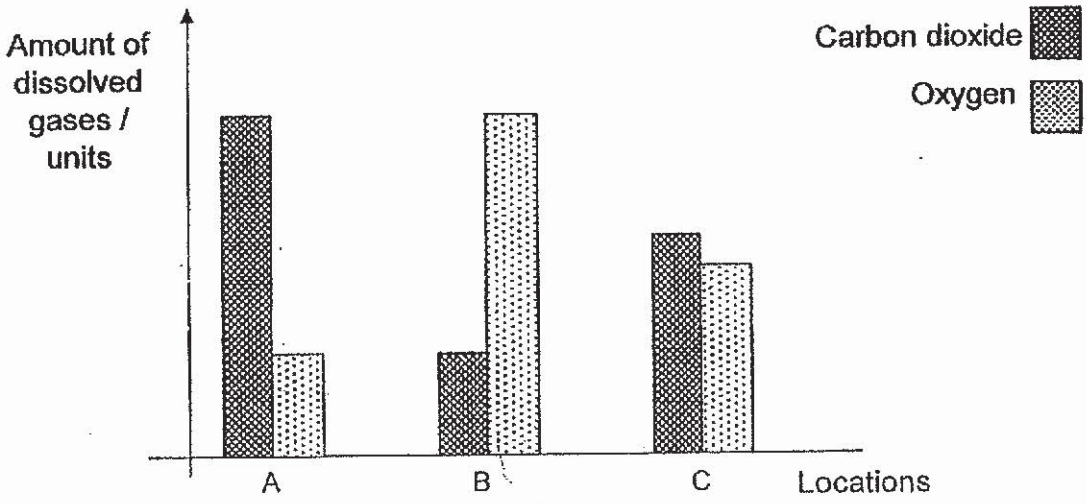
b) Suggest how organism R and organism H can work together to obtain their favourite food. [2]

c) Give a reason why this relationship reduces the population size of the bee over time. [1]

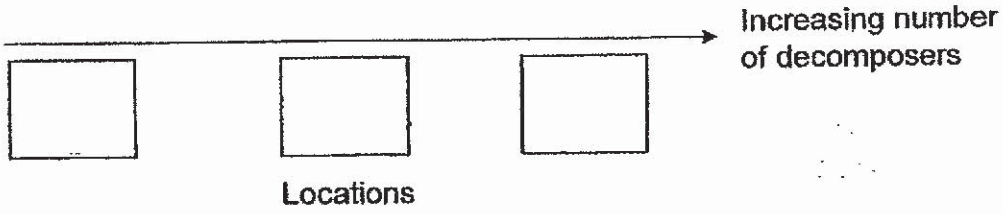
d) The above type of bees feeds on flowers of plant K. Explain how the population size of the bees would affect the population of plant K. [1]

Score	/4

33. Melissa wanted to find out which part of a river has the most decomposers. She collected equal volumes of water samples from different locations, A, B and C, along a river. She measured the amount of dissolved oxygen and carbon dioxide in each water sample and showed the results in the following graph.



a) Arrange the water samples from locations, A, B and C, in increasing number of decomposers in the boxes below. [1]

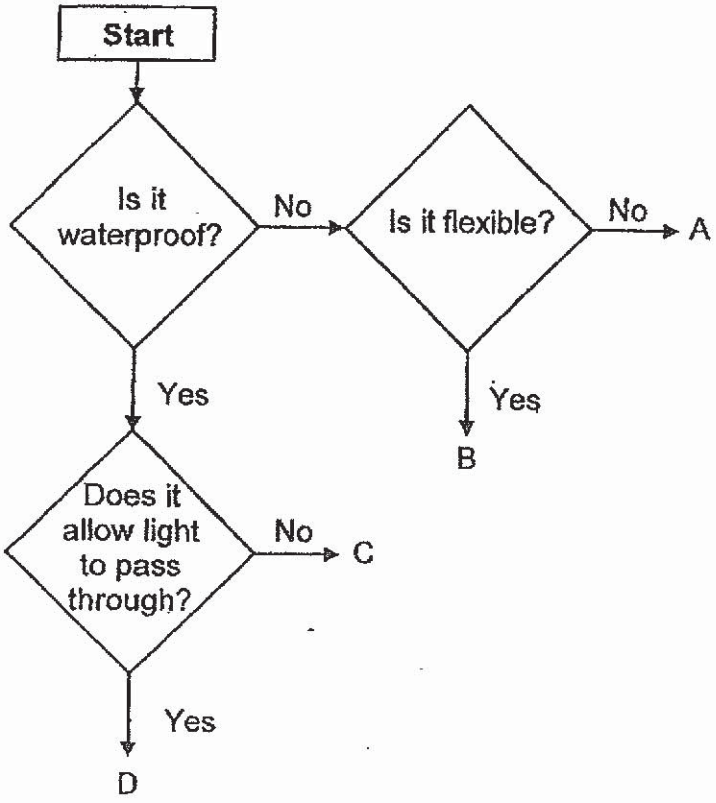


b) What kind of environmental condition would speed up the rate of decomposition of dead matter in the river? [1]

c) Melissa wanted to introduce a large number of floating water plants into the river to increase the amount of dissolved oxygen in the water. Explain why this suggestion may not work. [1]

Score 3

34. The flowchart below shows how different materials can be classified.

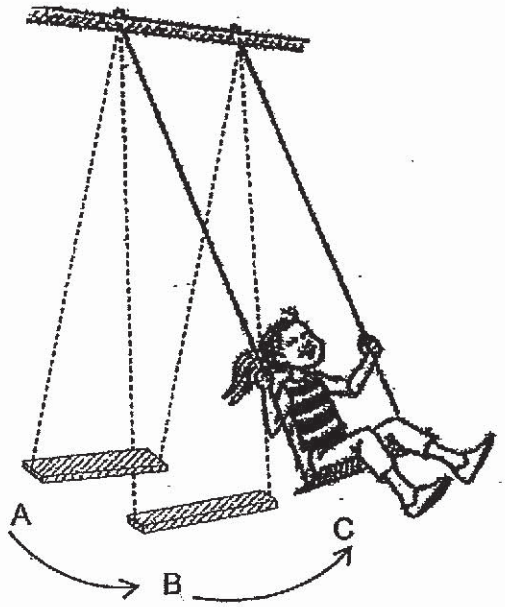


a) State two properties of material A. [1]

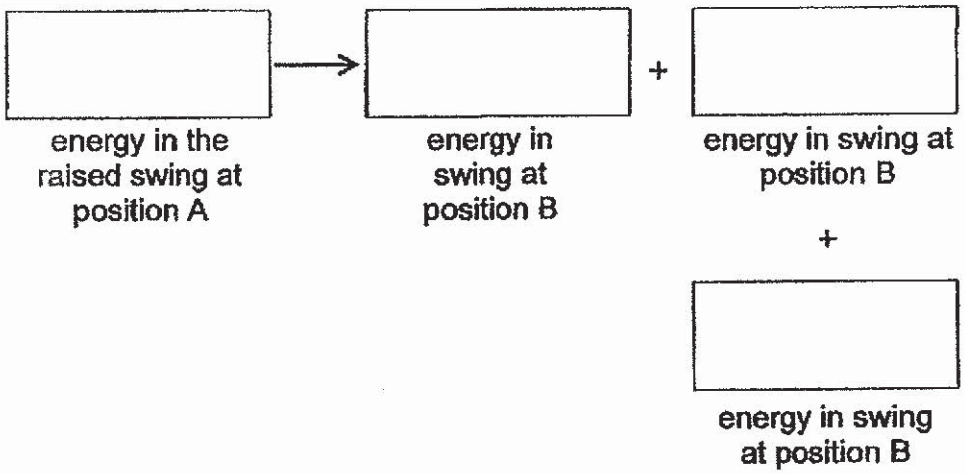
b) Which of the materials, A, B, C, or D, could be used to make the lenses for a pair of reading spectacles. Based on the above flowchart, explain your answer. [1]

Score 2

35. The diagram below shows a girl sitting on a swing that was raised to position A, and when released, moved to position B, then position C.

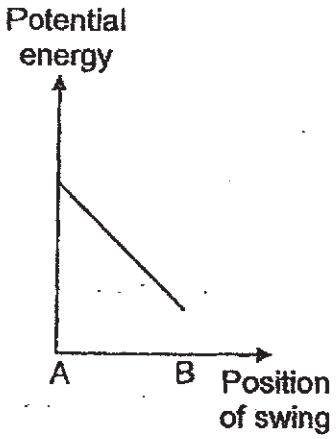


a) State the energy conversion of the swing as it moves from position A to position B. [1]

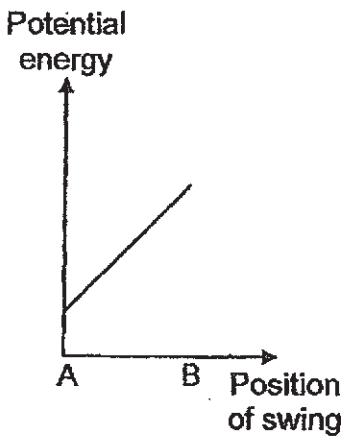


Score / 1

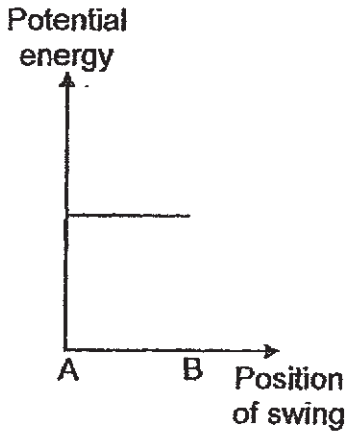
b) Study the graphs below.



Graph X



Graph Y



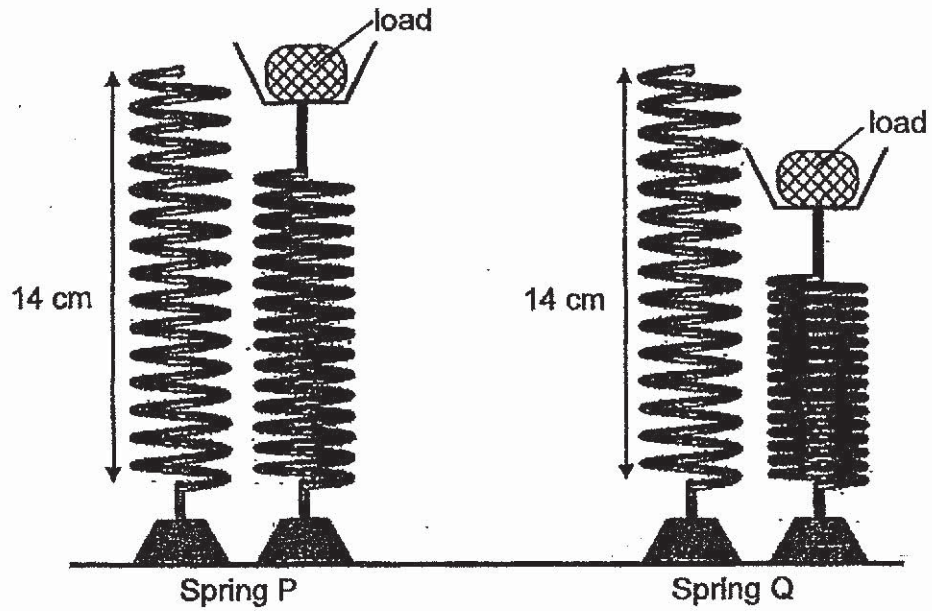
Graph Z

Which graph, X, Y or Z, best represents the change in potential energy in the swing from position A to position B of the swing?
Explain why. [1]

c) Describe what can be done, so that the girl can swing to a greater height at position C.
Explain how in terms of energy changes. [1]

Score	2

36. Jamimah conducted an experiment on two different types of springs, P and Q, of the same length, using the set-ups shown below.



Jamimah measured the new length of each spring after placing similar loads on both springs. Her results are shown in the table below.

Load (g)	New length of spring P (cm)	New length of spring Q (cm)
100	13	11
150	12	8
200	11	5

a) What was the length of the spring P when a 150 g load was placed on it? [1]

_____

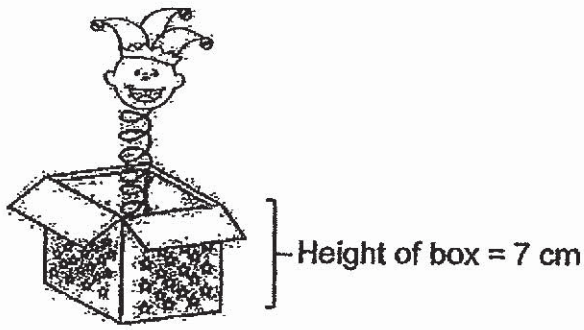
b) Based on the above results, how was the length of the springs affected by the mass of the load? [1]

_____

_____

Score	/ 2

Based on the results in the table above, Jamimah decided that she wanted the clown-in-the-box shown in the diagram below, to spring faster and with a greater force out of the box.



c) Which spring, P or Q, should Jamimah use? Explain why. [1]

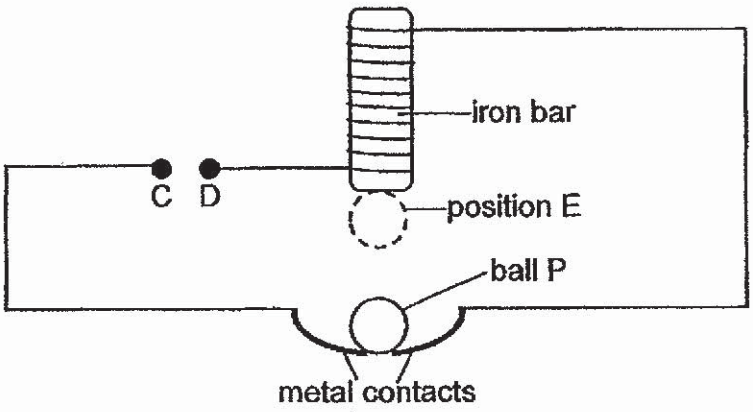
_____

_____

_____

Score	/ 1

37. Melissa set up an experiment shown below where a wire was coiled around an iron bar in the circuit shown below.



An object Y was used to connect point C to D in the circuit. Melissa observed that the ball P moved repeatedly between the iron bar and the metal contacts until object Y was removed.

a) What is object Y? [1]

_____

b) What material is ball P made of? [1]

_____

c) When object Y was connected between points C and D, explain why ball P is able to move to position E? [2]

_____

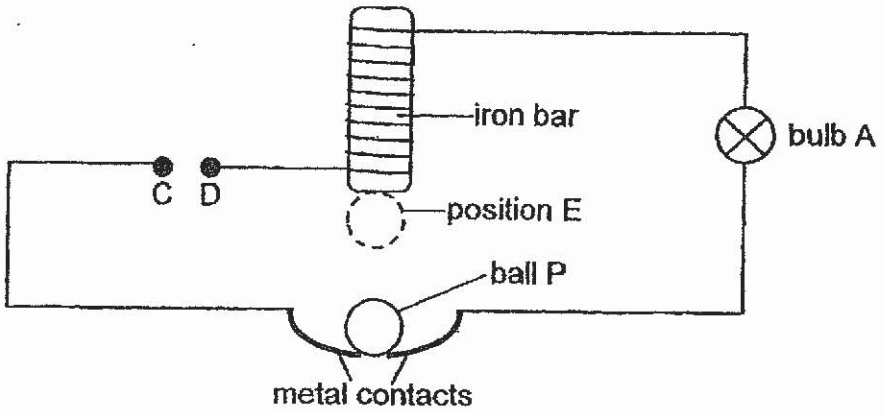
_____

_____

_____

Score	/ 4

Melissa then added bulb A to the same set-up, as shown below.



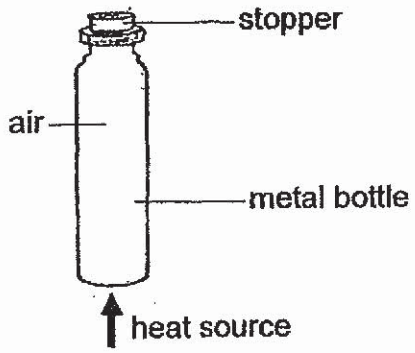
d) When object Y was placed between points C and D, describe what will Melissa observe for Bulb A when ball P moved repeatedly between the iron bar and the metal contacts? [1]

_____

_____

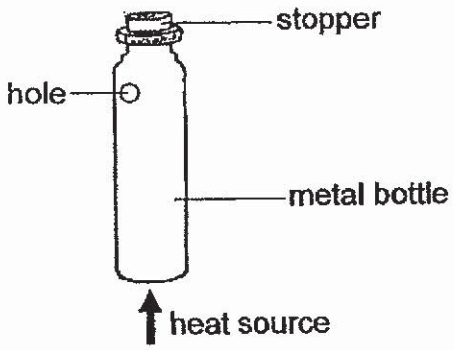
Score	/1

38. A metal bottle with a stopper was heated by Olivia as shown below.



a) Only after some time, the stopper flew off. Explain why. [2]

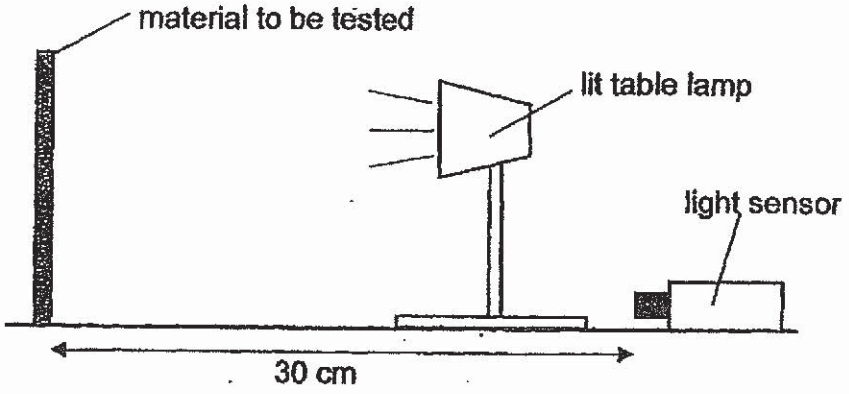
Olivia then made a hole in the bottle and repeated her experiment.



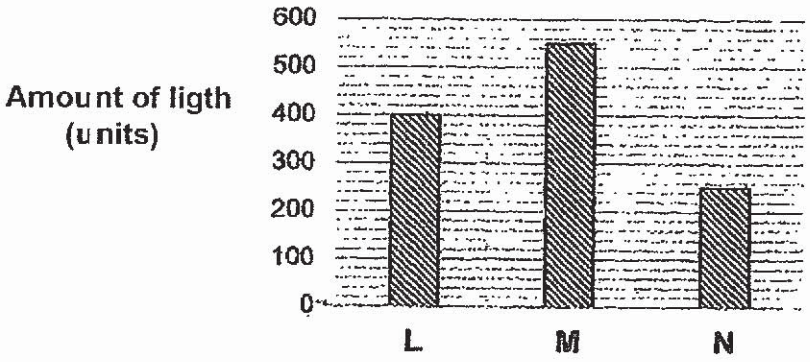
b) She observed that the stopper did not fly off this time. Explain her observation. [1]

Score / 3

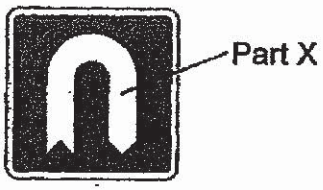
39. Amanda conducted the experiment in a dark room using different materials, L, M and N. She measured the amount of light reflected by the materials with a light sensor, as shown below.



Her results were recorded in the bar chart below.



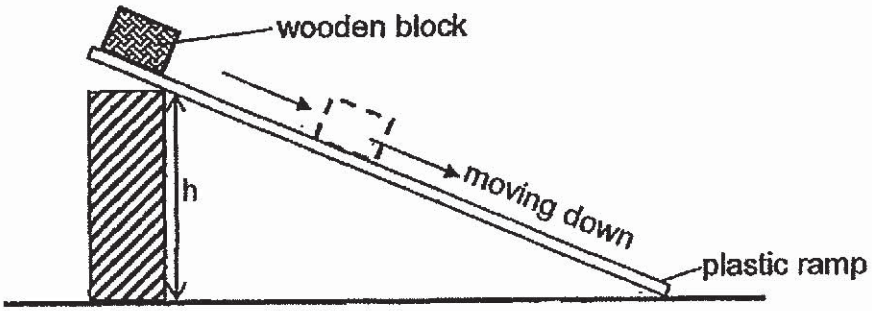
When driving at night, Amanda noticed Part X of the road sign shown below, which would 'glow' brighter as she drove closer to it.



Based on the above results, which of the above materials, L, M or N, is most suitable for making Part X? Explain your answer. [2]

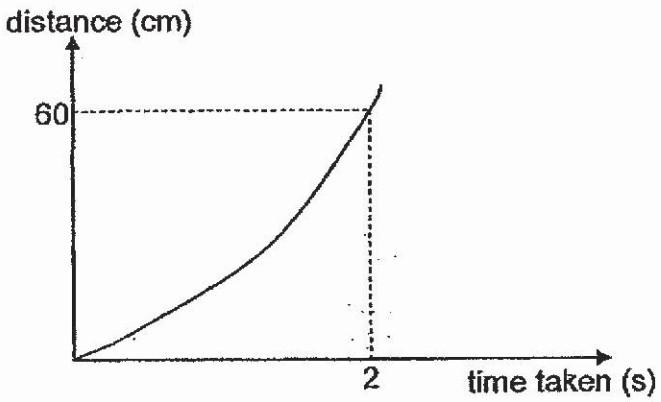
Score	
	2

40. Ray set up the experiment shown below.



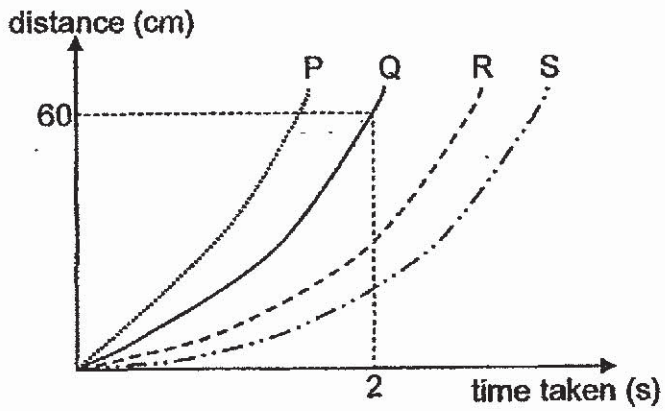
Set-up A

He releases the wooden block from the top of the ramp and measured the distance travelled by the block and the time taken. His results are shown in the graph below.



Ray repeated the experiment by applying oil to the surface of an identical ramp.

a) State which graph, P, Q, R or S, correctly represents the set-up with oil added to the ramp. [1]



Graph: _____

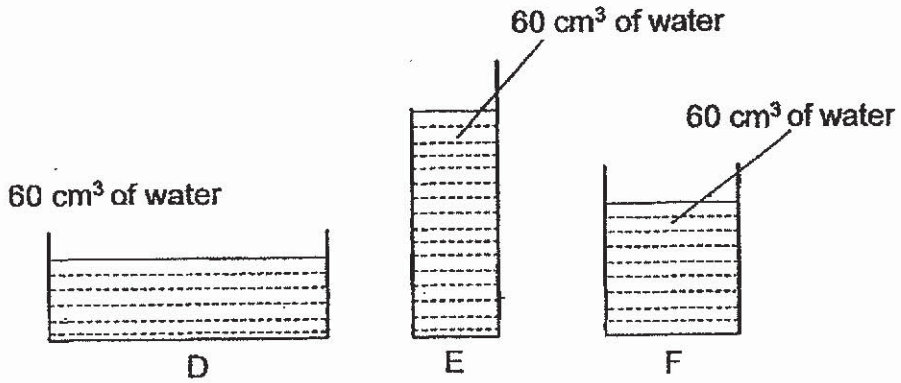
Score	1

b) Explain why you chose the graph in (a). [2]

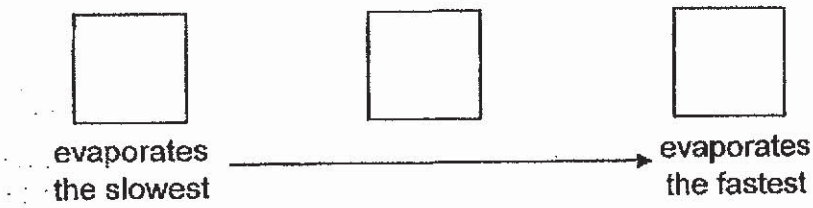
c) Without changing the plastic ramp, suggest one change to set-up A so that the wooden block will take a longer time to reach the bottom of the plastic ramp. [1]

Score	3

41. An experiment was carried out to find out how the exposed surface area of water affects the rate of evaporation. Three glass containers, D, E and F, were filled with the same amount of water at the same temperature. The amount of water left in each container was measured every few hours until all the water fully evaporated.



a) In the boxes below, arrange the containers in **ascending** order on the rate of evaporation of the water. [1]



b) List another variable, which is not stated above, that needs to be kept constant. [1]

_____

_____

c) Why must the same amount of water be used in all three glass containers to ensure a fair test? [1]

_____

_____

End of Booklet B

Score	
	3

SCHOOL : TAO NAN PRIMARY SCHOOL
LEVEL : PRIMARY 6
SUBJECT : SCIENCE
TERM : 2019 SA1

SECTION A

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

SECTION B

Q29)

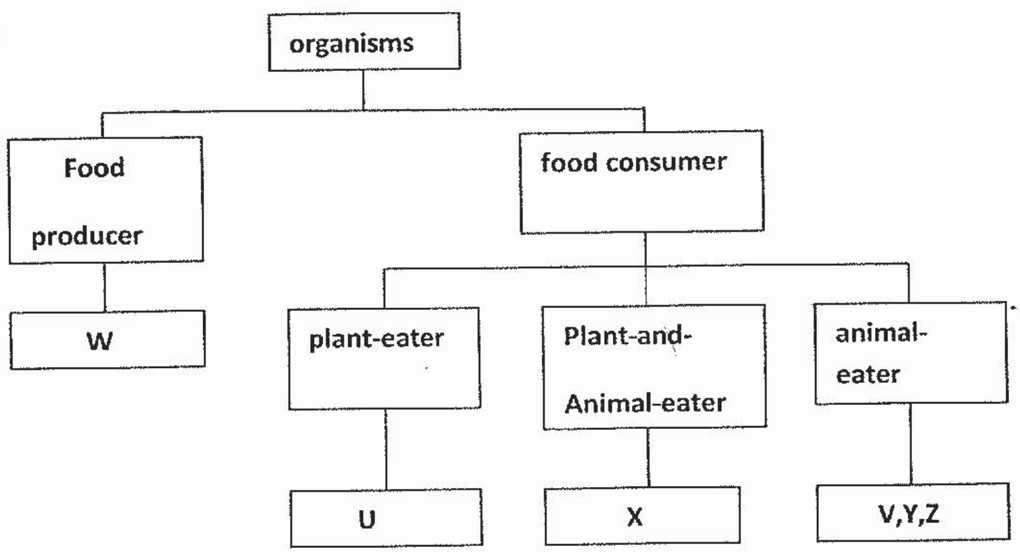
a)A: Water B: Food

b)In humans substances A and B are transported together in the blood while substances A and B are transported through two different tubes, the food carrying tubes and the water carrying tubes.

c)i)

√		√	√		

ii)

<table>
<tr><td>Q30)</td><td>a)The mass of the toy.
b)The longer the wings, the longer the time taken for the toy to reach the ground.
c)The fruits will be able to stay afloat for a longer time thus it can land further away from its parents to avoid competition with them for spare, nutrient and water. As a result, more plants will survive.</td></tr>
<tr><td>Q31)</td><td>a)5
b)
 

c)Organism Y can migrate to another suitable environment.</td></tr>
<tr><td>Q32)</td><td>a)Organism R has sharp claws.
b)Organism H can lead organism R to the beehive.
c)As organism H feeds on the bees larvae, there will be less larvae to grow up into adult bees.
d)As there are less bees [illegible] inate the flowers, the rate of reproduction dec[illegible]</td></tr>
<tr><td>Q33)</td><td>a)B , C , [illegible]
b)Somepla[illegible] higher surrounding temperature.
c)As some floating plants have their leaves above the water level, the oxygen produced during photosynthesis may be released into the atmosphere instead of the water.</td></tr>
</table>

Q34)	a)It is not water proof and is not flexible. b)D. It allows light to pass through so the person will be able see through the lens.
Q35)	a)Potential → Kinetic + Sound + Heat b)Graph X. As the swing is at its highest position in A, the amount of potential energy it has is the most while at position B has the lowest amount of potential energy as it is at it's lowest point. c)The girl can start at a higher position. The higher she starts the more potential energy she has. This energy is then converted to more kinetic energy. As a result more kinetic energy can be converted to potential energy.
Q36)	a)12 cm. b)The heavier the load the shorter the spring. c)Spring P. As spring P is harder to be compressed it will have more elastic spring force thus the clown-in-the-box will spring faster.Also more elastic spring force can be converted into more kinetic energy.
Q37)	a)A battery. b)Steel c)AS Iron is a conducted of electricity, the circuit became a closed circuit thus the iron bar turned into an electro-magnet. As a result the steel ball got attracted to the iron bar. As a result the ball could reach position E. d)Bulb A flickers repeatedly.
Q38)	a)As air in the bottle is a [illegible] onductor of heat, it gained heat from the metal bottle s [illegible] air gained enough heat from the heat source [illegible] there was no space left so it pushed out the st [illegible] b)When the [illegible] xpanded, it no longer needed to push out the stopper as the air could escape through the hold in the bottle.

Q39)	Material M. As a result Amanda will be able to see the road sign from a further distance.
Q40)	a)Graph : P b)As oil is a lubricant, it reduces the amount of friction between the ramp and the wooden block. As a result the block can slide down faster. c)Decrease the length of h
Q41)	a)E , F , D b)The location of the experiment. c)The results will be soley due to the exposed surface area of the water and not the volume of water.