Anglo-Chinese School (Junior)

SEMESTRAL ASSESSMENT (2022)

PRIMARY 6

SCIENCE

BOOKLET A

Thursday **12 May 2022** **1 hr 45 min**

Name: _____ ( ) Class: 6.( )

INSTRUCTIONS TO PUPILS

1 Do not turn over the pages until you are told to do so.

2 Follow all instructions carefully.

3 There are 28 questions in this booklet.

4 Answer ALL questions.

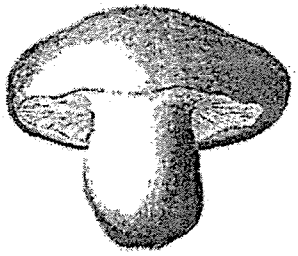
5 Shade your answers in the Optical Answer Sheet (OAS) provided.

This question paper consists of 20 printed pages (inclusive of cover page).

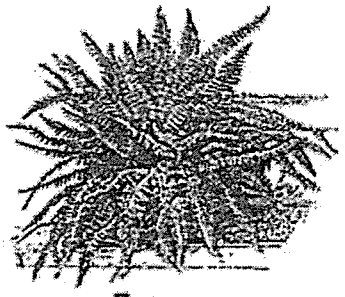
For each question from 1 to 28, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade your answer on the Optical Answer Sheet.

(56 marks)

1. Observe the two organisms.



Mushroom



Fern

How are the organisms similar?

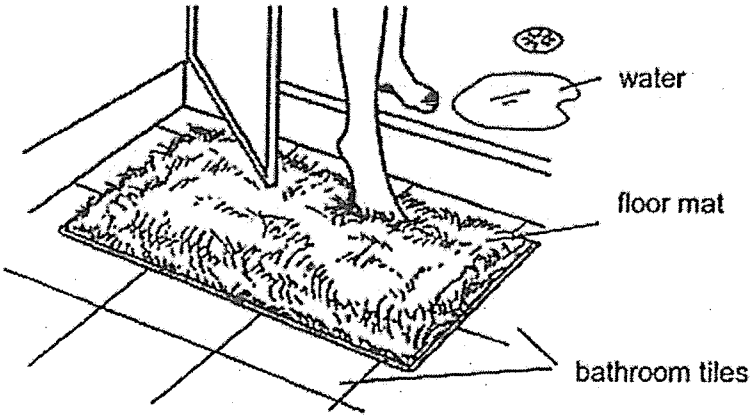
A Have gills
B Are decomposers
C Reproduce from spores
D Can make their own food

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

2. Study the table.

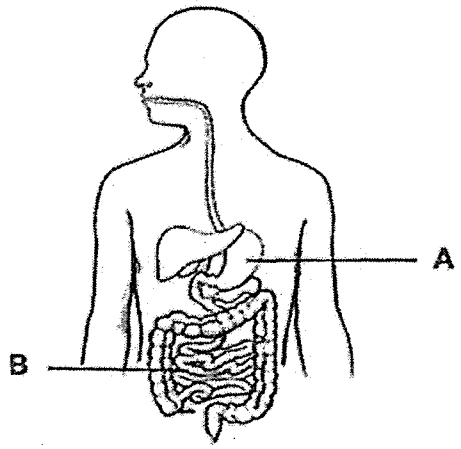
Properties \ Materials	A	B	C	D
Light		✓	✓	✓
Flexible	✓	✓	✓	
Waterproof	✓		✓	✓

Which material, A, B, C or D is most suitable to make a floor mat to be placed outside the bathroom to keep the feet of the person dry as shown?



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

3. The diagram shows the digestive system of a human.



What is the function of A and B?

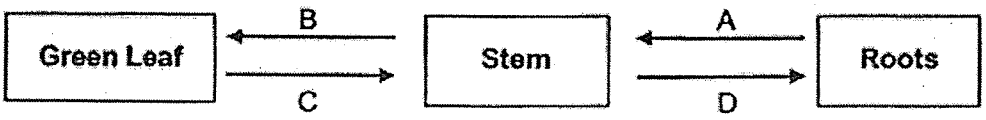
(1) To transfer the digested food into the blood.

(2) To produce digestive juices to break down food.

(3) To transport the digested food to all parts of the body.

(4) To allow water to pass through their walls and enter the bloodstream.

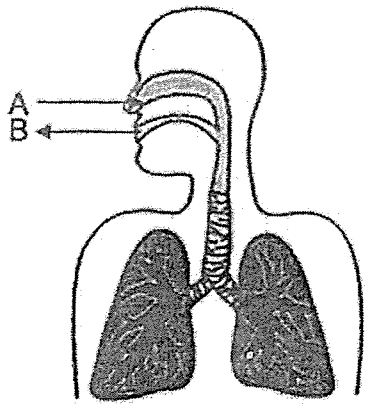
4. The diagram shows how substances, A, B, C and D are transported in the plant transport system.



Which are substances A and D?

	A	D
(1)	Sugar	Water
(2)	Starch	Mineral Salts
(3)	Water	Sugar
(4)	Water	Starch

5. Chris breathes in air through his nose at A and breathes out air through his mouth at B as shown in the diagram.



Which of the statements about air at A and B is true?

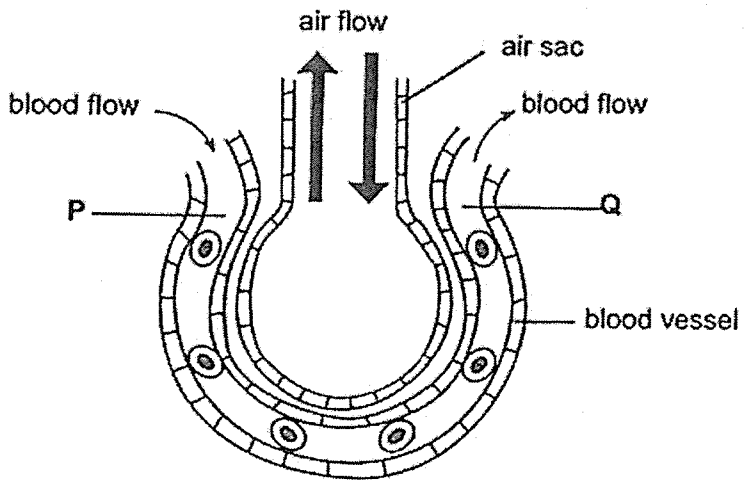
(1) The air at A is warmer than the air at B.

(2) The air at A has more dust than the air at B.

(3) The air at A has more water vapor than the air at B.

(4) The air at A has more carbon dioxide than the air at B.

6. The diagram shows an air sac and a blood vessel found in the lungs of a man. Blood flows through the blood vessel from point P to Q.



Which of the following compares the levels of oxygen and carbon dioxide in the blood between points P and Q?

	P		Q	
	Oxygen	**Carbon Dioxide**	**Oxygen**	**Carbon Dioxide**
(1)	High	Low	Low	High
(2)	Low	High	Low	High
(3)	High	Low	High	Low
(4)	Low	High	High	Low

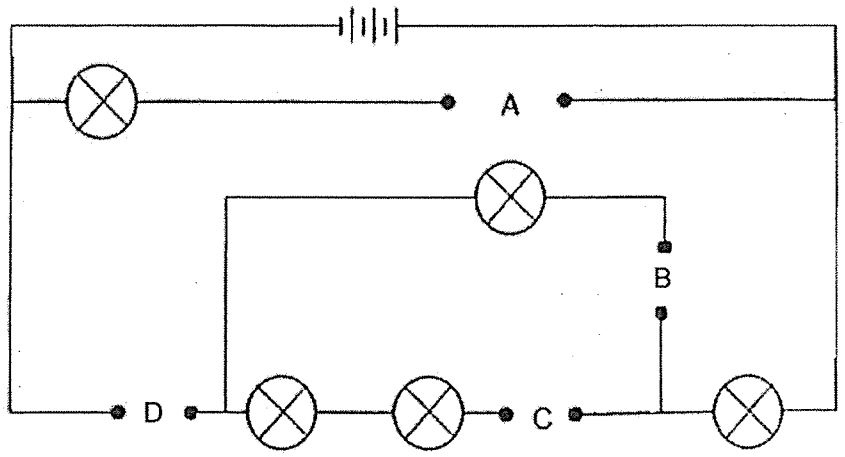
7. The table provides some information on three cells, X, Y and Z.
A tick (✓) indicates the presence of the cell part.

Cell Part	Cell X	Cell Y	Cell Z
cell wall	✓		✓
nucleus	✓	✓	✓
chloroplast			✓

Where are the cells X, Y and Z likely to be found?

	Cell X	Cell Y	Cell Z
(1)	Cheek	Root	Leaf
(2)	Leaf	Cheek	Root
(3)	Root	Leaf	Cheek
(4)	Root	Cheek	Leaf

8. Study the electric circuit with identical batteries and bulbs in working condition.

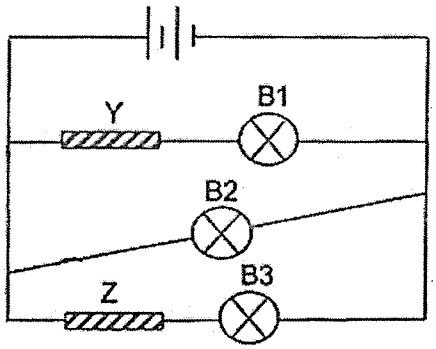
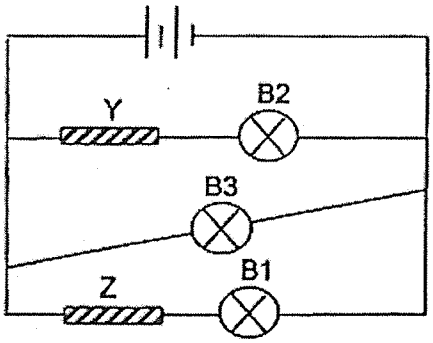


You are provided with four objects, A, B, C and D. Two of which are conductors of electricity and two of which are non-conductors of electricity.

Where would you connect the four objects so that only two bulbs in the circuit will light up?

	A	B	C	D
(1)	non-conductor	non-conductor	conductor	conductor
(2)	conductor	non-conductor	non-conductor	conductor
(3)	non-conductor	conductor	conductor	non-conductor
(4)	non-conductor	conductor	non-conductor	conductor

9. Ephraim set up two circuits as shown in the table. Both circuits had identical bulbs and objects Y and Z in working condition. He tested both circuits and recorded his observations.

Circuit set-up	Observations
	• B1 lit up • B2 lit up • B3 did not light up
	• B1 did not light up • B2 lit up • B3 lit up

Based on Ephraim's observations, which of the conclusions is correct?

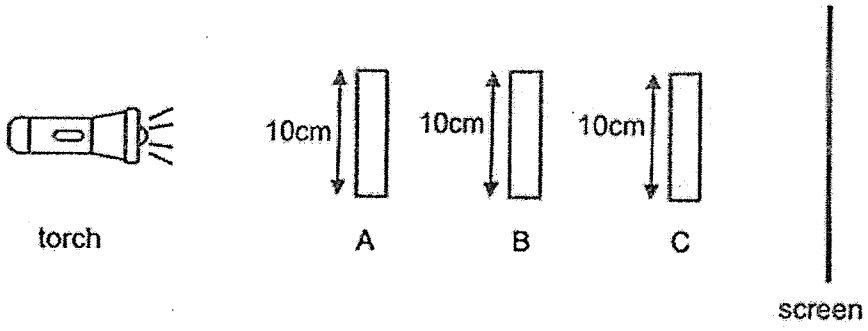
(1) Y is a non-conductor of electricity.

(2) Z is a non-conductor of electricity.

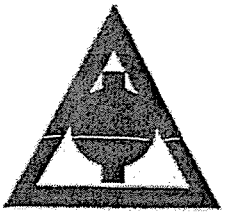
(3) Y allows electricity to pass through B1 better than B2.

(4) Electricity does not pass through B2 and B3 in both circuits.

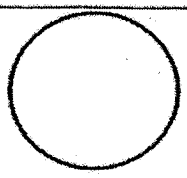
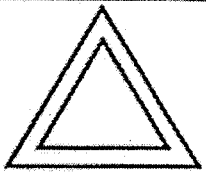
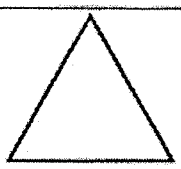
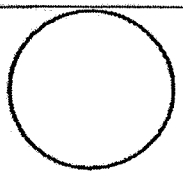
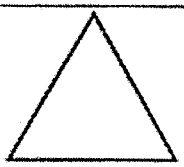
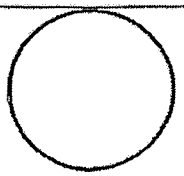
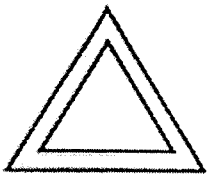
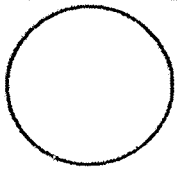
10. The set-up shows a torch shining light on three objects A, B and C made of cardboard. The objects are placed at different distances from the lit torch.



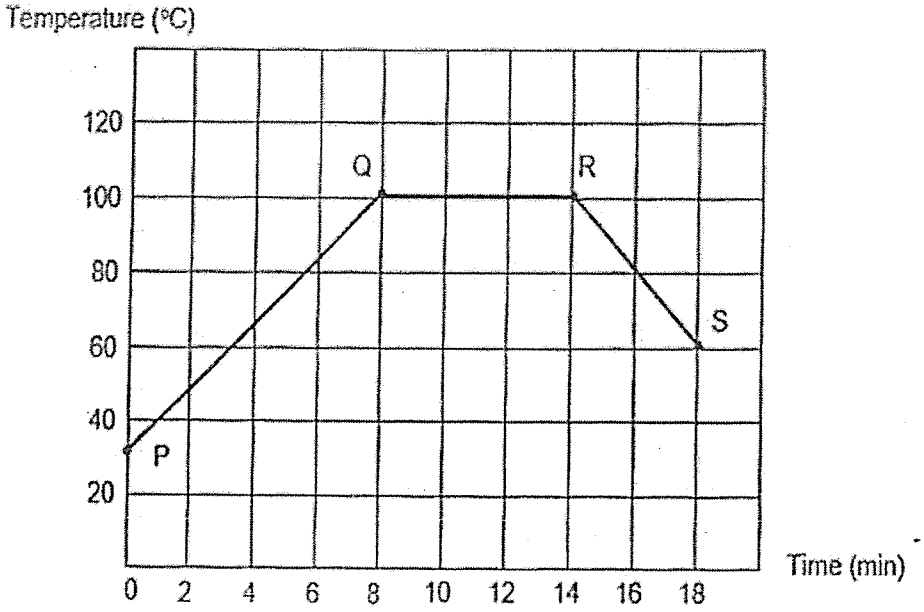
The diagram shows what was seen on the screen.



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

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

11. The graph shows the changes in the temperature of water as it is brought to boil before being left to cool.



Based on the graph, which of the following statements are correct?

A Water loses heat at RS only.

B Water boiled for six minutes only.

C Water did not gain heat at QR.

D Evaporation of water occurred at PQ only.

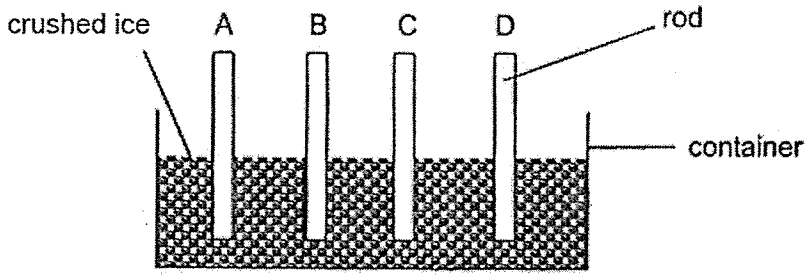
(1) A and B only

(2) A and C only

(3) A, B and D only

(4) B, C and D only

12. Hatta set up an experiment as shown to compare how well four different materials conduct heat. He placed similar sized rods, A, B, C and D of the same temperature into a container of crushed ice at the same time.



The table shows the temperature of each rod after five minutes.

Rod	Temperature (°C)
A	20
B	14
C	8
D	25

What can Hatta conclude based on the results of the experiment?

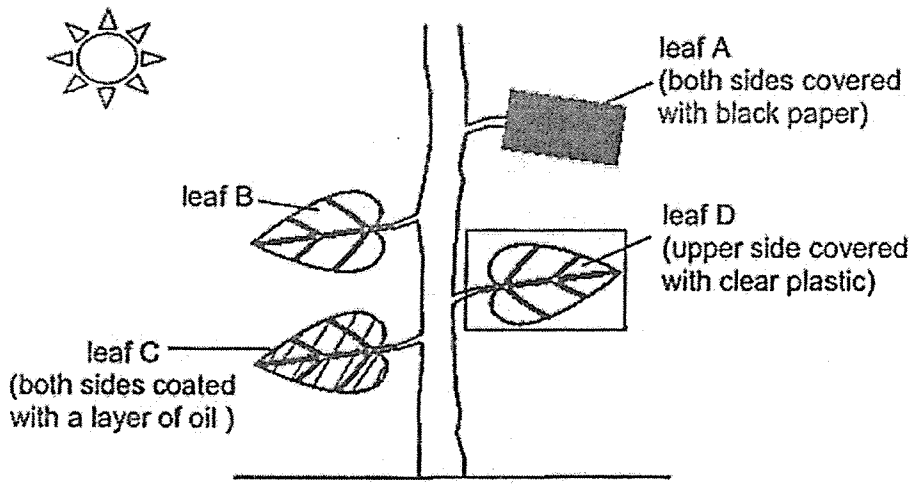
(1) D is definitely a metal.

(2) C is the poorest conductor of heat.

(3) B is a better conductor of heat than A.

(4) C is a poorer conductor of heat than D.

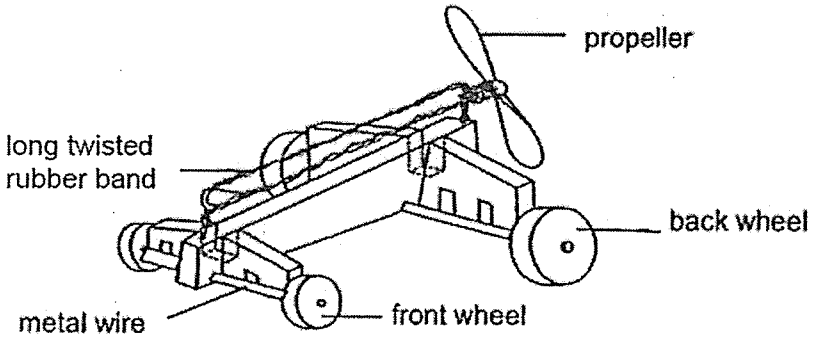
13. Kayla conducted an experiment as shown.



Which leaf(s) is/are able to make food?

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

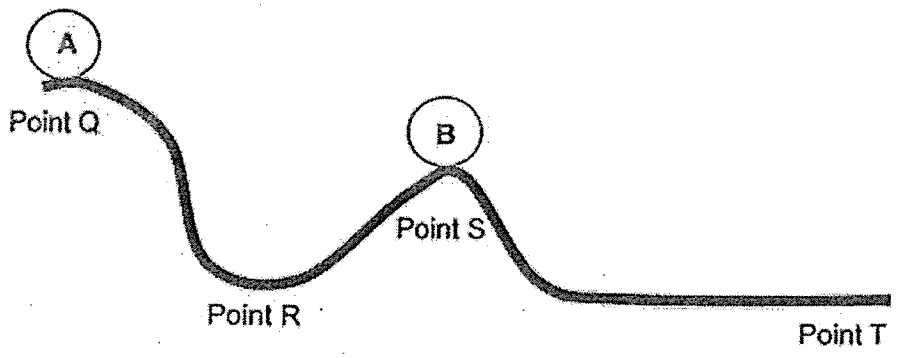
14. Study the diagram of a toy car.



Which part of the toy car procesess the source of energy for it to move?

(1) Wheels
(2) Propeller
(3) Metal wire
(4) Twisted rubber band

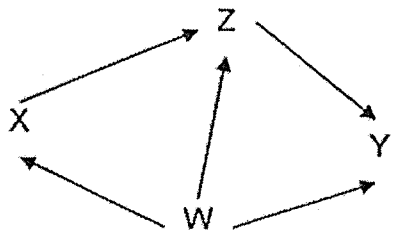
15. Zhenwei placed Ball A at Point Q and Ball B at Point S of a slope. He pushed Ball A and Ball A rolled towards Point T.



Which of the following shows the correct energy changes in the balls at the various positions?

	When Ball A rolled from Point R **to** Point S **and hit Ball B**	**When Ball B rolled down the slope from Point S towards Point T**
(1)	Potential energy → Sound energy + Heat energy	Potential energy → Kinetic energy + Heat energy
(2)	Potential energy → Kinetic energy + Sound energy + Heat energy	Kinetic energy → Potential energy + Heat energy
(3)	Kinetic energy → Potential energy + Heat energy + Sound energy	Kinetic energy → Potential energy + Heat energy
(4)	Kinetic energy → Potential energy + Heat energy + Sound energy	Potential energy → Kinetic energy + Heat energy

16. Study the food web of a pond.



Which statement is true?

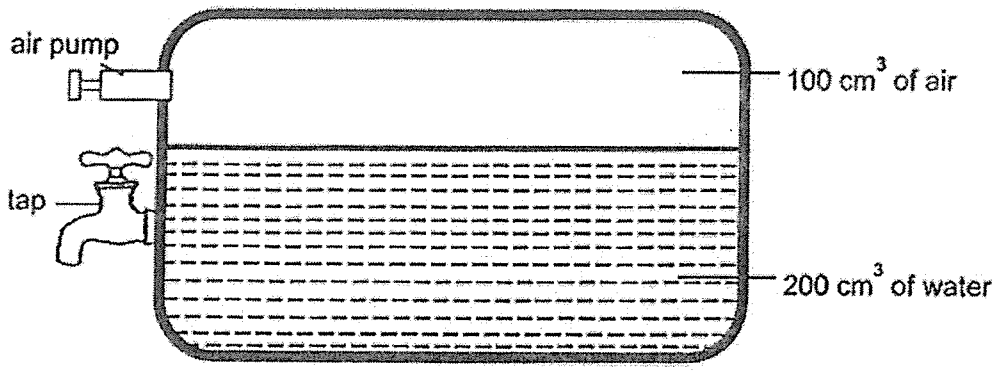
(1) There are two predators.

(2) There are two producers.

(3) There are four food chains.

(4) There are four communities.

17. The diagram shows a sealed container filled with 200 cm^3 of water



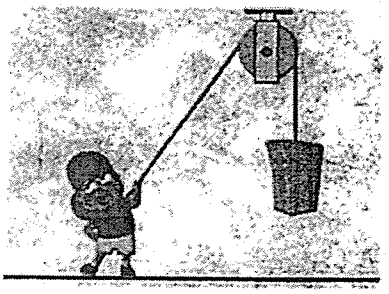
sealed container

50 cm^3 of water was released through the tap and 50cm^3 water was pumped out of the container.

What is the volume of air and water left in the sealed container?

	Volume of air (cm^3)	Volume of water (cm^3)
(1)	50	200
(2)	100	150
(3)	100	200
(4)	150	150

18. Study the following activities carefully.


Which of the following force(s) make(s) all the above activities difficult?

(1) Kinetic force

(2) Frictional force

(3) Gravitational force

(4) Frictional force and gravitational force

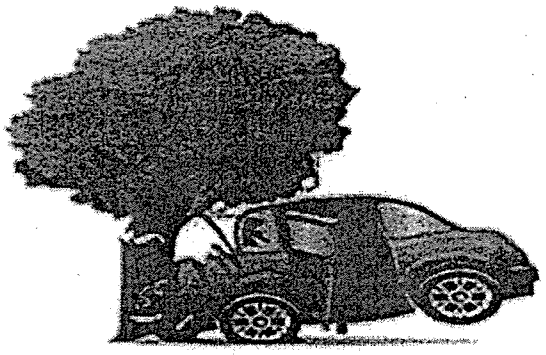
19. Sam recorded a chrysanthemum seed's growth over 15 days in a table.

Day	Observations
3	The seed swelled
6	The seed coat breaks
7	The roots start to appear
9	The shoot starts to appear
15	The seed leaves dropped off

Which day was the seedling most likely able to carry out photosynthesis?

(1) Day 6
(2) Day 7
(3) Day 9
(4) Day 14

20. Four students witnessed a car crash into a tree as shown.



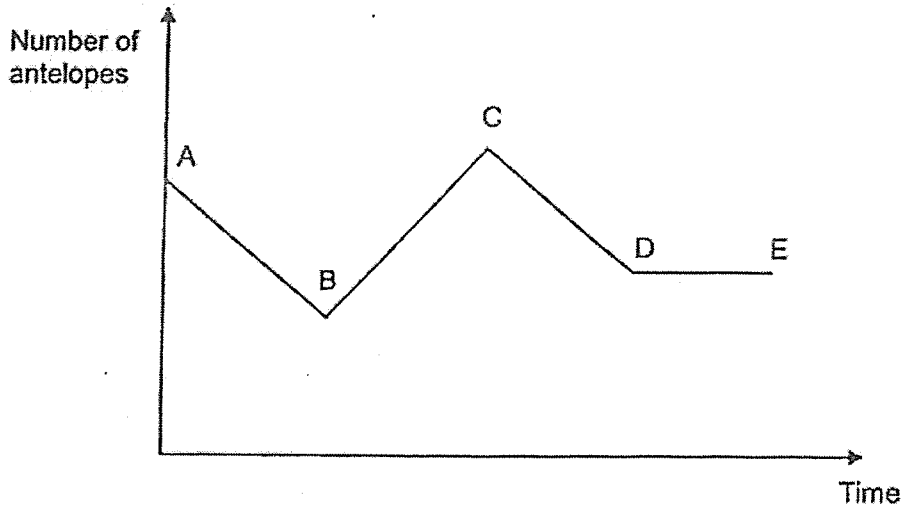
Each of them made a response about the effect of the force on the car.

Ali: It stopped moving.
Ben: It changed its shape.
Carl: It changed its position.
Dan: It changed its direction.

Whose responses are correct?

(1) Ali and Ben only
(2) Carl and Dan only
(3) Ali, Ben and Carl only
(4) Ben, Carl and Dan only

21. The graph shows the changes in the population of antelopes in a grassland habitat over a period of time.



Which of the following could have led to the change in the population of antelope from Point B to Point C?

(1) A drought.

(2) Shortage of food.

(3) More deaths than birth.

(4) Decrease in the population of its predators.

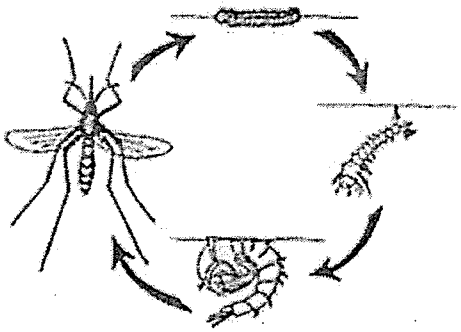
22. The table shows three different organisms and their adaptations

Organism P	Organism Q	Organism R
• Sharp teeth • Claws • Thick Fur • Thick layer of fat	• Shallow and widespread roots • Large stem • Needle-like leaves	• Hooves • Long horns • Long, slender legs

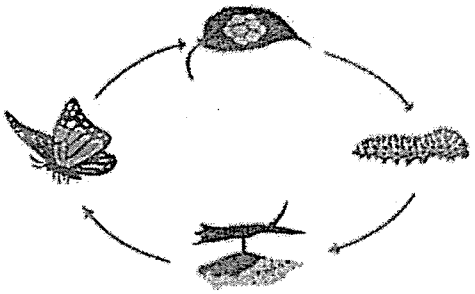
Which type of environment would the organisms be found in?

	Grassland	Arctic	Desert
(1)	Organism P	Organism Q	Organism R
(2)	Organism Q	Organism R	Organism P
(3)	Organism R	Organism P	Organism Q
(4)	Organism Q	Organism P	Organism R

23. The diagrams show the life cycle of a mosquito and a butterfly.



Life cycle of a mosquito



Life cycle of a butterfly

Which of the following is correct?

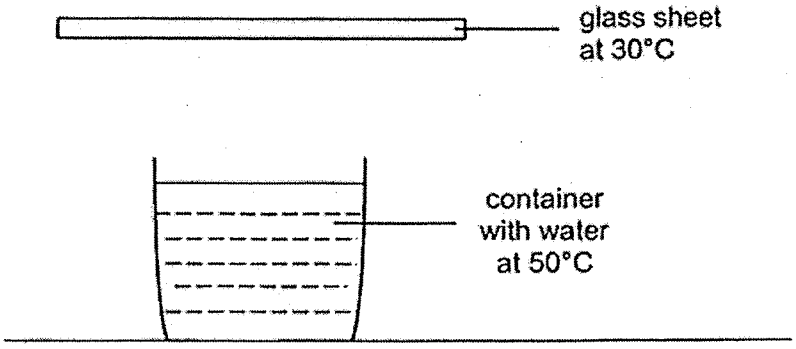
(1) The butterfly and the mosquito feed throughout all their stages.

(2) The pupa of the mosquito and the butterfly go through moulting.

(3) Unlike the butterfly, the mosquito spends part of its life cycle in the water.

(4) The larva and pupa of the mosquito and the butterfly resemble their adult.

24. The diagram shows a set-up in which water changes from one state to another.



Which of the following will most likely result in an increase in the amount of water droplets formed on the glass sheet?

P Adding ice into the water

Q Putting ice on top of the glass sheet

R Use a container with a wider opening

S Increasing the temperature of the water

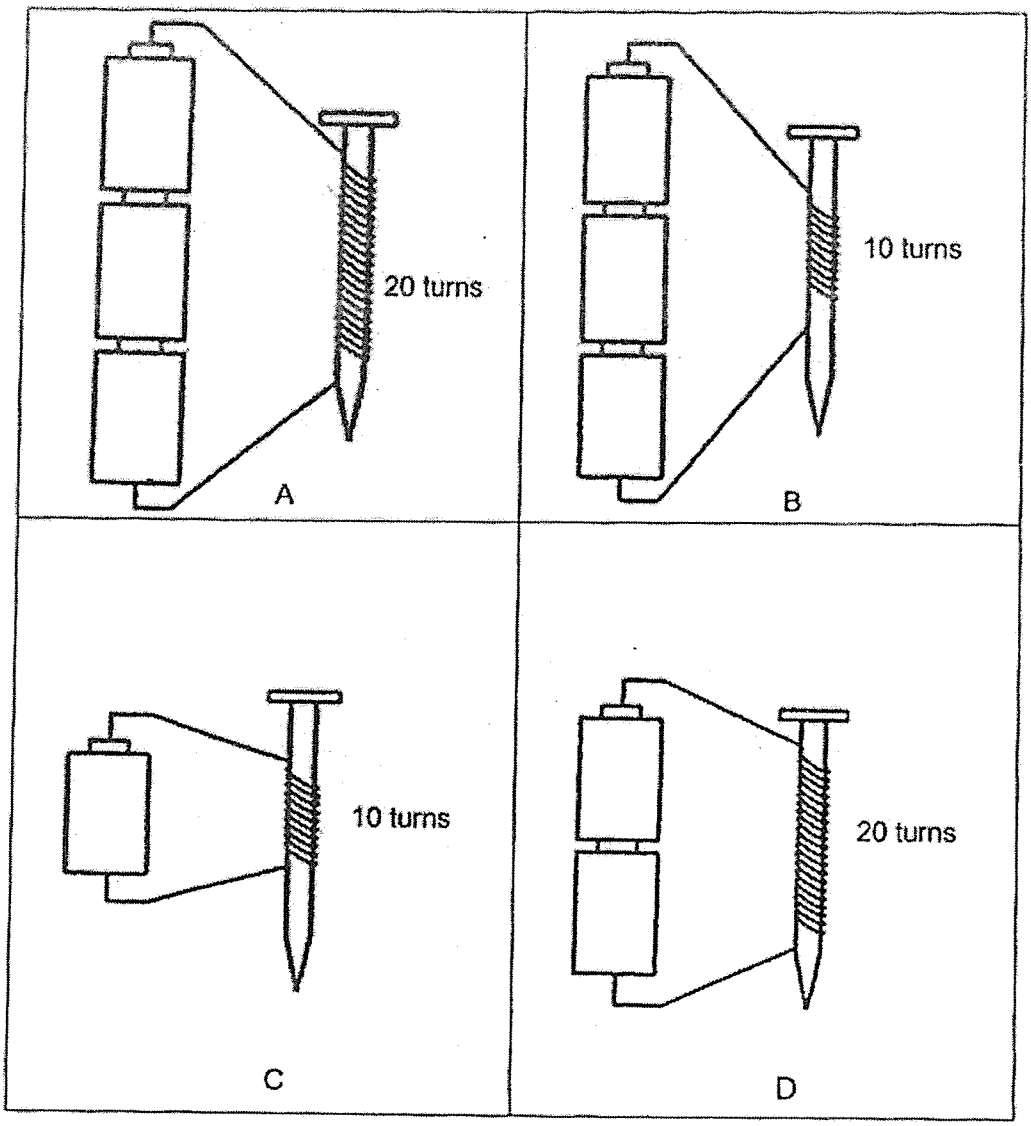
(1) P and R only

(2) Q and S only

(3) P, Q and R only

(4) Q, R and S only

25. Dexter wanted to find out how the number of batteries in a closed circuit affect the strength of an electromagnet.



Which two arrangements should he choose in order to conduct a fair test?

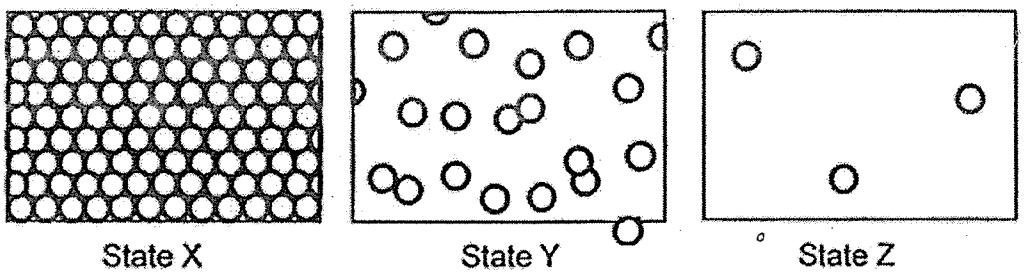
(1) A and B

(2) A and C

(3) B and C

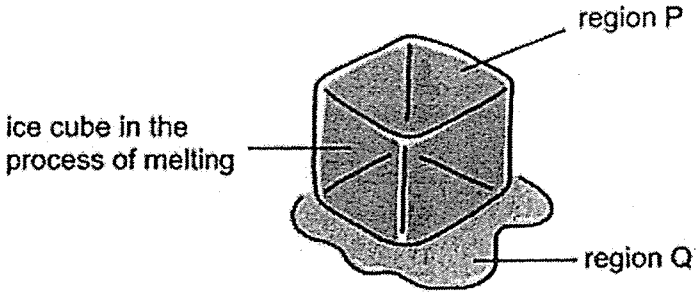
(4) B and D

26. Solid, liquid and gas are made up of microscopic particles. The behaviour of these particles differs in the three different states. The following diagrams represent the arrangement of these particles in the three different states, X, Y and Z at room temperature.



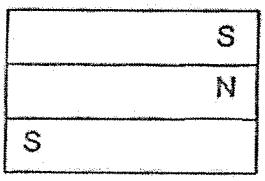
Particles in solid state are tightly packed, usually in a regular pattern.
Particles in liquid state are close together with no regular pattern.
Particles in gaseous state are far apart with no regular pattern.

Based on the above information, what is the most likely arrangement of particles in regions P and Q of an ice-cube in the process of melting?

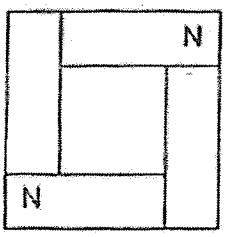


	Region P	Region Q
(1)	State X	State X
(2)	State X	State Y
(3)	State Y	State Z
(4)	State Z	State Y

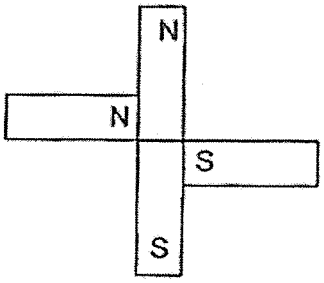
27. Cornelius set up four different arrangements of magnets.



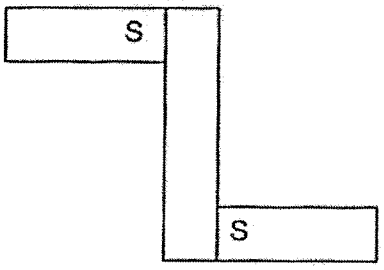
Set-up A



Set-up B



Set-up C



Set-up D

Which two of the set-ups are not possible?

(1) A and B

(2) A and D

(3) B and C

(4) C and D

28. The table shows some physical characteristics of Amanda and Bernard.

	Physical Characteristics			
Parent	**Face**	**Earlobes**	**Hair**	**Eye Colour**
Amanda	Dimples	Detached	Long	Blue
Bernard	No dimples	Attached	Short	Black

Amanda and Bernard have four children with the following physical characteristics.

	Physical Characteristics			
Child	**Face**	**Earlobes**	**Hair**	**Eye Colour**
Colin	Dimples	Detached	Short	Black
Diana	No dimples	Attached	Long	Black
Ethan	No dimples	Detached	Short	Blue
Faith	Dimples	Attached	Long	Blue

Based on the information in the tables, which of the following statement(s) is/are true?

A Diana and Faith are twins.

B Ethan is the only child who inherited Bernard's physical characteristics.

C Diana did not inherit any her physical characteristics from Amanda.

D Colin and Faith each inherited more than two physical characteristics from Amanda.

(1) C only

(2) A and D only

(3) B and C only

(4) A, B and D only

End of Booklet A

Anglo-Chinese School (Junior)

SEMESTRAL ASSESSMENT (2022)

PRIMARY 6

SCIENCE

BOOKLET B

Thursday 12 May 2022 1 hr 45 min

Name: _____ ( ) Class: 6.( ) Parent's Signature:_____

INSTRUCTIONS TO PUPILS

1 Do not turn over the pages until you are told to do so.

2 Follow all instructions carefully.

3 There are 13 questions in this booklet.

4 Answer ALL questions.

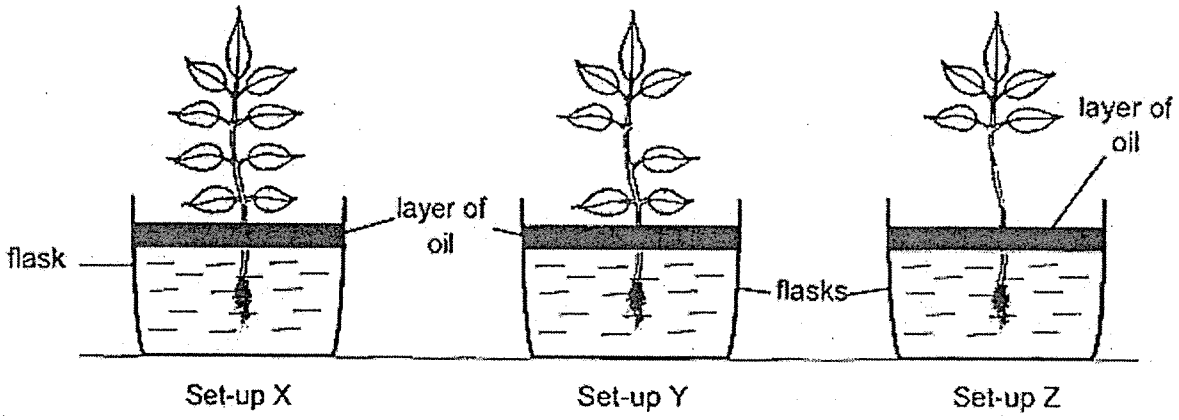
5 The marks are given in the brackets [ ] at the end of each question or part question.

Booklet	Possible Marks	Marks Obtained
A	56	
B	44	
Total	100	

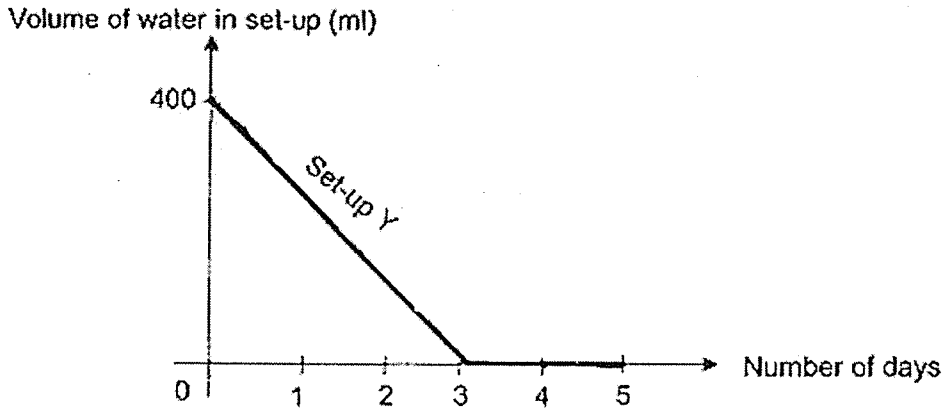
For questions 29 to 41, write your answers in this booklet.
The number of marks available is shown in brackets [ ] at the end of each question or part question.

(44 marks)

29. Niharika set up an experiment next to an open window using three similar types of plants as shown. The flasks were filled with the same volume of water at the start of the experiment.



Niharika measured and recorded the volume of water remaining in each of the set-ups at the end of each day for a period of 5 days. She drew the line graph for Set-up Y.



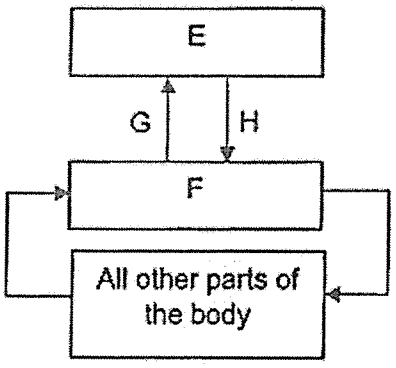
(a) On the graph above, draw another line graph to show the changes in the volume of water in Set-up Z during the same 5-day period. Label your graph 'Set-up Z'. [1]

(b) Predict in which set-up, X or Y, will there be a greater decrease in the volume of water. Explain your answer. [2]

(Go on to the next page)

SCORE	
	3

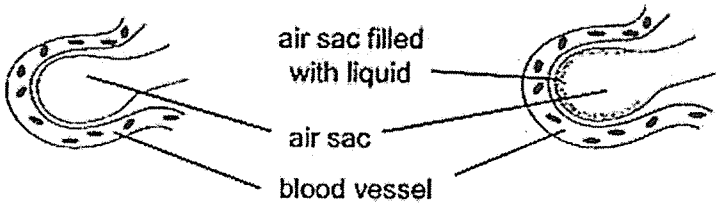
30. The diagram shows the direction of blood flow in some parts of the human body. E and F represent organs, while G and H represent blood vessels.



(a) Name organ E. [1]

(b) Blood in H contains more of substance M than the blood in G. Name Substance M. [1]

Ron read that the air sacs of a patient who is infected with Covid-19 is filled with liquid. The exchange of gases, oxygen and carbon dioxide, in the lungs takes place between the air sacs and blood vessels. The greater the surface area of the air sac, the greater the rate of gaseous exchange.



Air sac of a non-infected

Air sac of a patient with Covid-19

The table shows the research data on the available surface area of the air sacs for gaseous exchange of a Covid-19 patient and a non-infected person.

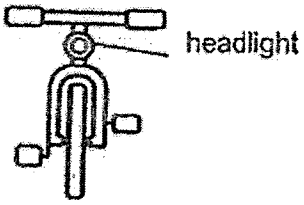
	Available surface area of the air sacs for gaseous exchange (unit)
Covid-19 patient	50
Non-infected person	82

(c) Ron learnt that Covid-19 patients become breathless more easily than a non-infected person. Using the information in the table, explain why this is so. [1]

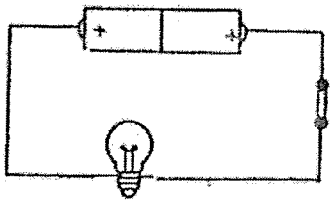
(Go on to the next page)

SCORE	
	3

31. Seth wants to cycle at night. In order to be visible to other road users, he installed a headlight to his bicycle which is connected to a circuit as shown.

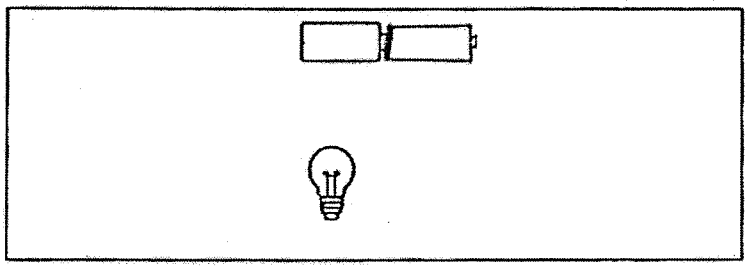


Front view of bicycle

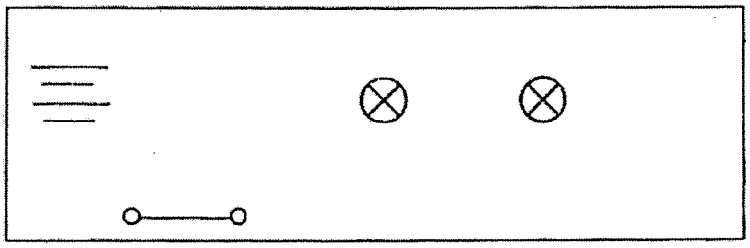


Circuit of headlight

(a) Seth noticed that the bulb did not light up in the circuit above.
Draw in the box provided below how he should rearrange the components in the circuit for the bulb to light up. (A battery and a bulb have been drawn for you). [1]



(b)(i) Seth then decided to install another headlight for his bicycle. He wanted to make sure that one headlight will still work even if the other headlight is fused. Complete the circuit diagram with the additional headlight by drawing in the wires. [2]

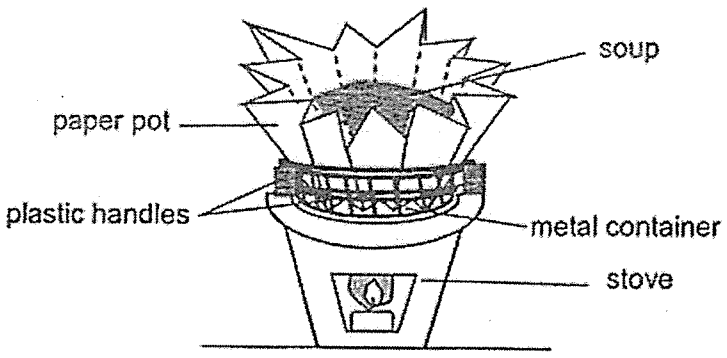


(ii) Suggest another advantage of the arrangement of the two headlights in (i) that would help Seth keep safe when he cycles at night. [1]

(Go on to the next page)

SCORE	/4

32. Macy went to a restaurant for dinner. Soup was served in a paper pot on a stove as shown. The paper pot has been coated with a layer of substance to make it waterproof.



(a) Macy noticed that there are plastic handles to hold up the whole stove. State an important property that the plastic used to make the handles must have to make it suitable for its use. Explain why the property is required. [1]

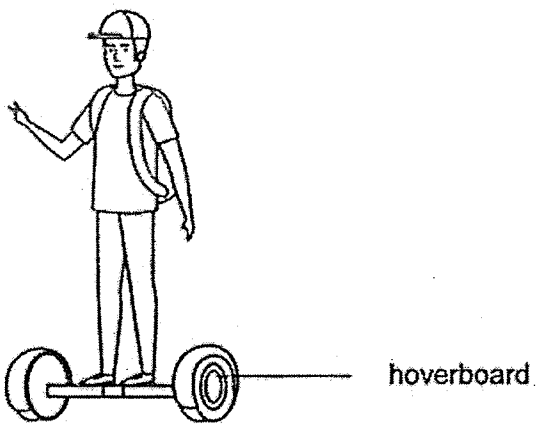
(b) After 15 minutes, she observed bubbles at the surface of the soup. Explain why. [1]

(c) Throughout the dinner, the paper pot did not burn. Macy concluded that the soup helped to prevent the paper pot from getting burnt. Suggest what Macy should do and observe to confirm her conclusion? [2]

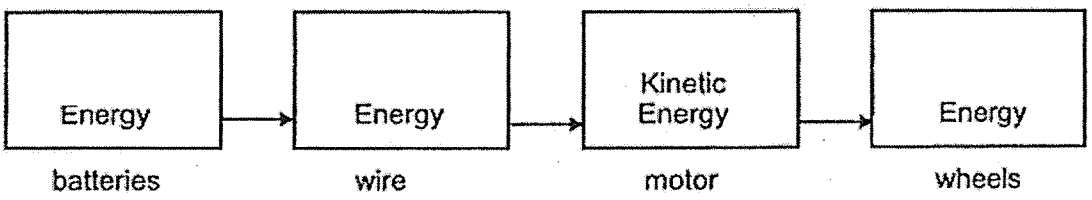
(Go on to the next page)

SCORE	/ 4

33. Elliott rides on a hoverboard as shown. The hoverboard has a built-in motor connected to a fully charged battery.



(a) Fill in the boxes to show the main energy conversion of the hoverboard as it moves. [1]



(b) Elliott noticed that as he moves down a slope on his hoverboard, the speed of the hoverboard increases. Explain his observation in terms of energy. [2]

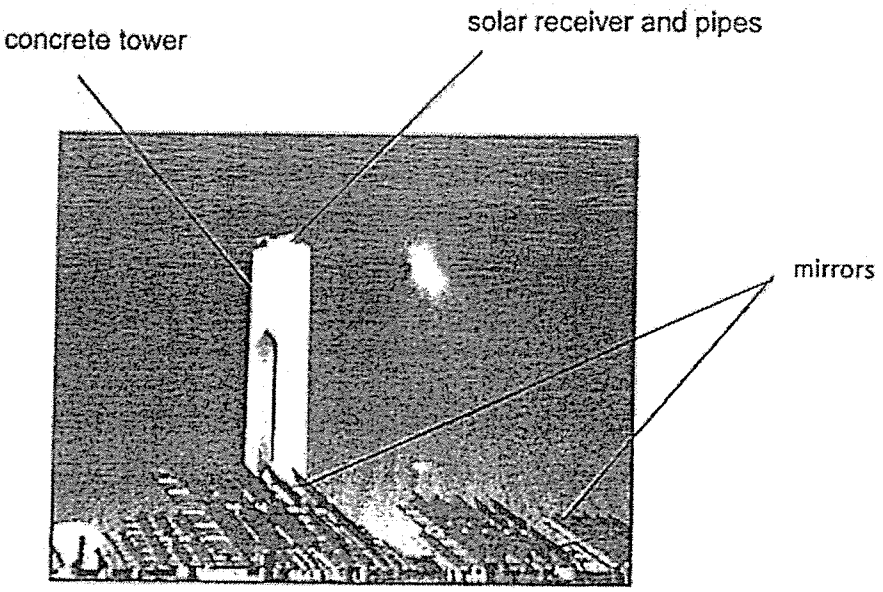
_____

_____

(Go on to the next page)

SCORE	/ 3

34. A solar power station has been built in Spain.



It uses a set of flat, movable mirrors to focus the sun's rays upon the solar receiver at the top of the tower.

(a) How do the movable mirrors make the solar power station more efficient? [1]

(b) Solar energy is used to heat water in pipes at the top of the tower. The heat turns the water into steam which is used to turn a turbine to generate electricity. Steam can be stored at 100°C in special tanks and can be used when needed.

When is it efficient to use the steam stored in the special tanks?

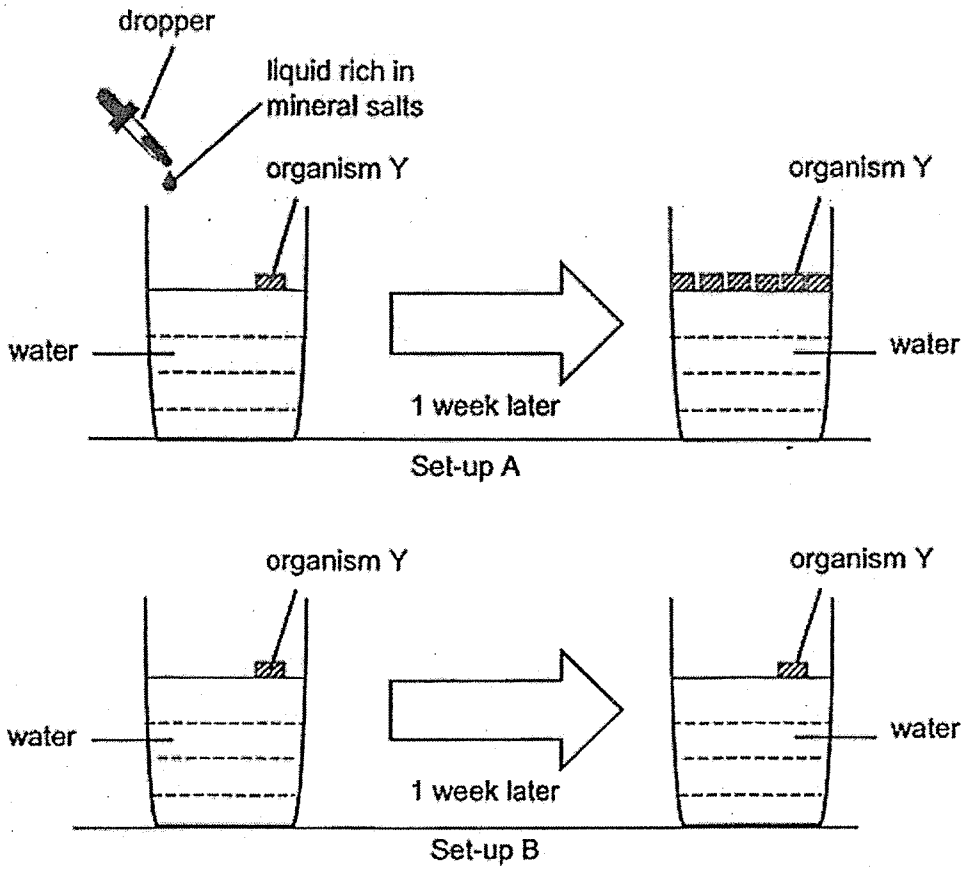
[1]

(c) Coal-fired power stations use coal to turn water into steam. Give one reason why solar power stations are more environmentally friendly than coal-fired power stations. [1]

(Go on to the next page)

SCORE	/ 3

35. Organism Y, which contains chlorophyll, is a plant-like organism that floats on water. Samuel put the same amount of Organism Y each into identical cups that contained the same amount of water. He added a few drops of liquid that are rich in mineral salts into the cup in Set-up A. He then placed both cups near a brightly lit window.



(a) One week later, Samuel noticed that the surface of the water in Set-up A had been completely covered by Organism Y. Explain why. [1]

_____

_____

(Go on to the next page)

SCORE	1

The picture shows a farmer looking at a pond full of organism Y.

(b) Suggest how a pond full of organism Y on the surface of the water can affect the fully submerged plants and animals living in water. [2]

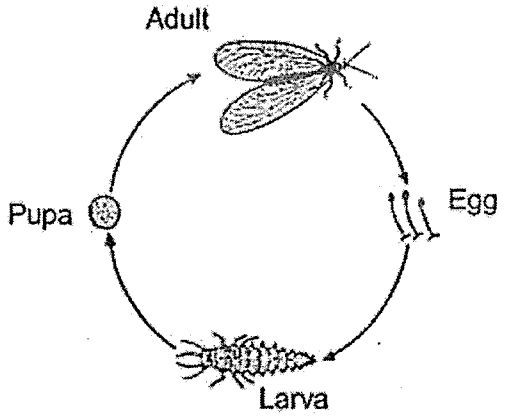
Fully submerged plants:

Animals living in the water:

(Go on to the next page)

SCORE	/ 2

36. The diagram shows the life cycle of organism X.



(a) Melvin classified the organism as an insect. State one characteristic of the adult stage that helped him classify organism X as an insect. [1]

Melvin then studied how surrounding temperature has an effect on the life cycle of organism X. He recorded his findings in the table.

Stage	Number of Days (Duration)	
	Surrounding temperature of 30°C	Surrounding temperature of 26°C
Egg	6	10
Larva	17	26
Pupa	15	28

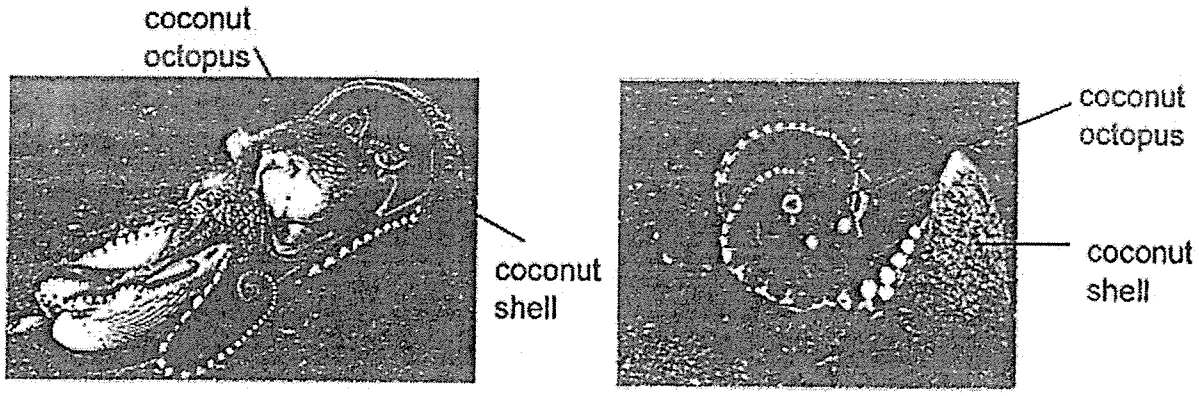
(b) What is the relationship between the surrounding temperature and the duration of one complete life cycle of organism X? [1]

(c) Organism X lays its eggs on the underside of leaves. Suggest an advantage to this behavioural adaptation. [1]

(Go on to the next page)

SCORE	
	3

37. The coconut octopus has no bones. It finds shelter inside empty coconut shells, or stay buried in the sand with only its eye visible.



(a) Fill in the table with the adaptations of the coconut octopus and how they help it to survive. [3]

Adaption	How it helps the octopus to survive?
Structural _____ _____	_____ _____
Behavioural: _____ _____	_____ _____

(b) Explain why a female coconut octopus lays up to as many as 100 000 eggs at a time. [1]

_____

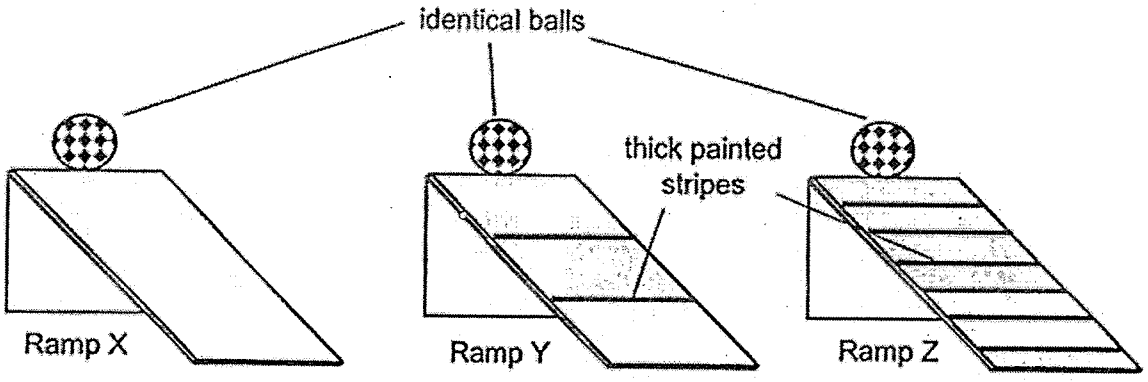
_____

(Go on to the next page)

SCORE	/ 4

38. An experiment was conducted by placing identical balls on three similar ramps, X, Y and Z. Ramps Y and Z have different number of thick painted stripes.

The balls were then released from the same starting point as shown in the diagrams.



The results were recorded in the table.

Ramp	Time taken for the ball to roll down to the bottom of the ramp (seconds)
X	1.4
Y	2.5
Z	4

(a) State the hypothesis for the experiment. [1]

_____

_____

(Go on to the next page)

SCORE	/ 1

The diagram shows a car moving on a road with thick painted stripes.

(b) Explain why the thick painted stripes on the road help to reduce accidents from happening. [2]

(Go on to the next page)

SCORE	/ 2

39. Nathan grew some plants from seeds using three identical pots with the same amount of soil. He also placed the plants in the same location and added the same volume of water to each pot daily.

He observed and recorded the appearance of the stems of the plants in the table.

Set-up	Temperature (°C)	Volume of water (ml)	Number of seeds	Appearance of stems
A	30	200	5	Shortest and thickest
B	30	200	10	Taller and thinner than A
C	30	200	15	Tallest and thinnest

(a) Explain why Nathan added the same amount of water to each pot. [1]

(b) Explain why the plant in Pot C have the tallest stems. [1]

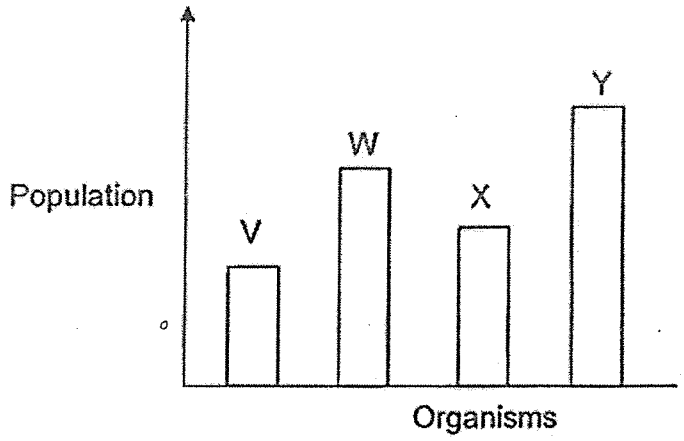
While walking in a park, Nathan noticed that the young plants of plant X grew very close to the adult plant X.

(c) How does plant X disperse its seeds? Give a reason for your answer. [1]

(Go on to the next page)

SCORE	/ 3

40. The bar graph shows the population of 4 organisms, V, W, X, and Y which make up a food chain in a habitat.



(a) Which organism(s) is/are both a prey and predator? [1]

There are two other population of organisms, P and Q living in the habitat. Organism P is a producer while Organism Q is a consumer. The table gives more information about Organisms P and Q.

Organism	Food
Q	P, Y and X

(b) Based on the information in the graph, draw a food web showing the food relationship of the six organisms. [2]

(Go on to the next page)

SCORE	
	3

(c) Explain what would happen to the population of organism V if all of organism X died. [1]

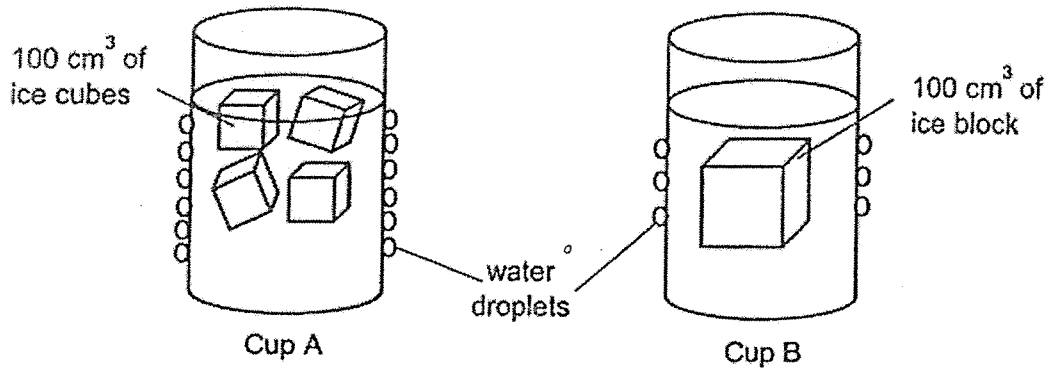
(d) Fungi and bacteria are decomposers. In what way are decomposers important to producers when organisms die? [1]

(Go on to the next page)

SCORE	/ 2

41. Matthias poured 300 ml of water each into Cup A and Cup B. He added 100 cm^3 of ice cut into small cubes into Cup A and a 100 cm^3 of ice block into Cup B.

The diagrams show how the cups look after three minutes.



(a) Explain how water droplets are formed on the outer surface of Cup A. [1]

(b) Based on the observations of the cups after three minutes, explain why Matthias concluded that the water in Cup A is colder than the water in Cup B. [2]

End of Booklet B

SCORE	3

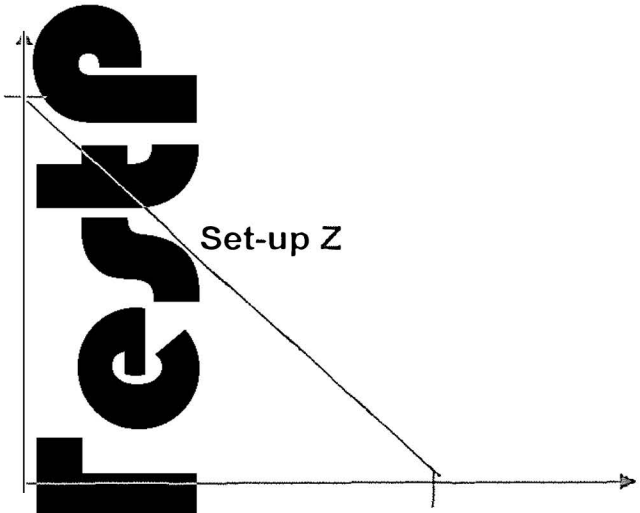
SCHOOL : ACS PRIMARY SCHOOL
LEVEL : PRIMARY 6
SUBJECT : SCIENCE
TERM : 2022 SA1

SECTION A

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
2	2	2	3	2	4	4	4	2	4
Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
1	3	3	4	4	1	4	3	4	1
Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28		
4	3	3	4	3	2	2	1		

SECTION B

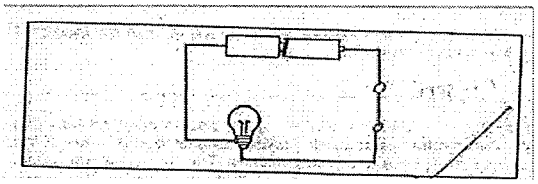
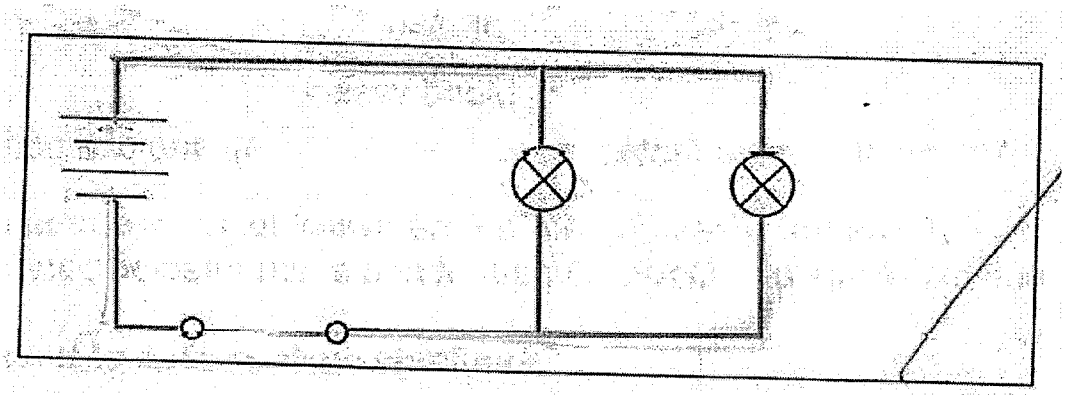
Q29) a)



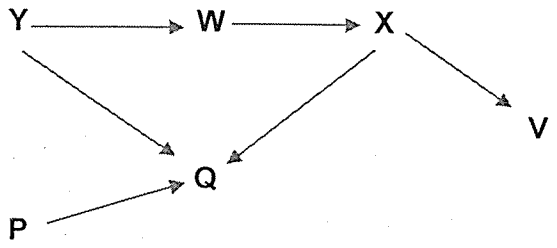
b) Set-up X. In set-up X there are more leaves on the plant so the roots will absorb more water for the leaves for photosynthesis resulting in a greater decrease in the volume of water.

Q30) (a) Lungs

(b) Oxygen

	(c) The patient's lungs have a smaller available surface area for gaseous exchange. Thus, the patient will need to breathe faster since there is less oxygen taken per breath.
Q31)	(a)   (b) i) ii) The bulbs will be brighter.
Q32)	(a) Plastic is a poor conductor of heat. Thus the plastic will gain heat slower from the heat source hence the person holding the handles will not be scaled. (b) The water in the soup gained heat from the flame and reached boiling point. (c) Macy could take two paper pots on with soup and one without soup and but them over a flame. After waiting for 10 minutes if none of the paper pots burn it means that the soup does not prevent the paper pot from getting burnt. However if the paper pot without soup burns and the one with soup does not burn, it means that the soup prevents the paper not from burnings.
Q33)	(a) Chemical potential Energy-→ Electrical Energy → Kinetic Energy → Kinetic Energy

	(b) On a slope, Elliott has more gravitational potential energy and the gravitational potential energy will then be converted to more kinetic energy thus increasing the speed of which the hoverboard increases.
Q34)	(a) The movable mirrors will make it more efficient by tilting the mirrors so that more of the sun's rays could be focused in the sun receiver. (b) It is efficient to used the steam when there is not lot of sun rays to power the solar receiver. (c) Solar power stations produce less carbon dioxide.
Q35)	a)Y absorbed the mineral salts & reproduced . b) Fully submerged plant: Organism Y will block most of the sunlight so the fully submerged plants will have less sunlight and with less sunlight, the rate of photosynthesis would decreases and they would soon run out of food an die. Animals living in the water: Animals are unable to take in dissolved oxygen & decrease in population.
Q36)	a) It has six legs. b) As the surrounding temperature decreases, the duration of one complete life cycle of X increases. c) The increasing the chances of X growing into larva and not being eaten by predators.
Q37)	a) Structural – it has no bones This allows it to be hid inside empty coconut shells, thus decreasing the chances of the predators spotting it. Behavioural – it hid with only one eye visible. So that predators will not spot the coconut octopus and eat it. b) Some of the eggs will be eaten by predators and some of the eggs will not grow into adults to reproduce and ensure the continuity of their own kind hence laying many egg will increase the chances of the eggs growing into adults and reproducing.

Q38)	a) The greater the number of thick stripes, the longer the time taken for the ball to roll down to the bottom of the ramp. b) The stripes increase friction between the wheels and the road, slowing down the car.
Q39)	a) To ensure that any change in the appearance of the stem is only due to the number of seeds. b) There was the most amount of seeds in the pot so overcrowding occurred so there was competition for water, mineral salts, sunlight and space thus they have the tallest stem. c) Explosive action. Plant X grew very close to adult plant X so it was dispersed by explosive action as it can only scatter the seeds close to the parent plant.
Q40)	a) X b)  c) The population of organisms V would decrease. X was only food source and if X died , V would have no more food and die. d) When the decomposers decompose the dead organisms into similar substances, the organisms will return to the ground as mineral salts which the producers will use to during photosynthesis. Q41) a) When the warmer water vapour in the surrounding air comes into contact with the cooler outer surface of the cup, it loses heat to condense and form water droplets. b)There were more water droplet on the outer surface of A. The contact surface area of the ice in A is bigger than in B, the water in A loses heat to the ice faster.