

Anglo-Chinese School (Junior)



SEMESTRAL ASSESSMENT 2 (2018) PRIMARY 5

SCIENCE

BOOKLET A

31 October 2018

1 HOUR 45 MINUTES

Name : _____ ()

Class : P5 _____

INSTRUCTIONS TO PUPILS

DO NOT TURN OVER THE PAGES UNTIL YOU ARE TOLD TO DO SO

Follow all instructions carefully.

There are 28 questions in this booklet.

Answer **ALL** questions.

INFORMATION FOR PUPILS

The total marks for this booklet is 56.

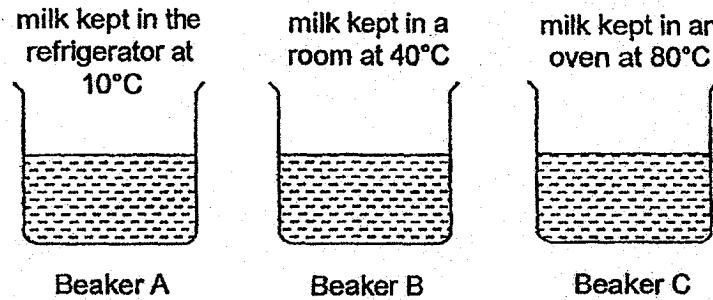
The total time for Booklets A and B is 1 hour 45 minutes.

This question paper consists of 21 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) and shade your answer on the Optical Answer Sheet.

(56 marks)

1. Yogurt is made by adding bacteria to milk at the correct conditions. John conducted an experiment to find out the right conditions for making yogurt. He used beakers with the same amount of milk at different temperatures as shown.



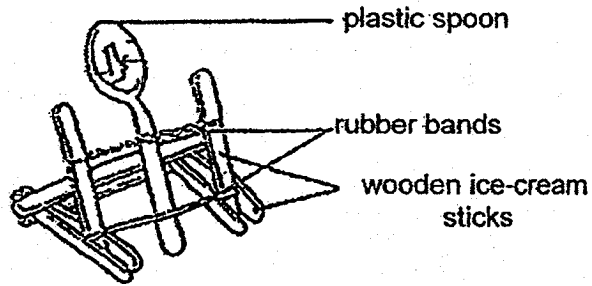
John added the same amount of bacteria to the three beakers and recorded his observation after 4 hours in the table below.

Beaker	Observation after 4 hours
A	No change to milk.
B	Milk turns into yogurt.
C	A thick layer forms on the surface of the milk. Rest of the milk remains the same.

Based on John's experiment, which of the following can John conclude?

- (1) Bacteria became yogurt in 4 hours.
- (2) Bacteria needs any temperature to turn milk into yogurt.
- (3) Bacteria needs a temperature of 40°C to turn milk into yogurt.
- (4) Bacteria needs a temperature of 40°C and above to turn milk into yogurt.

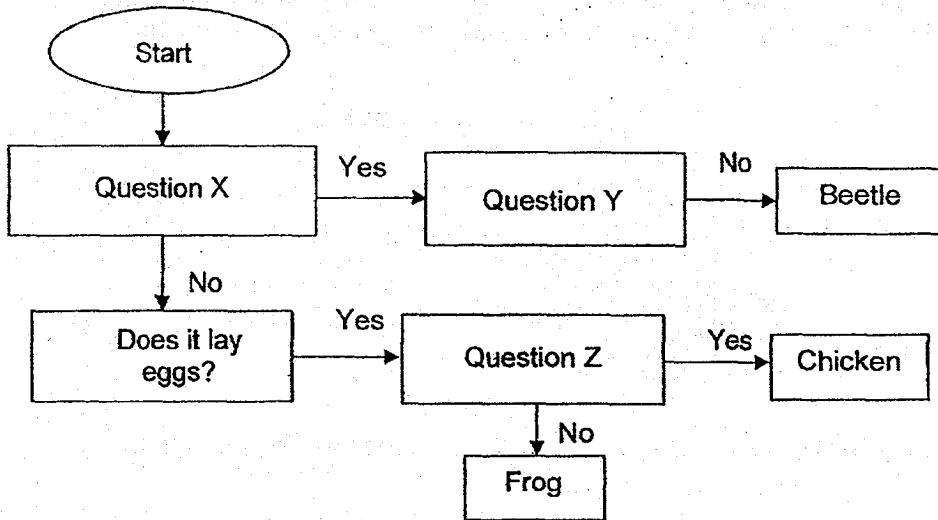
2. Allan built a catapult using rubber bands, wooden ice-cream sticks and a plastic spoon as shown in the diagram. He placed an eraser on the plastic spoon and pulled the plastic spoon back. When he released the spoon, the eraser flew forward.



Which of the following properties of materials is necessary for making the catapult?

	Plastic Spoon	Rubber bands	Ice-cream sticks
(1)	waterproof	floats in water	flexible
(2)	flexible	strong	floats in water
(3)	strong	flexible	strong
(4)	transparent	waterproof	waterproof

3. Study the flowchart.



Which of the following represents questions X, Y and Z?

	X	Y	Z
(1)	Does it have a 3-stage life cycle?	Does the young look like the adult?	Does it moult?
(2)	Does it have a 4-stage life cycle?	Does the young look like the adult?	Does the young look like the adult?
(3)	Does it have a 3-stage life cycle?	Does it spend part of its life cycle in water?	Does the young look like the adult?
(4)	Does it have a 4-stage life cycle?	Does it moult?	Does it spend part of its life cycle in water?

4. Read the following statements regarding the growth of a plant.

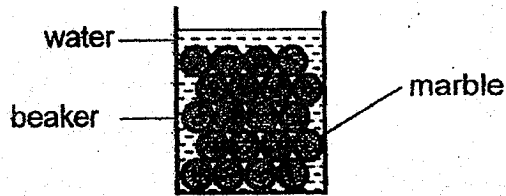
- A Fruit contains seeds.
- B Shoot starts to grow out of the seed.
- C Root starts to grow out of the seed.
- D Flowers appear.
- E Make its own food.



Arrange the above statements in the correct order in the growth of a plant.

- (1) A → C → B → D → E
- (2) A → C → B → E → D
- (3) A → B → C → E → D
- (4) A → D → C → B → E

5. Jack pour some water into a beaker with marbles.

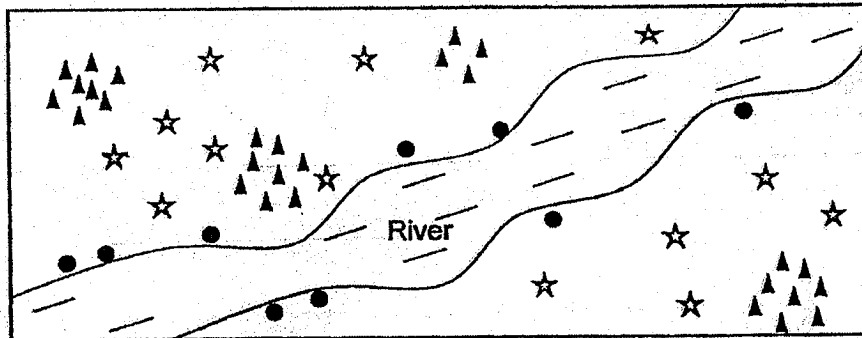


Which of the following can Jack conclude based on the property of matter?

- A The volume of the water did not change.
- B The marbles do not have a definite shape.
- C Water filled up the gaps between the marbles.
- D The marbles takes the shape of the beaker that it is placed in.

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

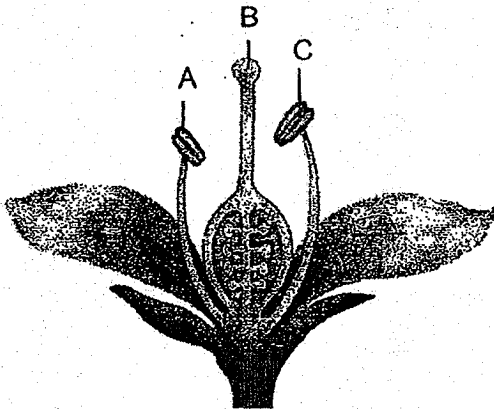
6. The diagram shows an area in the forest where three types of plants (▲, ☆, ●) are growing.



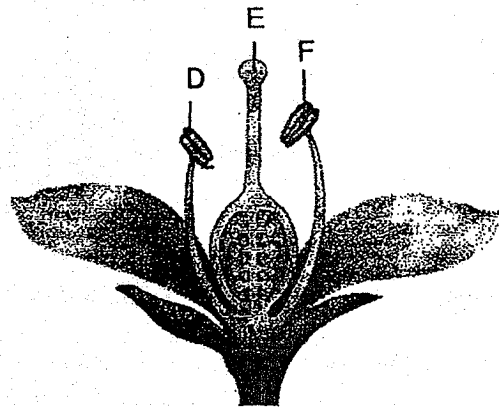
How are the fruits or seeds of the three plants most likely dispersed?

	Plant ▲	Plant ☆	Plant ●
(1)	Wind	Animal	Splitting
(2)	Splitting	Wind	Water
(3)	Wind	Splitting	Water
(4)	Splitting	Animal	Wind

7. The diagrams show the flowers of two plants.



Flower from plant X



Flower from plant Y

Pollination takes place when pollen grains are transferred from _____.

- (1) B to A and B to C
- (2) A to B and C to D
- (3) C to D and B to E
- (4) D to B and F to E

8. The diagrams show the reproductive systems of a human and a plant respectively.

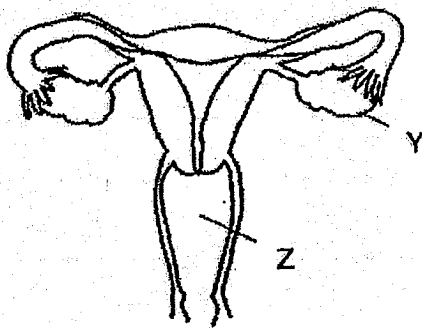


Diagram 1

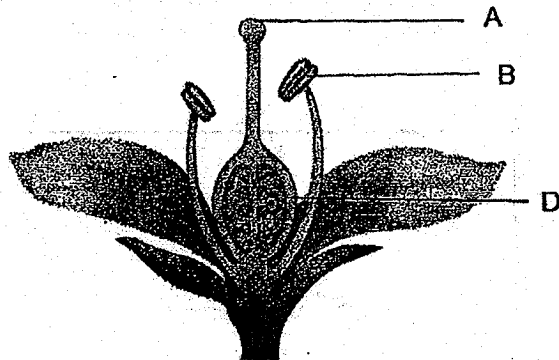
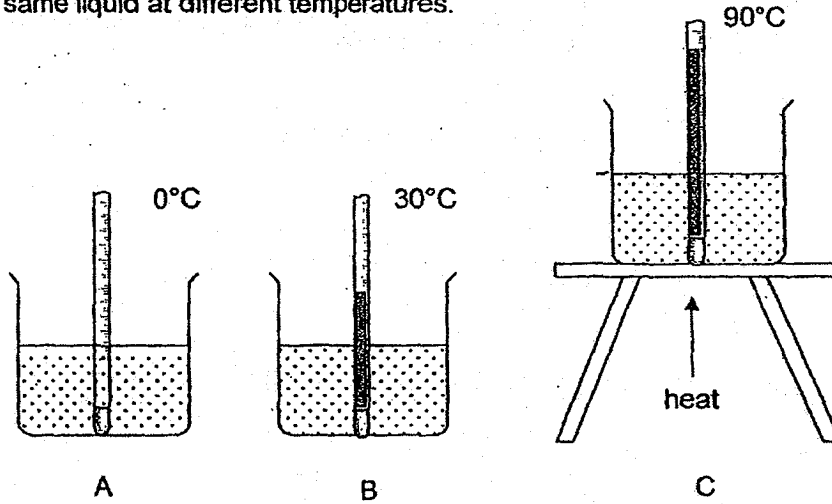


Diagram 2

Which of the parts in the diagrams have similar functions?

	Diagram 1	Diagram 2
(1)	Z	B
(2)	Z	D
(3)	Y	D
(4)	Y	A

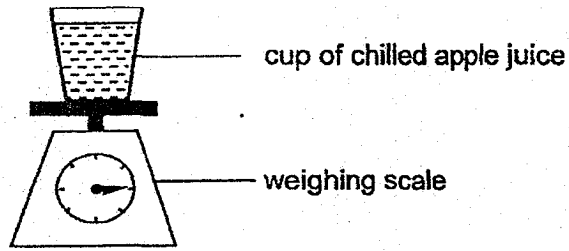
9. Study the three set-ups, A, B and C. Each beaker contains the same volume of the same liquid at different temperatures.



In which of the set-ups would evaporation occur?

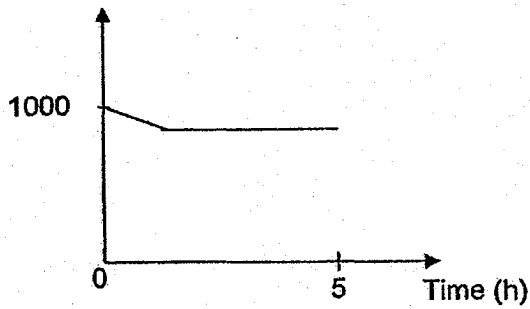
- (1) B only
- (2) A and B only
- (3) B and C only
- (4) A, B and C

10. Diana placed a cup of chilled apple juice onto a weighing scale as shown. She left the set-up on the kitchen table and recorded the mass every hour for the next 5 hours.

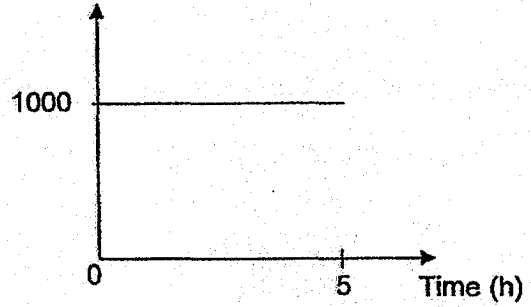


Which of the graphs correctly shows the change in the mass over a period of 5 hours?

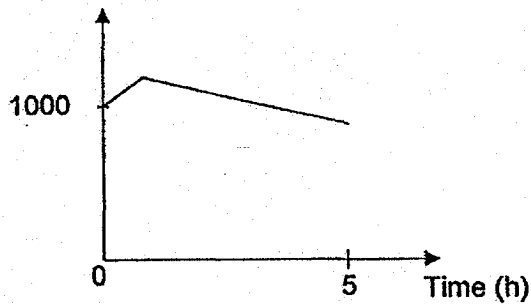
(1) Mass (g)



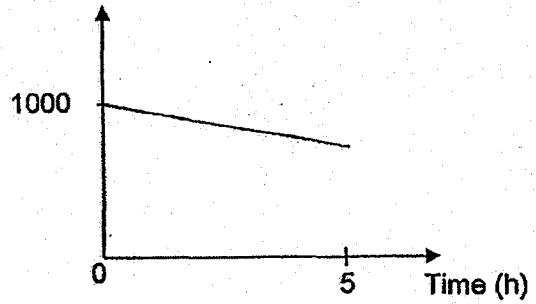
(2) Mass (g)



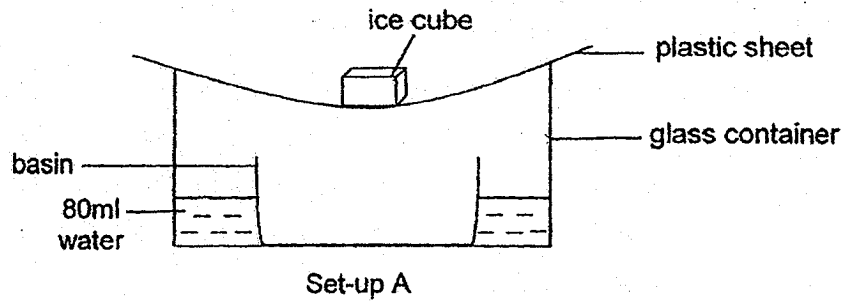
(3) Mass (g)



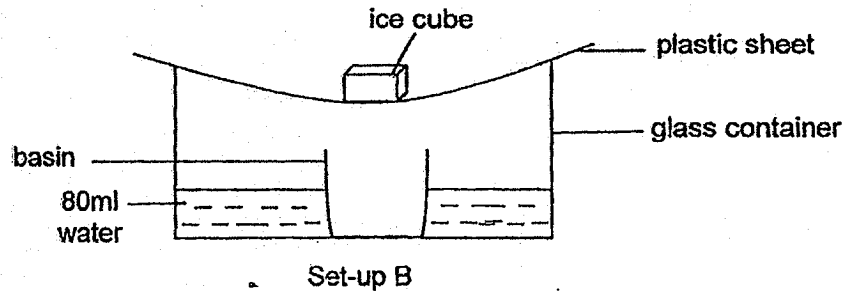
(4) Mass (g)



11. Mr Koh conducted an experiment as shown in set-up A.



After 3 hours, he observed that 50 ml of liquid was collected in the basin.
Mr Koh repeated the experiment with a smaller basin as shown in set-up B below.



Which of the following is the correct explanation about the amount of liquid collected in set-up B as compared to set-up A?

	Amount of liquid collected in basin of set-up B (ml)	Explanation
(1)	50	The rate of evaporation is the same in both set-ups as the surrounding temperature is the same.
(2)	75	The rate of evaporation in set-up B is faster as there is a larger exposed surface area of water.
(3)	25	The rate of evaporation in set-up B is slower as there is a smaller exposed surface area of water.
(4)	100	The rate of evaporation in set-up B is faster as there is a larger exposed surface area of water.

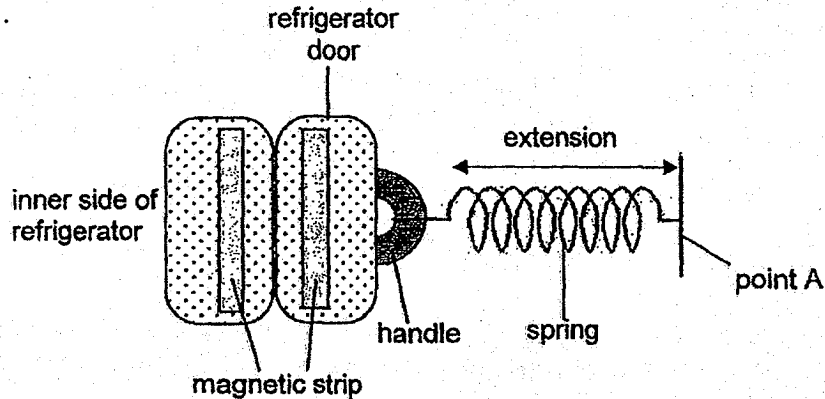
12. Mei Ling suspended a bar magnet on a string and waited until it stopped turning. She observed that the magnet did not point in a north-south direction. What could be the possible reasons for this?

- A There was another magnet near the bar magnet.
- B The magnetic strength of the bar magnet was too strong.
- C She had used a defective compass to determine the direction.
- D She conducted her experiment in the school field instead of in the science laboratory.

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

13. Paul noticed that most refrigerators have a magnetic strip around the door. Paul wanted to investigate the magnetic strength of the magnetic strips of four different models of refrigerators.

He attached a spring to the handle of the door of refrigerator A as shown. He pulled the spring at point A and measured how long the spring extended before the door opened.



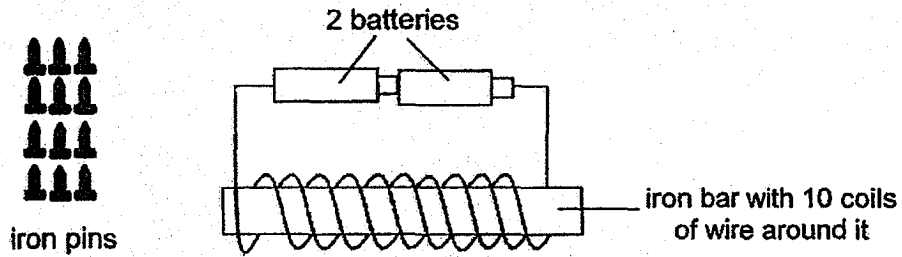
He repeated his experiment with refrigerators B, C and D and recorded his results in the table below.

Refrigerator model	Extension of spring (cm)
A	25
B	40
C	30
D	65

Which of the following shows the arrangement of the refrigerators according to the magnetic strength of the magnetic strips beginning from the strongest magnetic strength?

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

14. Tristan conducted an experiment with the electromagnet as shown. He brought the electromagnet near a pile of iron pins and records the number of pins attracted by the electromagnet.



Number of pins attracted	10
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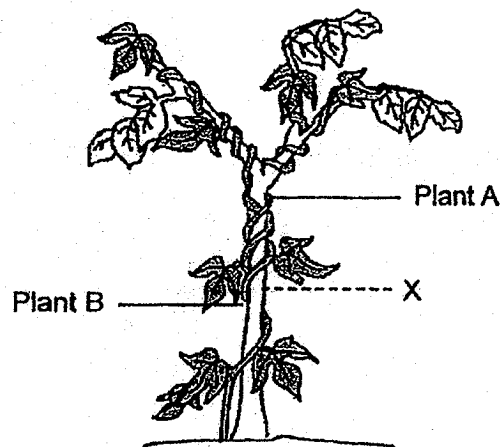
Tristan made one change to his set-up each time and repeated his experiment. Predict the number of pins that would be attracted to the electromagnet when Tristan makes each change.

	Number of coils around the iron bar	Number of batteries	Number of pins attracted
(1)	10	1	5
(2)	10	3	10
(3)	5	1	10
(4)	15	2	5

15. Which of the following is a function of the human skeletal system?

- (1) Protects the vital organs in the body
- (2) Transports food in the digestive system
- (3) Carries waste material away from the body
- (4) Absorbs oxygen and passes it to the bloodstream

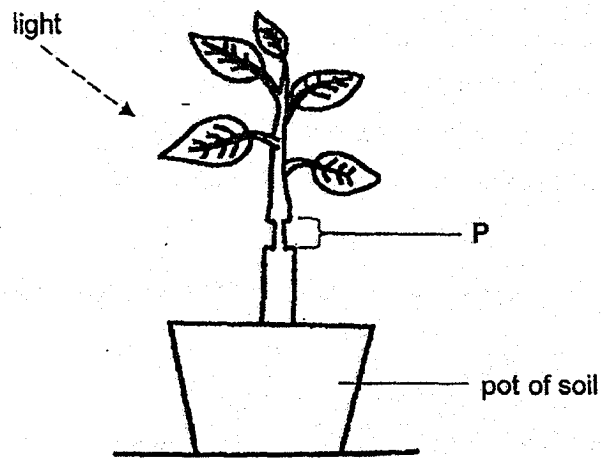
16. Plant A is a creeper that climbs around Plant B to get more sunlight.



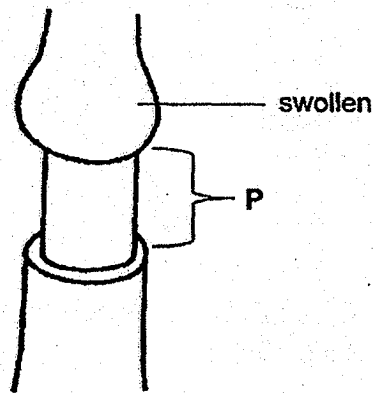
The stem of Plant A was cut at X. The parts of Plant A above X withered and died after some time. Why?

- (1) It could not get enough sunlight.
- (2) There was insufficient chloroplasts.
- (3) The parts above X did not receive water.
- (4) Plant A cannot get support from Plant B above X.

17. Andrew removed the outer ring of the stem of a plant at part P.



He then placed the plant in the garden under the Sun and watered it regularly.

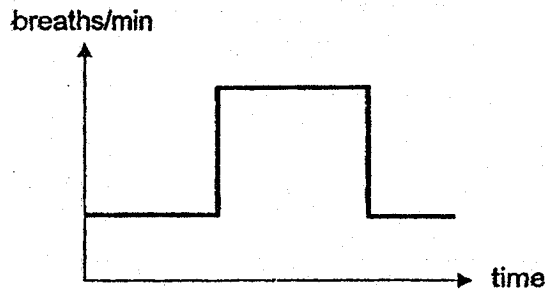


After a few days, Andrew observed that the plant was alive but the part of the stem above P was swollen. Why?

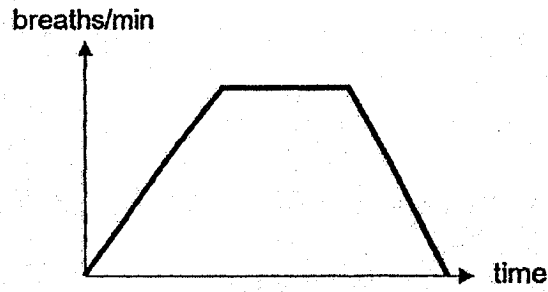
- (1) Only the food-carrying tubes were removed at P.
- (2) Only the water-carrying tubes were removed at P.
- (3) Both the food and water carrying tubes were removed at P.
- (4) Neither the food nor the water carrying tube was removed at P.

18. Which of the graphs most likely represents the changes in the breathing rate of an athlete before, during and after a run?

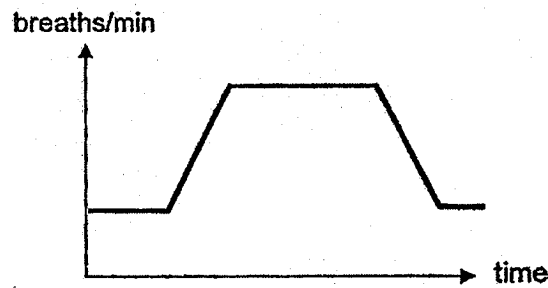
(1)



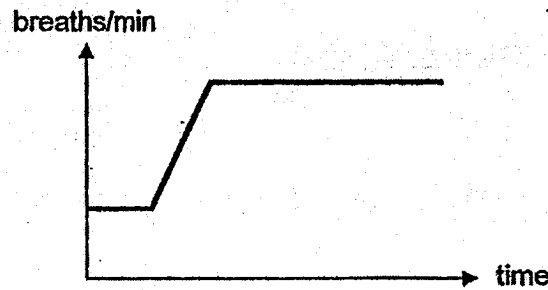
(2)



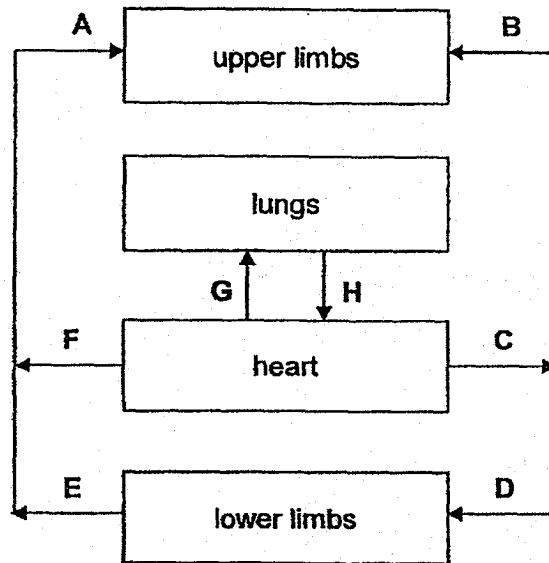
(3)



(4)



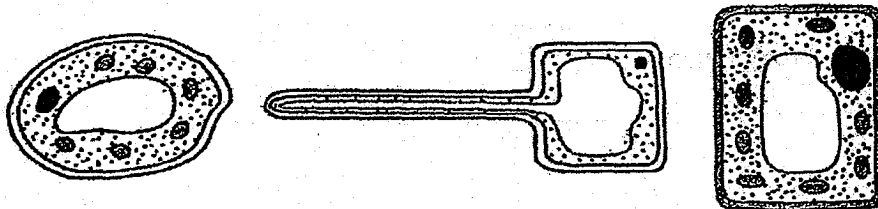
19. Daniel drew the diagram below to show the blood flow in the human body.



His teacher commented that his diagram is incorrect and he needs to change the direction of two arrows in the diagram.

Which two arrows should be corrected in the diagram?

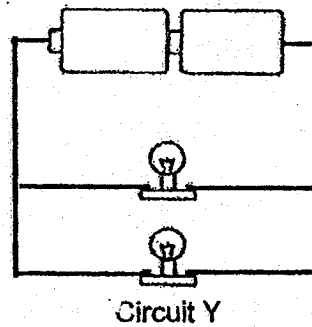
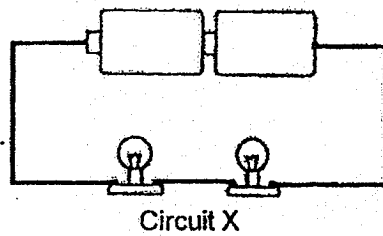
- (1) A and F
 - (2) B and G
 - (3) C and D
 - (4) E and H
20. Study the three plant cells.



Which of the following part(s), cell wall, chloroplast and cytoplasm, is /are found in all three cells?

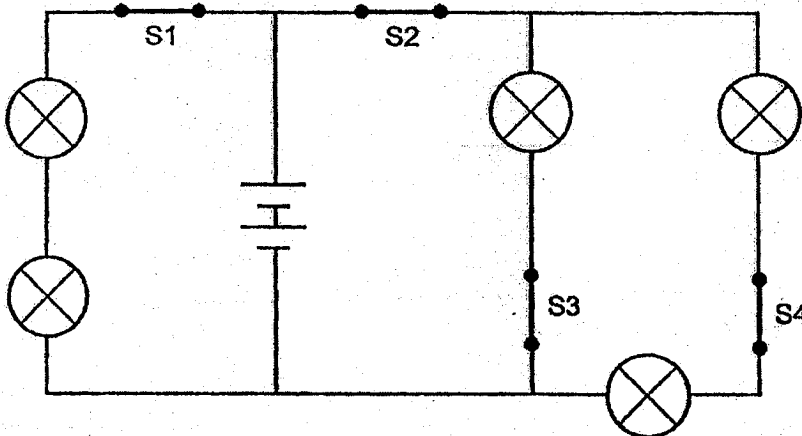
- (1) chloroplast only
- (2) cell wall and cytoplasm only
- (3) cytoplasm and chloroplast only
- (4) cell wall, cytoplasm and chloroplast

21. Aidan constructed two circuits, X and Y, using the identical bulbs and batteries which are in working condition.



Which of the following observations is correct when circuit X is compared with circuit Y?

- (1) All bulbs will have the same brightness.
 - (2) Each bulb will have different brightness.
 - (3) Bulbs in Circuit X will be dimmer than those in Circuit Y.
 - (4) Bulbs in Circuit X will be brighter than those in Circuit Y.
22. Evan set up the circuit shown.

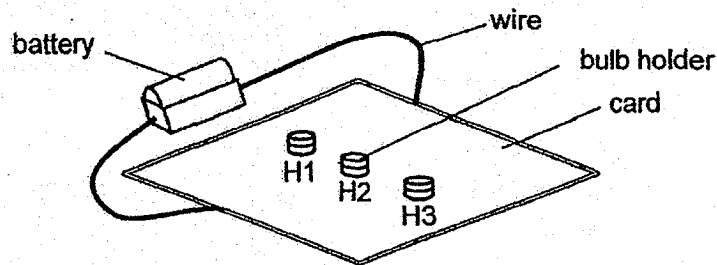


All five bulbs were lit when all four switches, S1, S2, S3 and S4, were closed. Evan wanted the least number of bulbs to be lit when only one switch is open.

Which switch should he open?

- (1) S1
- (2) S2
- (3) S3
- (4) S4

23. Jeremiah created a game using a battery and three light bulb holders H1, H2 and H3. The wires were hidden behind a card such that only the bulb holders can be seen.

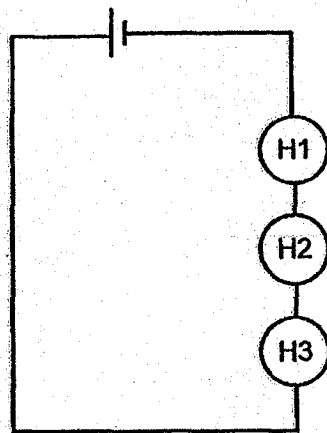


He then asked his classmate, Kyler, to find out how H1, H2 and H3 were connected using two identical light bulbs. Below are Kyler's observations.

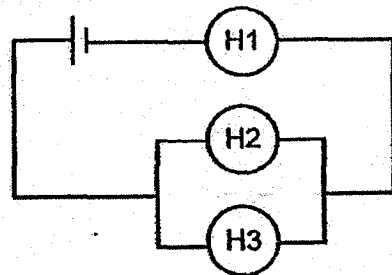
When no bulb at	Observation
H1	bulbs at holders H2 and H3 lit up
H2	bulbs at holders H1 and H3 lit up
H3	bulbs at holders H1 and H2 did not light up

Which of the following shows the correct circuit of the game?

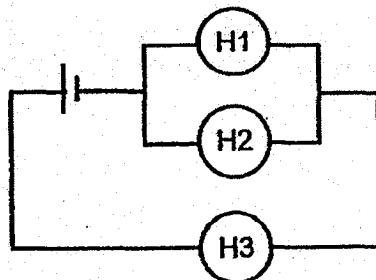
(1)



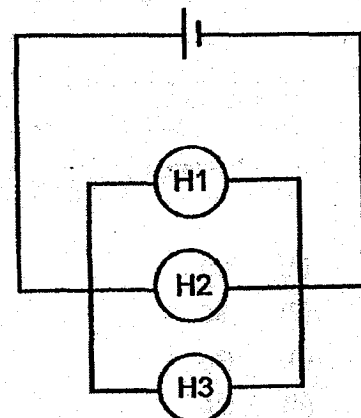
(2)



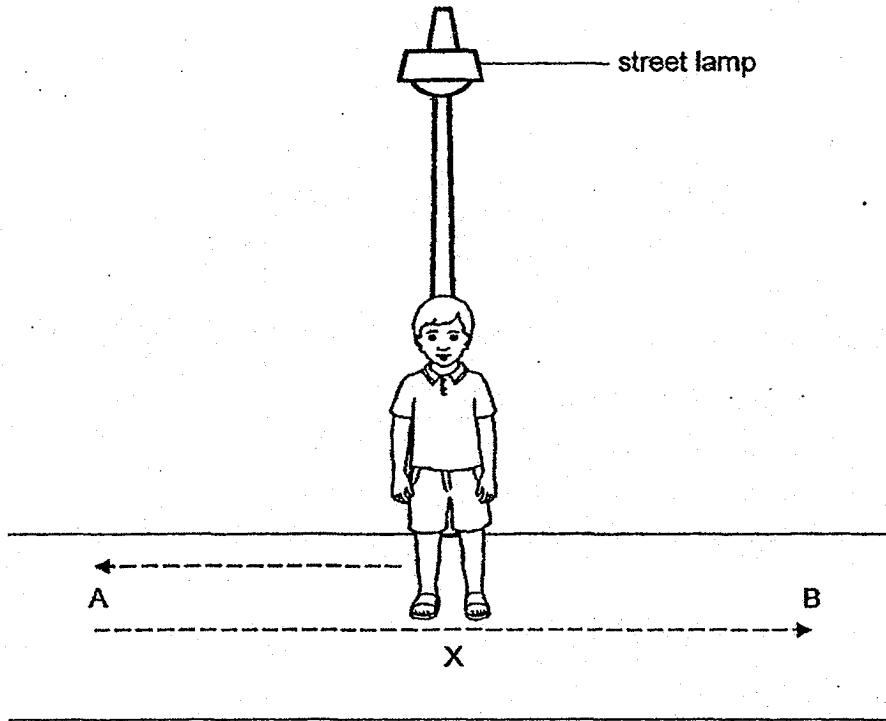
(3)



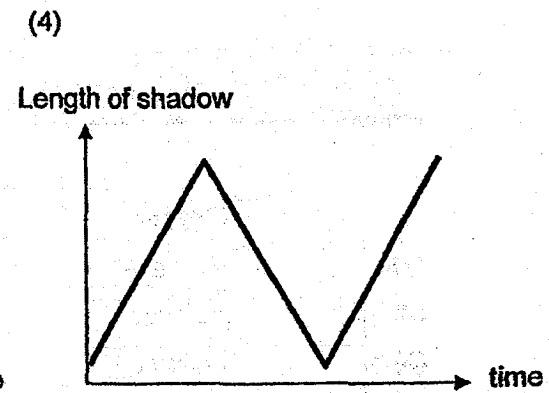
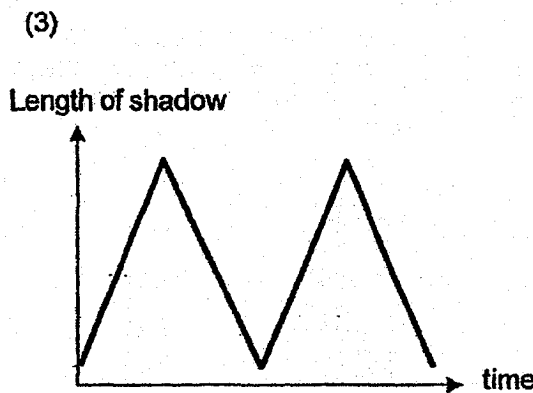
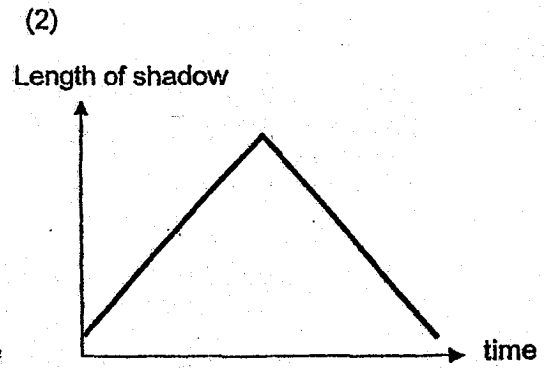
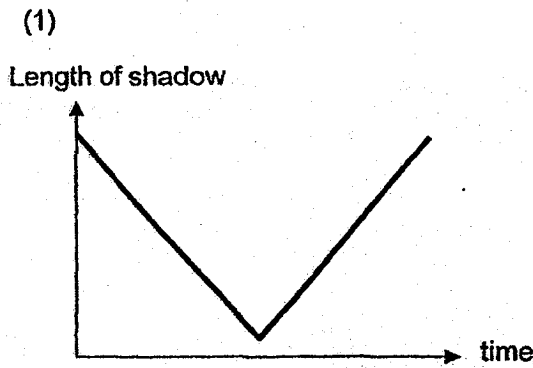
(4)



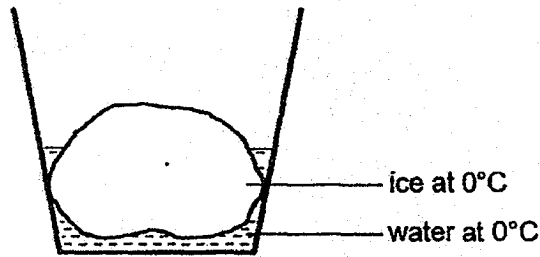
24. Gabriel was standing under a street lamp. He walked to A and then to B.



Which of the following graphs correctly represents the changes in the length of his shadow as he walked from X to A then to B?



25. Chris placed a block of ice into a glass containing some water at a room of 28°C .

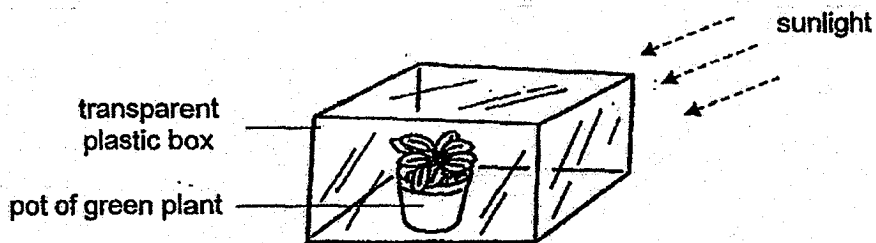


Chris made the following statements when the ice and the water were at 0°C .

- A The ice is not melting as it remains at 0°C .
- B The ice does not melt as it did not gain heat.
- C The ice melts as it gains heat from the water.
- D The ice melts as it gains heat from the surrounding air.

Which of his statement(s) is/are correct?

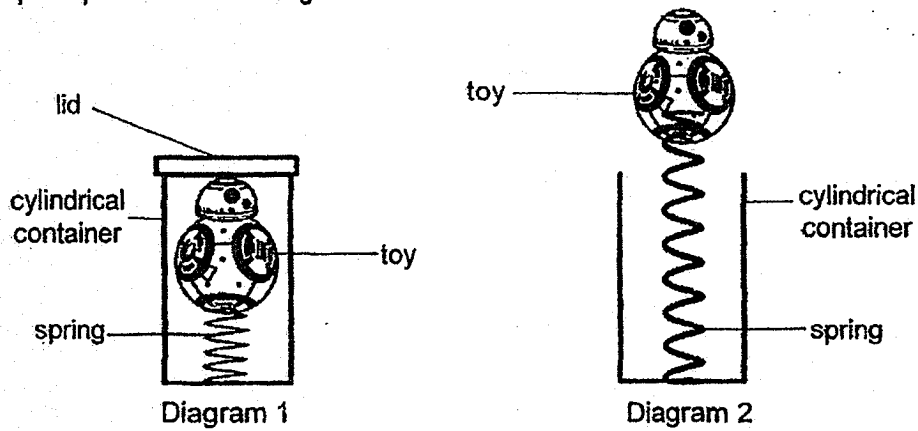
- (1) A only
 - (2) D only
 - (3) A and B only
 - (4) C and D only
26. Benjamin placed a pot of green plant in a transparent plastic box as shown. He measured the amount of oxygen and carbon dioxide in the box at the start of the experiment.



After some time, Benjamin measured and recorded the amount of oxygen and carbon dioxide again. Which of the following best represents the change in the amount of oxygen and carbon dioxide in the box after some time?

	Oxygen	Carbon dioxide
(1)	decrease	decrease
(2)	increase	decrease
(3)	increase	increase
(4)	decrease	increase

27. Casey pushed a toy, which was attached to a spring, into a cylindrical container and closed it with a lid as shown in Diagram 1. When he opened the lid, the toy jumped up as shown in Diagram 2.



He wanted the toy to jump higher. What should he do?

- (1) Use a lighter lid
 - (2) Use a smaller toy
 - (3) Use a longer spring
 - (4) Use a taller container
28. Natural gas, coal and oil are examples of _____.
- (1) energy
 - (2) organisms
 - (3) fossil fuels
 - (4) living things

Anglo-Chinese School (Junior)



SEMESTRAL ASSESSMENT 2 (2018)

PRIMARY 5

SCIENCE

BOOKLET B

31 October 2018

1 HOUR 45 MINUTES

Name : _____ ()

Class : P5 _____

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Follow all instructions carefully.

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Answer **ALL** questions.

INFORMATION FOR PUPILS

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The total time for Booklets A and B is 1 hour 45 minutes.

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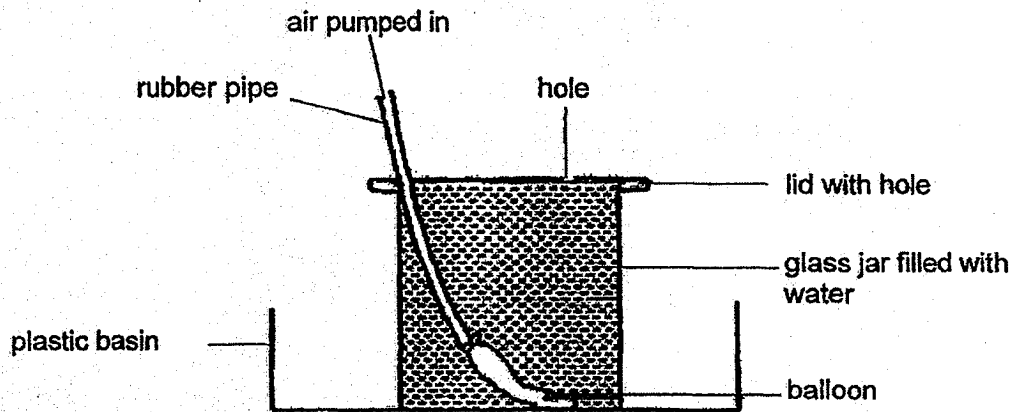
BOOKLET A	/ 56
BOOKLET B	/ 44
TOTAL	/ 100
Parent's signature/ Date: _____	

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. Mrs Tan set up an experiment as shown. She filled the glass jar to the brim with water. She then pumped five pumps of air into the balloon.



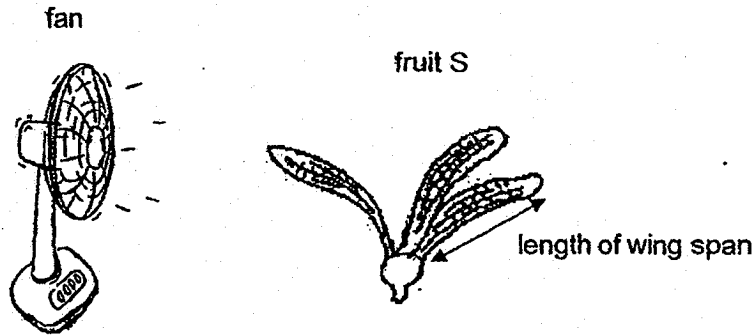
- (a) State two observations that Mrs Tan would make. Explain your answer. [2]

- (b) Describe how Mrs Tan can measure the volume of air in the balloon. [1]

(Go on to the next page)

SCORE	
	3

30. Sam wants to find out how the length of the wing span a fruit S affects the distance it travels when dropped from a fixed height. He dropped the fruit from a height in front of a fan and measured the distance travelled by the fruit as shown.



Sam used the same fruit and cut away some of the wing each time and repeated his experiment. He recorded the results in the table below.

Length of wing span (cm)	10	7	4	2
Distance travelled (cm)	50	38	20	12

- (a) When the length of the wingspan is longer, the distance travelled by the fruit is further. How is this advantageous to fruit S? [1]

- (b) Sam used a constant wind speed for the fan throughout his experiment. Explain why this ensures that his experiment is a fair test. [1]

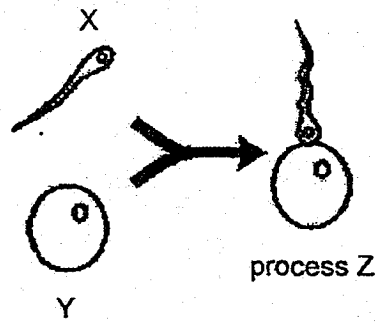
- (c) Sam now wants to conduct another experiment. He wants to find out if the height at which fruit S is dropped affects the distance it travels. Complete the table by placing a (✓) next to the variables that are to be kept the same. [1]

Variables	Keep the same
Length of wing span	
Wind speed	
Height at which fruit is dropped	
Mass of fruit	

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SCORE	3
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31. The diagram below shows the process in human reproduction.



- (a) Name the parts X and Y. [1]

X: _____

Y: _____

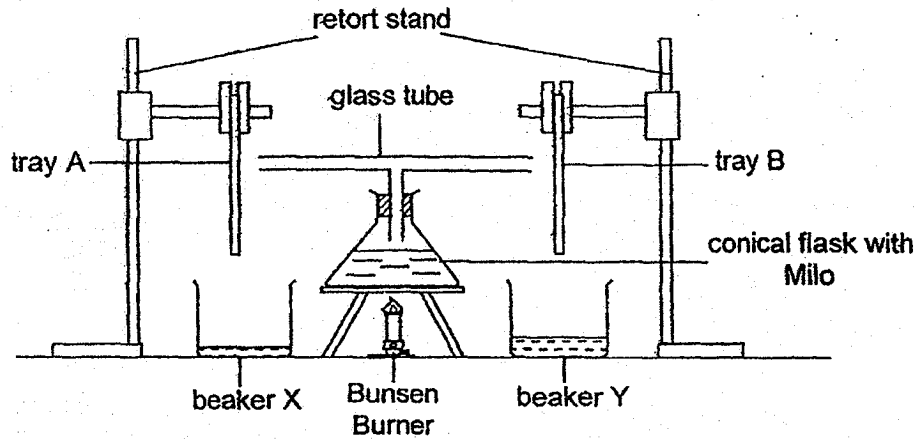
- (b) Name process Z and describe what happens during this process. [1]

- (c) How does the developing foetus obtain nutrients after process Z? [1]

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32. Peter suspended two trays, Tray A and Tray B, at equal distances from the ends of a glass tube attached to a conical flask. Both trays are of the same size and at room temperature but made of different materials, plastic and metal.



Peter heated the Milo in the conical flask to 100°C and allowed the Milo to continue boiling for 10 minutes.

- (a) After 5 minutes, Peter observed droplets of liquid on both trays. Explain Peter's observation. [2]

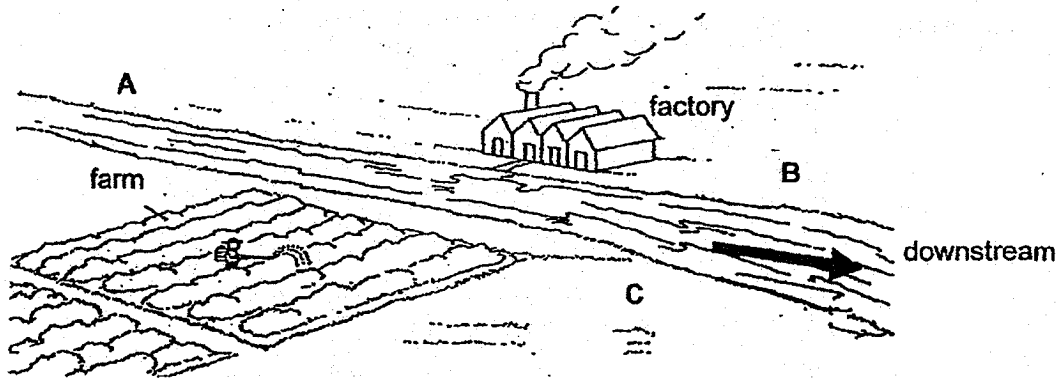
- (b) After 10 minutes more liquid was collected in Beaker Y than Beaker X. Which tray, Tray A or Tray B, is made of metal? Explain your answer. [2]

- (c) If Peter turned up the flame of the bunsen burner, will the amount of liquid collected in the same period of time in both beakers be more or less than the experiment above? Explain why. [1]

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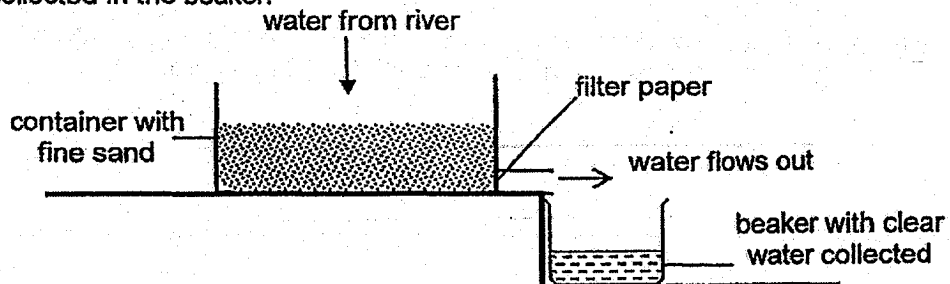
SCORE	
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33. The picture shows a factory and a farm situated along a river flowing downstream.



- (a) Company X wants to build a water treatment plant which supplies water for home use. The water that is to be treated is pumped to the treatment plant from the point in the river nearest to it. Why is location A a better location than locations B or C to build the water treatment plant? [1]

Ben wanted to find out whether the water collected from point C could be cleaned. He used the set-up shown. He poured 100 cm^3 of water collected from the river near point C onto the fine sand. After some time, clear water was collected in the beaker.



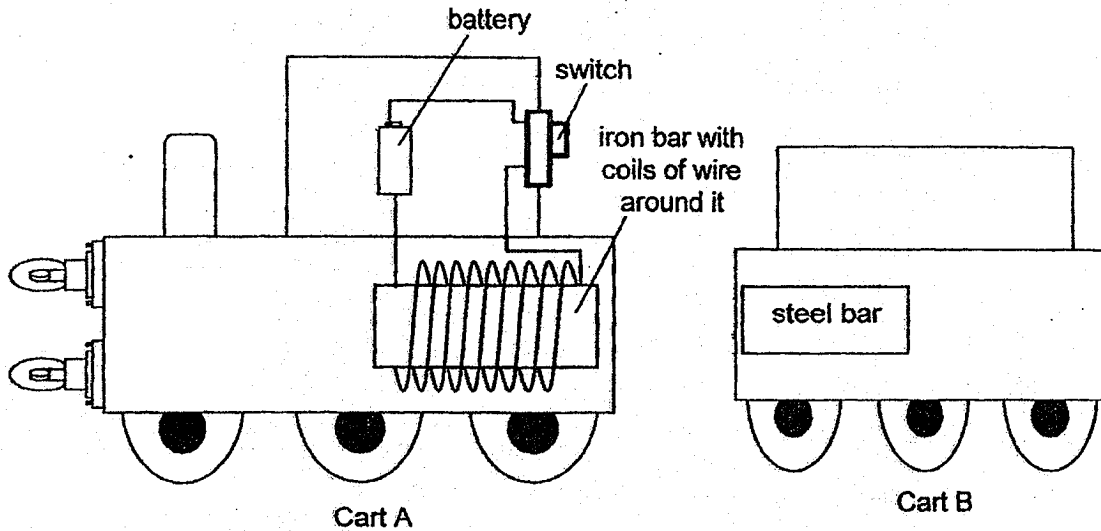
- (b) Give a reason why Ben used fine sand instead of big rocks in his experiment. [1]

- (c) Which method of water conservation is Company X using? [1]

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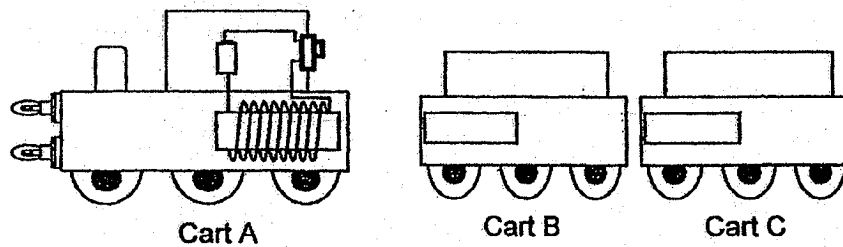
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34. Thomas has a toy train set. The diagram shows part of the circuit inside the trains. The train carts are not attached to each other. When he switches on cart A, it will start to move forward and cart B will move along with it.



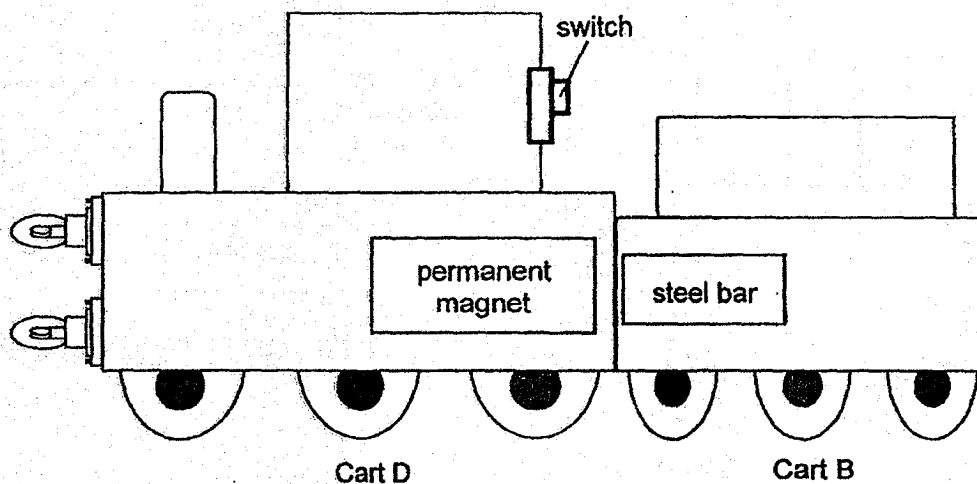
- (a) Explain why Cart B moves along with Cart A when it is switched on. [1]

- (b) Thomas placed Cart C, which is identical to Cart B, behind Cart B as shown.



- When Thomas switched on Cart A, Cart B moved along with Cart A but not Cart C. Explain clearly why. [1]

- (c) Thomas replaced Cart A with Cart D that had a permanent magnet as shown.

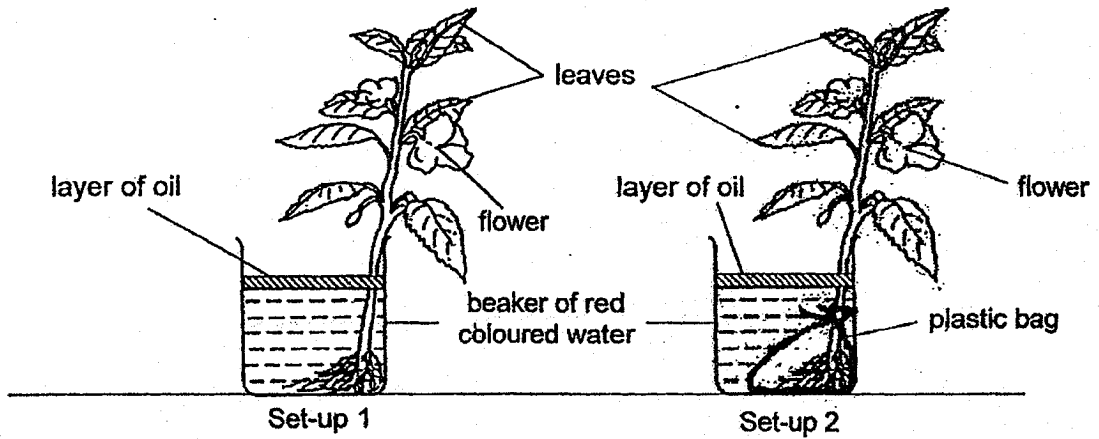


Thomas noticed that even before the switch on Cart D was switched on, Cart B was attracted to Cart D. He tried to separate Cart B from Cart D but had a lot of difficulty doing so. From Thomas' observation, why it is better for him to use Cart A instead of Cart D. [1]

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35. Kelvin prepared 2 set-ups. He placed a healthy plant in both beakers of red coloured water as shown in the diagram. He then poured a layer of oil into the beakers.



(a) What changes would be observe in the flower and leaves in set-up 1 after two days? [1]

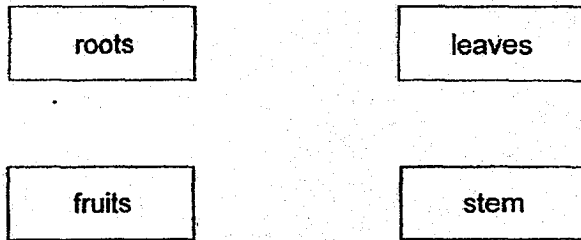
(b) Why did Kelvin pour oil into the water? [1]

(c) What was the aim of Kelvin's experiment? [1]

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36. (a) Four parts of a plant are shown. Draw arrows (→) in the diagram to show how water is transported in a plant. [1]



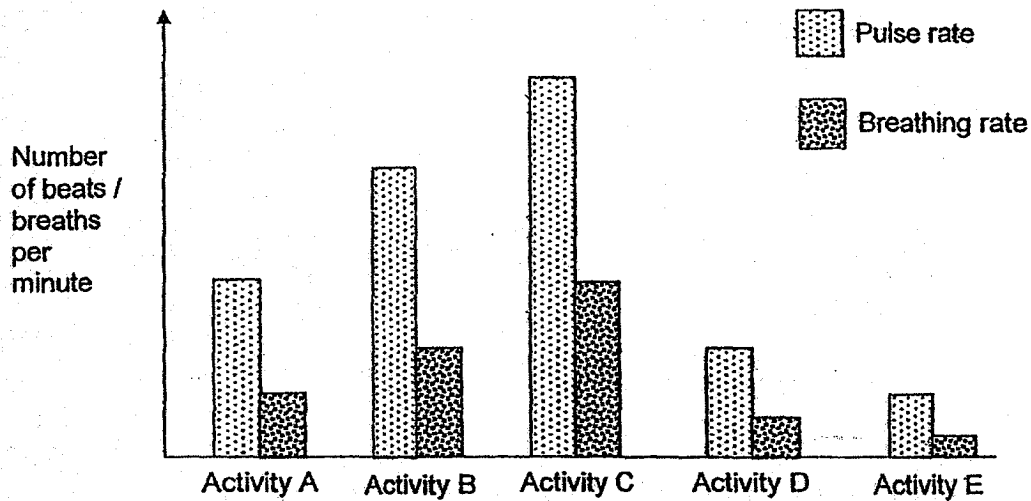
- (b) (i) What is needed for photosynthesis in green plants? [1]

- (ii) Insect X eats its way into a tree trunk. This affects the growth of the roots of the tree. Explain why. [1]

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37. Dominic recorded his pulse rates and breathing rates during five different activities, A, B, C, D and E. He presented the data in the bar graph as shown. Each activity was carried out on different days under similar conditions.



- (a) What is the relationship between Dominic's pulse rate and breathing rate? [1]

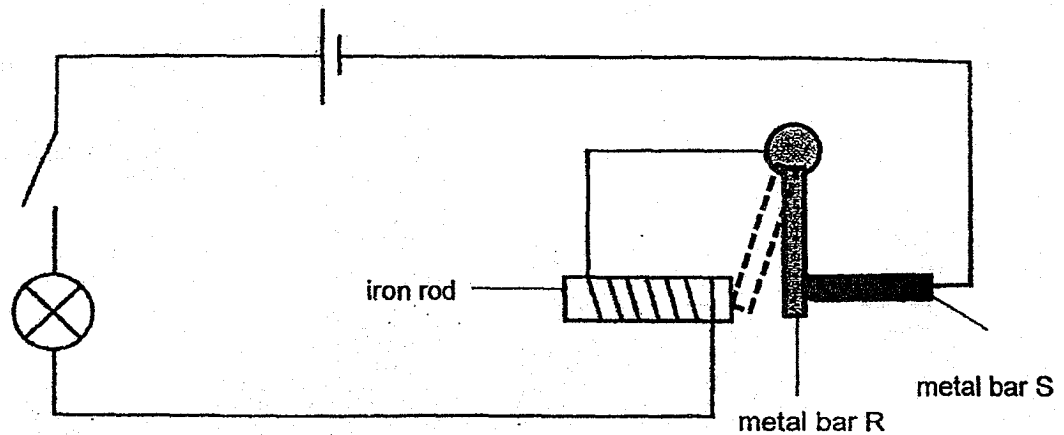
- (b) Which activity needs the least energy? Explain your choice. [2]

- (c) Name the two human systems involved in producing the pulse rate and breathing rate. [1]

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SCORE	
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38. Jonas set up a circuit as shown. When he closed the switch, the bulb lit up. After a short while, metal bar R moved away from the metal bar S and touched the iron rod.

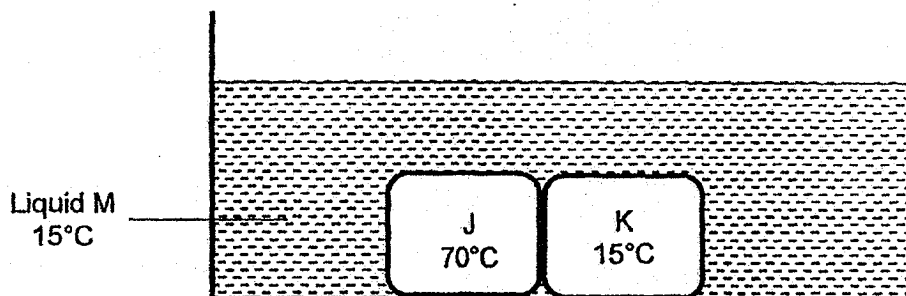


- (a) Why did metal bar R move away when the switch was closed? [1]
-
-
- (b) When bar R touched the iron rod, what happened to the bulb? Explain your answer. [1]
-
-
- (c) Jonas replaced bar R with another bar, bar T. Bar R and T are made of different materials. When he closed the switch, the bulb lit up but bar T did not move. State two properties of the material of bar T. [1]
-
-

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SCORE	
	3

39. Jonathan placed two identical sized objects, J and K, made of different materials and at different temperatures into a container filled with liquid M at a 15°C . Both J and K are in contact with each other as shown in the diagram. He left the set-up in a room at 25°C .

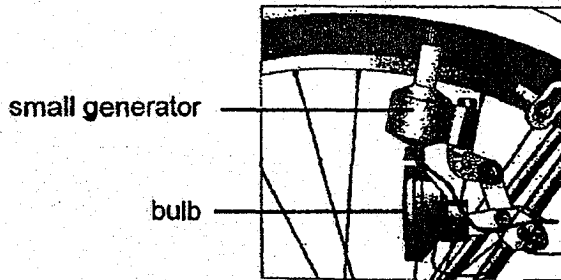


- (a) What will happen to the temperature of objects J and K and liquid M? Circle the correct answer. [1]
- (i) Temperature of J will decrease / increase / remain the same.
- (ii) Temperature of K will decrease / increase / remain the same.
- (iii) Temperature of liquid M will decrease / increase / remain the same.
- (b) Explain your answer for (a)(iii)? [1]
-
-
- (c) Jonathan left the set-up overnight and measured the temperature of liquid M. What is most likely the temperature of liquid M? Explain your answer. [1]
-
-
- (d) Jonathan removes J and K from the container and heats them to a temperature of 80°C . He then placed them on a table in the same room for 15 minutes. He touched both objects at the same time with each hand and felt that K was warmer than J. What can you conclude about the heat conductivity of K compared to J? [1]
-
-

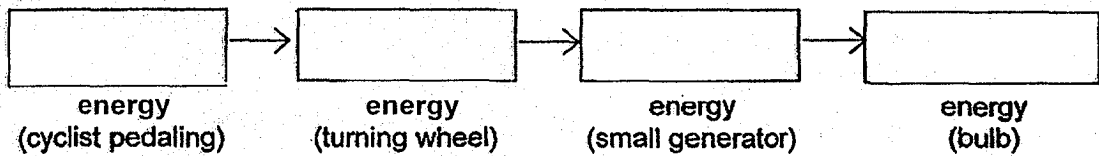
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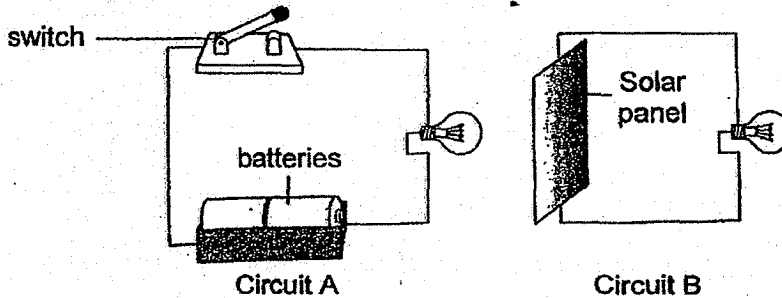
40. Zachary fixed his bicycle with a small generator connected to a light bulb in the picture. The bulb gives out light while the cyclist is pedaling.



- (a) Fill in the main forms of energy in the boxes to show the conversion of energy that takes place when the cyclist pedals at night. [1]



Zachary then sets up two circuits, A and B that also gives out light. He placed both circuits next to each other as shown.



- (b) State two observations Zachary will make when he closes the switch in Circuit A [1]

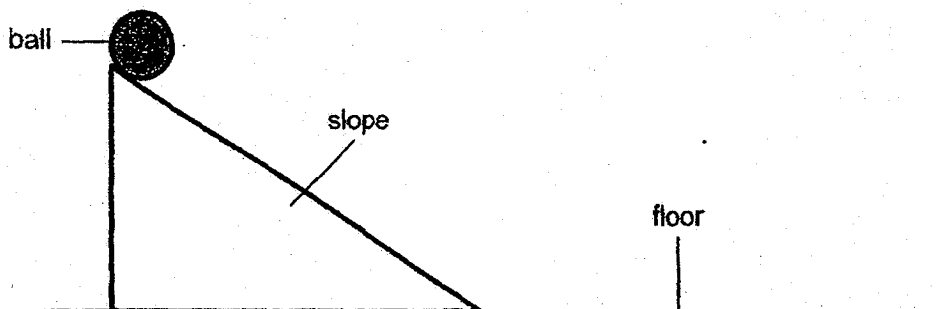
- (c) Explain your answer in (b). [1]

- (d) Without changing the bulb or adding batteries to Circuit B. What can Zachary do to Circuit B to increase the brightness of its bulb? [1]

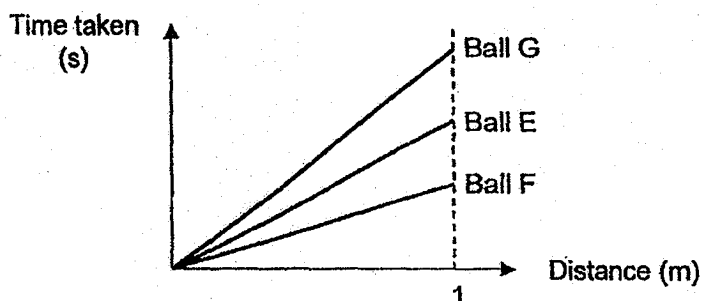
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41. Denzel carried out an experiment on his classroom floor. He released a ball down the slope. He then repeated the same procedure using two similar sized balls of different masses.



He plotted a graph to show the time taken for the balls to roll the same distance on the floor. The graph shows the results of his experiment.



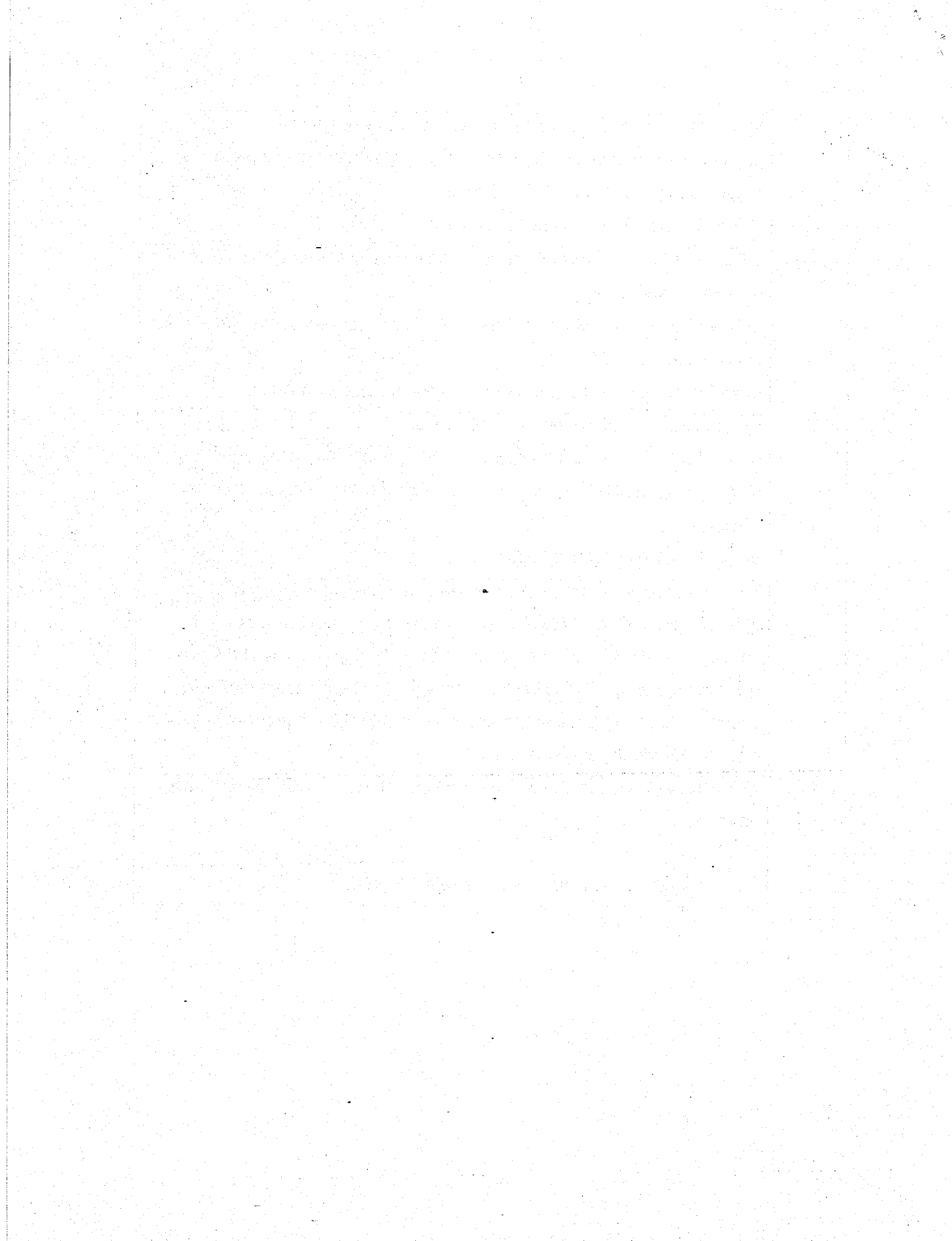
- (a) What is the relationship between the mass of the balls and the time taken to travel 1 metre? [1]

- (b) Based on the graph, arrange the balls, E, F and G, from the heaviest to the lightest. [1]

- (c) State two things that Denzel must do to ensure the experiment is fair. [1]

End of Paper

SCORE	
	3



SCHOOL : ACS PRIMARY SCHOOL
 LEVEL : PRIMARY 5
 SUBJECT : SCIENCE
 TERM : 2018 SA2

SECTION A

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

SECTION B

Q29)	<p>a)The balloon will inflate and water will spill out of the jar. When the air is pumped in the air occupies the space in the balloon which than displaces the water.</p> <p>b)She could measure the volume of the water before putting the balloon in then measure the volume of the water with the balloon in the glass jar.</p>
Q30)	<p>a)It is advantageous to fruits S as it would be further away from the parent plant causing less competition for water ,mineral salts and sunlight.</p> <p>b)This ensure the distance travelled by the fruit is due only to the length of its wing span.</p> <p>c)Length of wing span Wind speed Mass of fruit</p>
Q31)	<p>a)X: Sperm Y: Egg</p>

	<p>b)Fertilisation. The sperm fuses with the egg.</p> <p>c)It obtains nutrients from the mother's blood stream through the umbilical cord.</p>
Q32)	<p>a)Water from the Milo gained heat and evaporated into water vapour which lost heat to the cooler surface of the tray and condensed into tiny water droplets.</p> <p>b)B. Metal is a better conductor of heat and will lost heat faster than plastic.</p> <p>c)It will be more. The rate of evaporation will be faster as the water will gain heat faster.</p>
Q33)	<p>a)Water at A is cleaner that that B and C as the wastage from factory will contaminate the water at B and C when it flows downstream.</p> <p>b)The air spaces between the sand will be smaller and can trap more impurities.</p> <p>c)rectcling</p>
Q34)	<p>a)There is an electromagnet inside cart A attracting the steel bar in cart B when it is turned on.</p> <p>b)C did not more along as the electromagnet was not strong enough to pull cart C from that distance.</p> <p>c)It is so because when the switch is switched off the iron bar will no longer be magnetised and will not attract the steel bar.</p>
Q35)	<p>a)The flower and leaves will turn red as the roots are absorbing red water and the water-carrying tube would transport red coloured water to the flowers and the leaves.</p> <p>b)To ensure that no water evaporates.</p> <p>c)To find out if plants take in water from the roots.</p>
Q36)	<p>a)roots → leaves</p> <p>← fruits ← stem</p> <p>b)Water, carbon dioxide and light.</p> <p>c)The leaves would not be able to transport food to the roots if the food-carrying tubes are eaten.</p>
Q37)	<p>a)The higher his pulse rates, the higher his breathing rate.</p>

	<p>b)Activity E. He had the least amount of pulse per minute and breathes per minute. Therefore he did not need as much digested food, water or oxygen compared to the other activities.</p> <p>c)The circulatory system and respiratory system.</p>
Q38)	<p>a)It moved away as the iron rod had become an electromagnet which attracted metal bar R.</p> <p>b)When bar R touched the rod, the bulb did not light up as the circuit was not completed.</p> <p>c)Bar T is an electrical conductor and a non-magnetic material.</p>
Q39)	<p>a)i)decrease ii)increase iii)increase</p> <p>b)Liquid M gained heat from object J and the surrounding air.</p> <p>c)25°C . M gained heat from the surrounding air and reached room temperature.</p> <p>d)K is a poorer conductor of heat than J.</p>
Q40)	<p>a)Kinetic energy →kinetic energy →electrical energy →light energy</p> <p>b)The bulb in circuit A will light up as while as the bulb in circuit B.</p> <p>c)When the switch is closed electricity flows through the circuit and the light bulb lights up. The solar panel converts the light energy to electrical energy which flows through the circuit and light up the bulb.</p> <p>d)He could add another solar panel.</p>
Q41)	<p>a)The heavier the ball, the shorter amount of time the ball takes to travel one metre.</p> <p>b)F, E , G</p> <p>c)Same material of slope and same release point.</p>

