AI TONG SCHOOL

2023 END-OF-YEAR EXAMINATION
PRIMARY FIVE SCIENCE

(BOOKLET A)

23 OCTOBER 2023

Total time for booklets A and B : 1 h 45 min

INSTRUCTIONS

Do not turn over this page until you are told to do so.

Follow all instructions carefully.

Answer all questions.

Name : _____ ( )

Class : Primary 5 _____

Parent's Signature : _____

Booklet A	56
Booklet B	44
Total	100

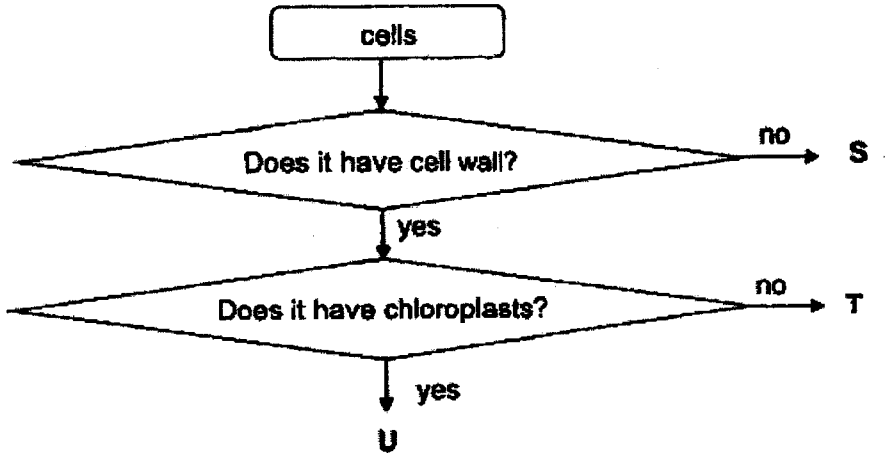
Section A (28 x 2 marks)

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

1. Which of the following can be used to differentiate between birds and insects?

   (1) ability to fly
   (2) number of legs
   (3) presence of wings
   (4) method of reproduction

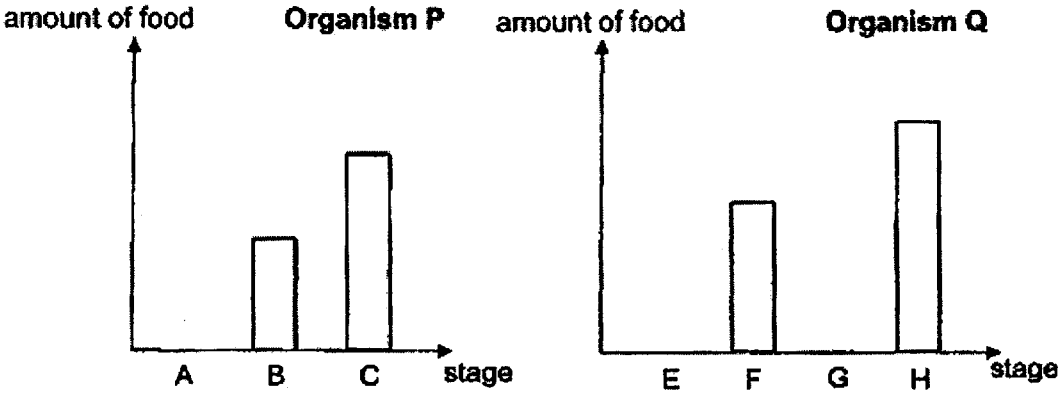
2. Study the flowchart below.



What types of cells can S, T and U be?

	S	T	U
(1)	cheek cell	leaf cell	root cell
(2)	leaf cell	root cell	cheek cell
(3)	root cell	cheek cell	leaf cell
(4)	cheek cell	root cell	leaf cell

3. The bar graphs below show the amount of food organisms P and Q eat at different stages of their life cycles.



Four children made the following statements about the bar graphs.

Tay	B and F are the larva of the two organisms.
Felice	A, E and G are the egg stage of the two organisms.
Alexa	Organism P does not have the pupa stage in its life cycle.
Zach	Organism Q has the nymph stage in its life cycle.

Whose statement(s) is/are correct?

(1) Tay only
(2) Alexa only
(3) Tay and Alexa only
(4) Felice and Zach only

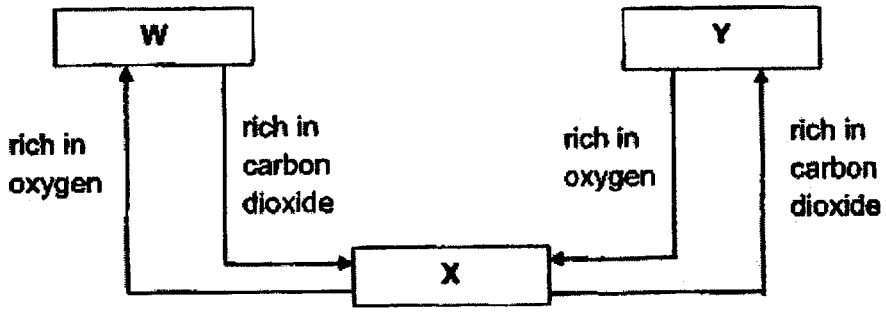
4. Javier wanted to carry out an experiment to find out if overcrowding affects the growth of plants. He listed the following variables below.

A number of seeds
B amount of water
C size of container
D height of plants
E type of seeds

Which of the following variables does he need to keep constant to ensure a fair test?

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

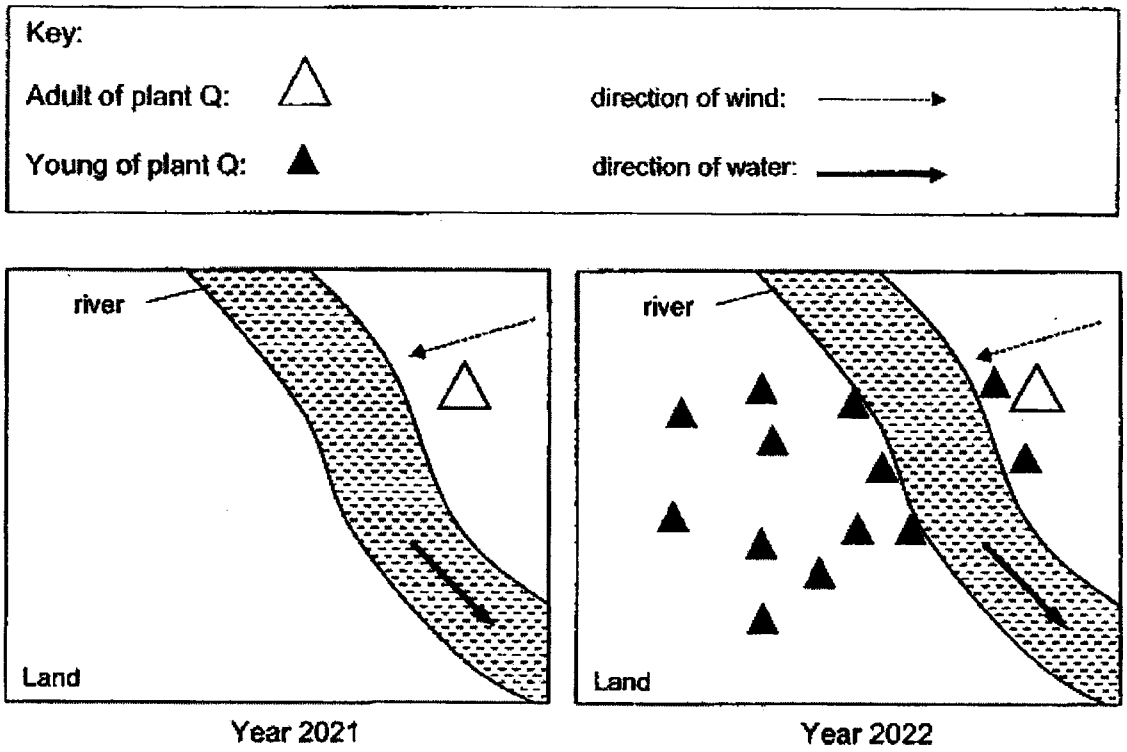
5. The diagram below shows the direction of blood flow in the human body.



What do W, X and Y represent?

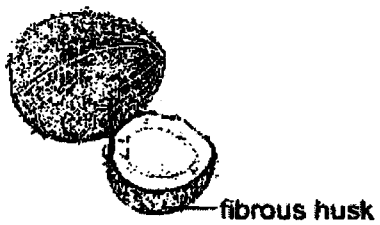
	W	X	Y
(1)	rest of the body	heart	lungs
(2)	heart	lungs	rest of the body
(3)	lungs	heart	rest of the body
(4)	rest of the body	lungs	heart

6. The diagrams show pictures of a similar area taken in years 2021 and 2022.



Which of the following is likely the fruit of plant Q?

(1)



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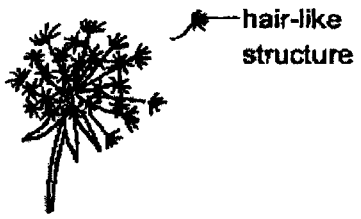

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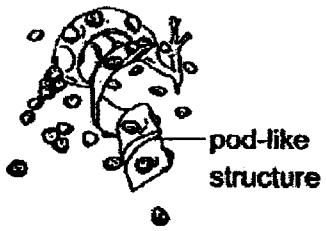
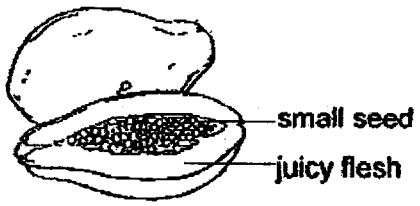
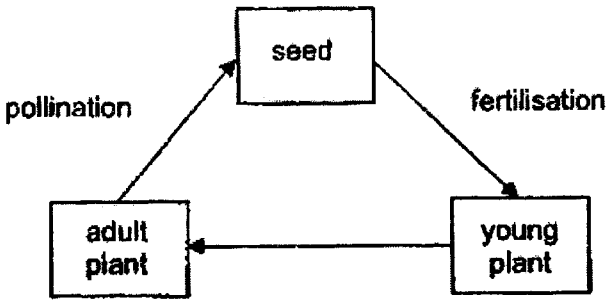


(4)



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

(1)



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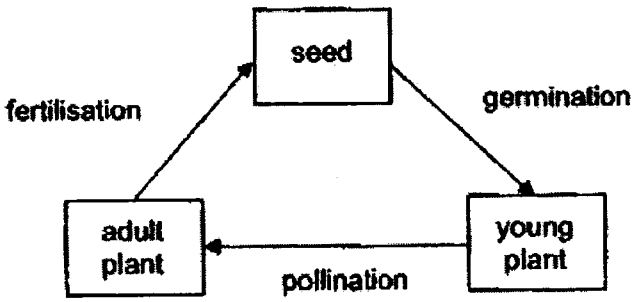

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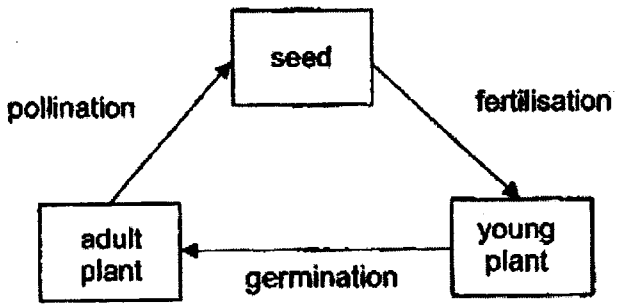

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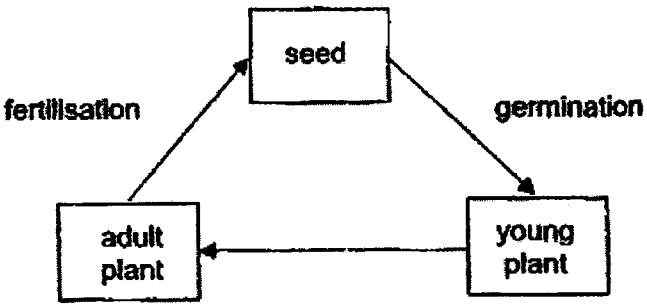
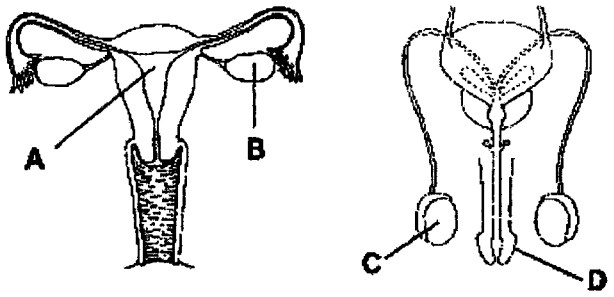


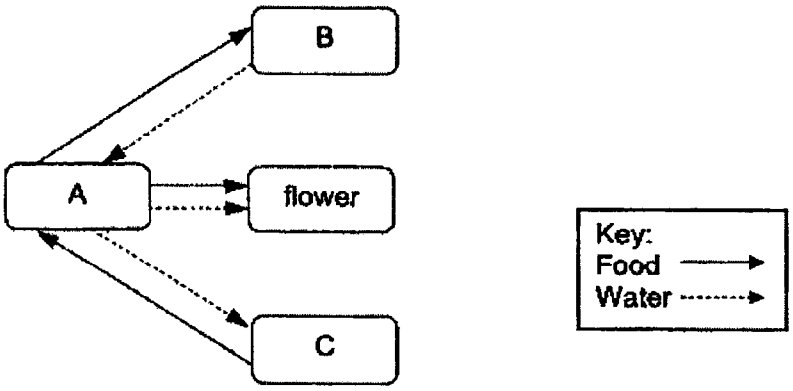
8. The diagrams below show the human reproductive systems.



Which two parts, A, B, C or D, produce cells that will fuse together to develop into a baby?

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

9. The diagram below shows how water and food are transported in a plant.



Which one of the following shows the parts of the plant correctly?

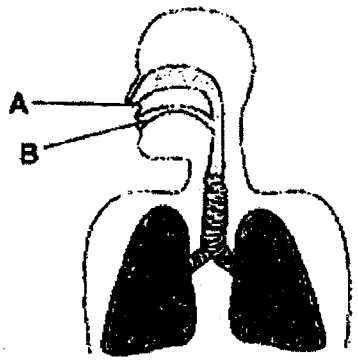
	A	B	C
(1)	stem	leaves	roots
(2)	stem	roots	leaves
(3)	leaves	roots	stem
(4)	roots	leaves	stem

10. Richelle measured the oxygen concentration of the water in her fish tank. The oxygen concentration in the water was below the normal levels and the fishes behaved differently.

Which of the following describes the behaviour of the fishes and its explanation?

	Rate of opening and closing of mouth	Explanation
(1)	increase	The fish needs to release less carbon dioxide through its mouth.
(2)	increase	The fish needs to breathe more to take in enough oxygen for it to be alive.
(3)	decrease	The fish does not need to take in so much oxygen as the water has lesser oxygen concentration.
(4)	decrease	The fish does not need to give out so much carbon dioxide.

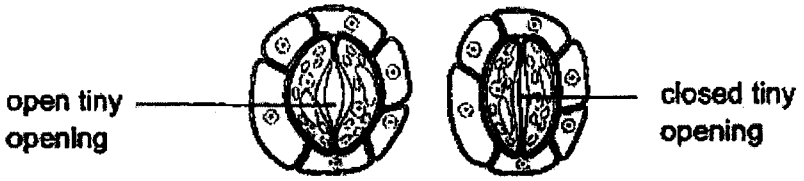
11. In the air-conditioned school library, Aaron breathes in air through his nose at A and breathes out air through his mouth at B as shown in the diagram below.



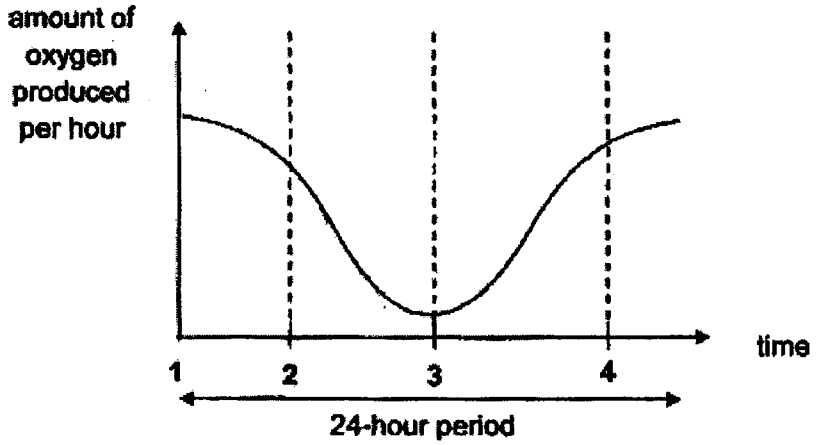
Which of the following statements about air at A and B is true?

(1) The air at A is warmer than the air at B.
(2) The air at A has more nitrogen than the air at B.
(3) The air at A has less water vapour than the air at B.
(4) The air at A has more carbon dioxide than the air at B.

12. The diagram below shows tiny openings that are found on the underside of the leaves. The tiny openings will open and close in the presence and absence of light respectively.



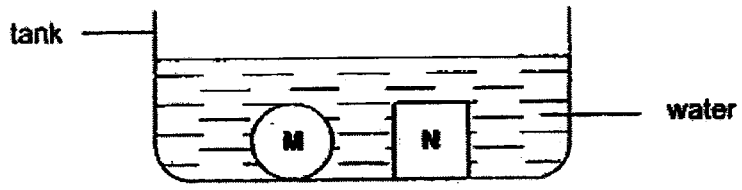
The graph below shows the amount of oxygen produced by a green plant placed outdoor during a 24-hour period, on a warm and sunny day.



Which one of the following is correct about the tiny openings at the different points of time?

	Point	Tiny openings
(1)	1	Open
(2)	2	Closed
(3)	3	Open
(4)	4	Closed

13. Alex dropped two objects M and N into a tank of water as shown below.

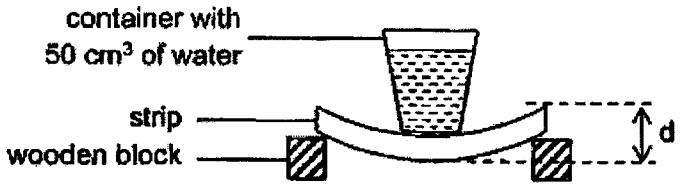


Which of the following conclusion(s) about objects M and N is/are definitely true?

A Objects M and N can sink in water.
B Objects M and N have the same mass.
C Objects M and N are made of the same material.

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

14. Shanis set up an experiment as shown below to compare the flexibility of four similar strips, A, B, C and D, each made of different materials.

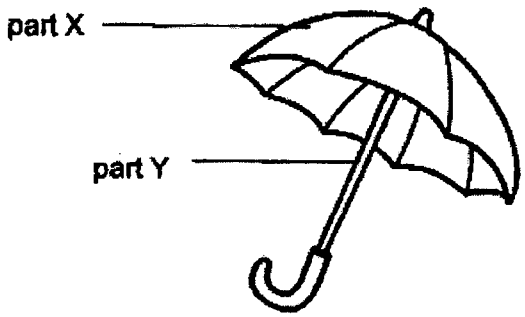


On each strip, she placed a container with 50 cm^3 of water. The distance, d, between the highest and lowest points of the strip was measured.

Her results are shown below.

Strip	d (mm)
A	36
B	14
C	25
D	4

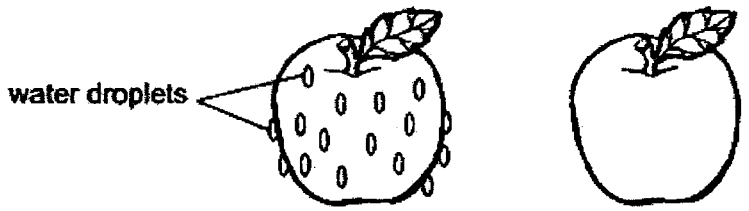
The diagram below shows an umbrella made of parts X and Y.



Based on the information above, which of the materials, A, B, C or D, are most suitable for making parts X and Y of the umbrella?

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

15. Mrs Teo picked up two similar apples from the fruit cart at the supermarket. She observed that there were many tiny water droplets on the surface of apple Q while apple R was dry.



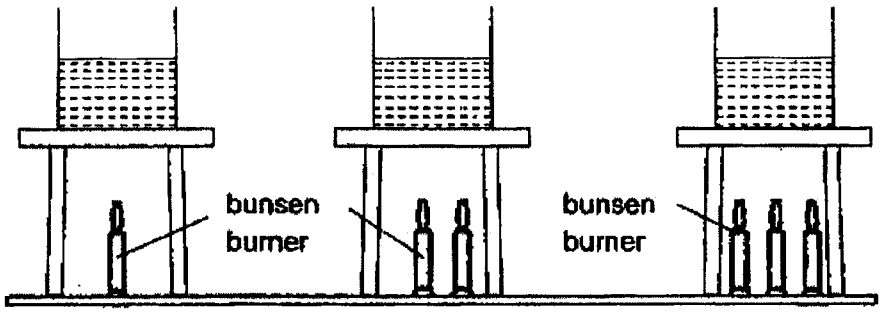
apple Q apple R

Which of the following statements about apples Q and R are definitely correct?

A Temperature of apple Q is lower than that of apple R.
B Temperature of apple Q is higher than that of apple R.
C Temperature of apple Q is lower than that of the surrounding.
D Temperature of apple R is lower than that of the surrounding.

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

16. Claire set up an experiment as shown below. The beakers in set-ups A, B and C contained 200 ml of water at 30°C. She then heated the water in each beaker till boiling point at 100°C.



set-up A set-up B set-up C

Which of the following statement(s) is/are correct after the water in all the set-ups have boiled?

A The water in set-up C has the most heat energy.
B The amount of water left in all set-ups is less than 200 ml.
C The water in all three set-ups have the same amount of heat energy.

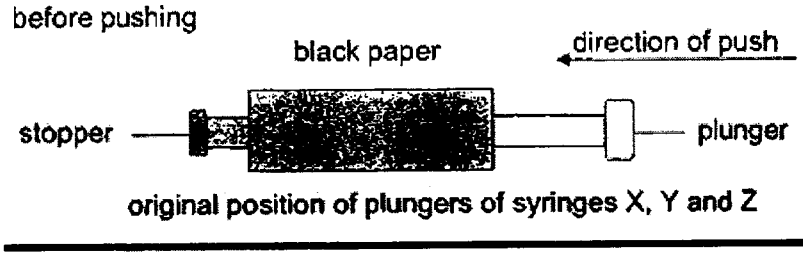
(1) C only
(2) A and B only
(3) B and C only
(4) A, B and C

17. Four students listed ways to conserve water.

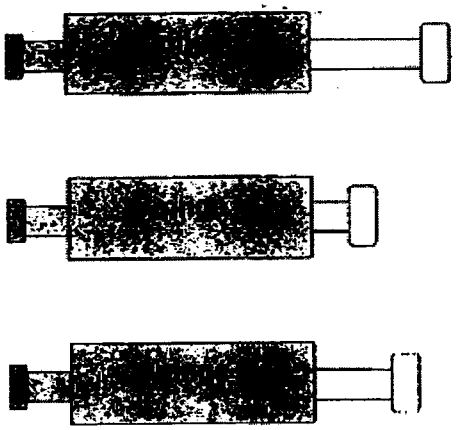
student	ways to conserve water
A	Use a pail to wash the car.
B	Turn off the heater when showering.
C	Treat seawater so that it can be drinkable.
D	Use running tap water when washing rice.

Which student(s) suggested way(s) that help(s) to conserve water?
(1) A only
(2) B only
(3) A and C only
(4) B and D only

18. Zhangling wrapped the sides of syringes X, Y and Z with black paper. She then filled each syringe with some substances and pushed the plunger of each syringe as far as it would go. The results are shown below.



original position of plungers of syringes X, Y and Z

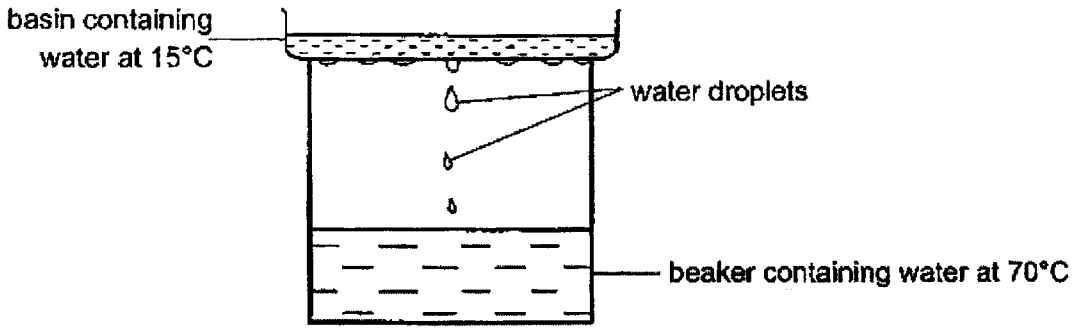


final position of plungers of syringes X, Y and Z

Based on the results, identify the substance(s) in each syringe.

	Syringe X	Syringe Y	Syringe Z
(1)	Water only	Air and water	Air only
(2)	Air and water	Air only	Water only
(3)	Water only	Air only	Air and water
(4)	Air and water	Water only	Air only

19. Mr. Loh has a set-up as shown below.



After a while, he observed water droplets forming on the underside of the basin.

Which one of the following should Mr. Loh do so that he can decrease the amount of water droplets formed on the underside of the basin?

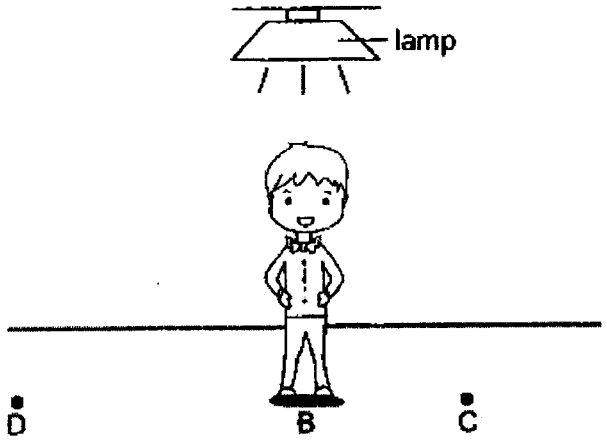
(1) Add some ice cubes in the basin.
(2) Add more water at 50°C in the basin.
(3) Add more water at 70°C in the beaker.
(4) Add more water at 100°C in the beaker.

20. Substance T has a boiling point of 190°C and a melting point of 60°C.

At which one of the following temperatures will substance T have a definite volume but no definite shape?

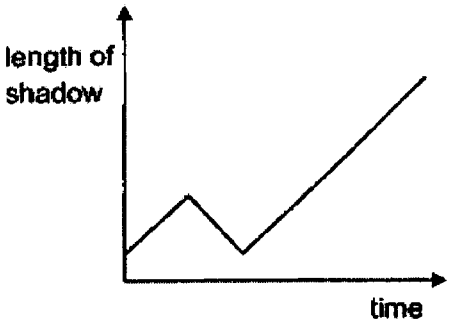
(1) 0°C
(2) 50°C
(3) 170°C
(4) 200°C

21. Garelle stood under a lamp as shown.

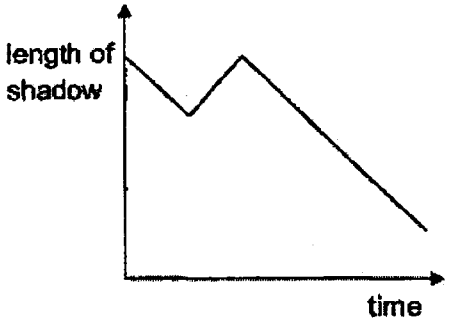


He walked from position B to position C, and then to position D in a straight line.
Which graph shows how the length of his shadow changed during this time?

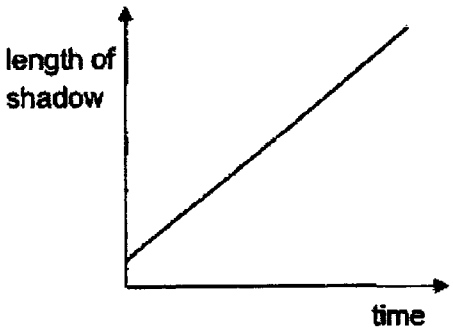
(1)



(2)



(3)



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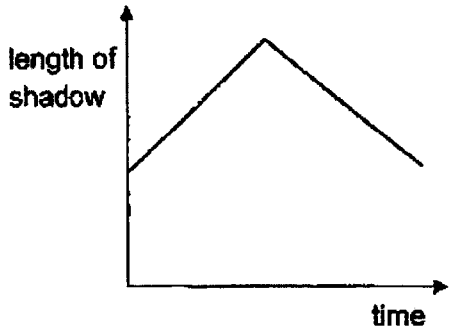
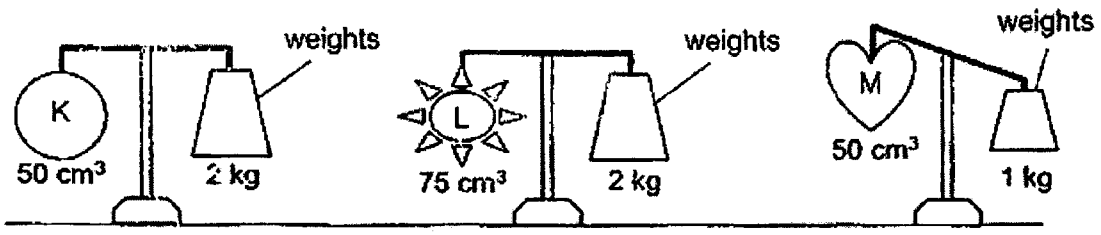


22. Kaden hung objects K, L, M and some weights on the beam balance as shown below.

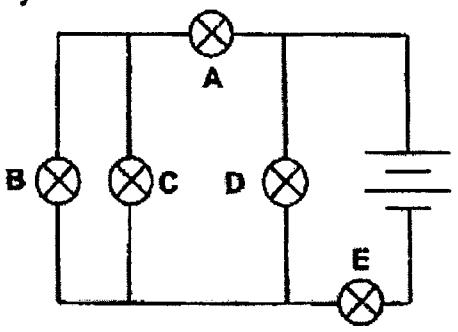


Based on the information provided, which of the following statements are correct?

A Object M has the least mass.
B Objects K and L will not be balanced when both are placed on a beam balance.
C Objects that occupy more space have more mass.
D Objects that occupy the same amount of space may not have the same mass.

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

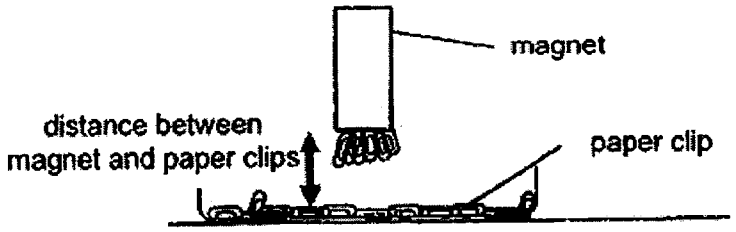
23. The diagram shows two batteries connected to five identical bulbs, A, B, C, D and E. All five bulbs lit up initially.



When one of the bulbs in the circuit fused, it was observed that only two bulbs lit up. Which two bulbs would continue to light up?

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

24. Lisa had four magnets, W, X, Y and Z. To compare the strength of the magnets, Lisa took each of the magnets and placed them near a bowl of paper clips.



She then recorded the number of paper clips attracted in the table below.

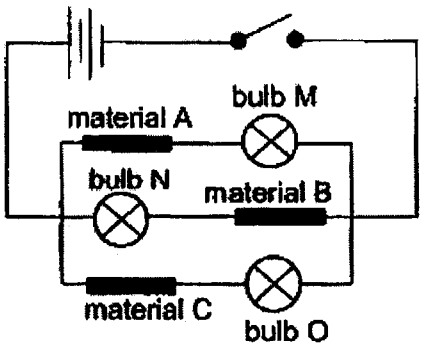
Magnet	Distance between magnet and paper clips (cm)	Number of paper clips attracted
W	3	9
X	3	11
Y	5	12
Z	3	12

Which statements about magnets W, X, Y and Z are correct?

A Z is stronger than X.
B Y is stronger than Z.
C W has the least magnetic strength.

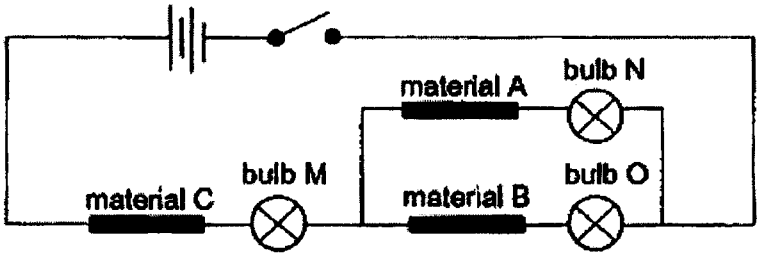
(1) A and B only
(2) A and C only
(3) B and C only
(4) A, B and C

25. The diagram below shows an electrical circuit with materials A, B and C. All the batteries and bulbs are working well.



When the switch was closed, only bulb N and bulb O lighted up.

The circuit was rearranged as shown below.

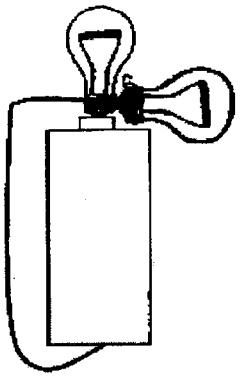


When the switch was closed, which one of the following is the correct observation?

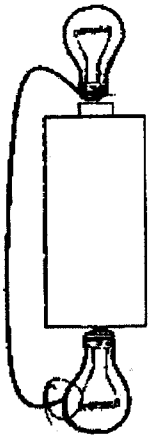
	Bulb M	Bulb N	Bulb O
(1)	did not light up	did not light up	did not light up
(2)	lit up	lit up	lit up
(3)	lit up	lit up	did not light up
(4)	lit up	did not light up	lit up

26. In which one of the following circuits will both bulbs light up?

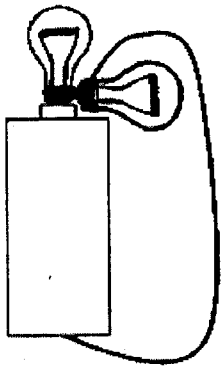
(1)



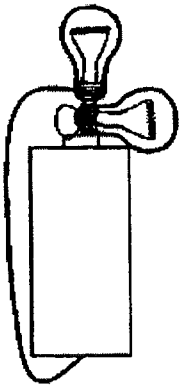
(2)



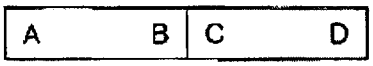
(3)



(4)



27. Two bar magnets were arranged such that they were attracted to one another as shown in the diagram below.



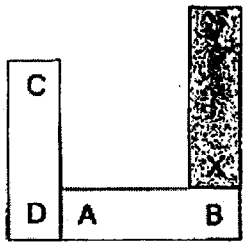
two bar magnets

iron bar

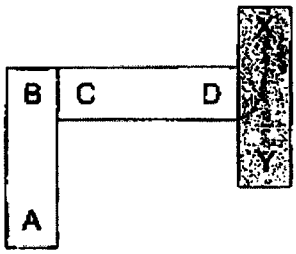
An iron bar was then placed near the magnets.

Which of the following arrangements is not possible?

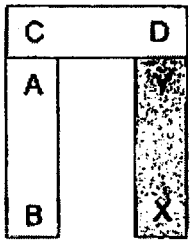
(1)



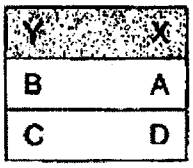
(2)



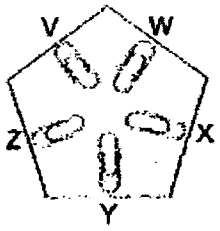
(3)

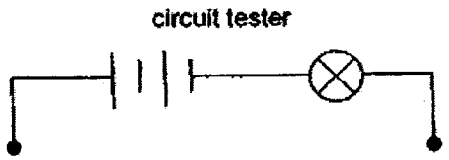


(4)



28. Five clips, V, W, X, Y and Z, were placed on a cardboard and tested in the circuit tester as shown below.



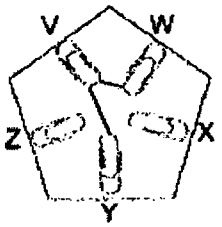


Kai Rui connected a circuit tester to two clips at a time to find out which clips are connected. He tabulated the results below.

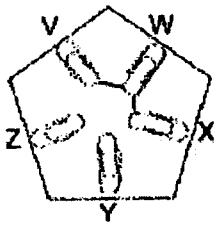
Clips that are connected	Does the bulb light up?
V and Y	Yes
W and X	No
Y and Z	No
X and Y	No
V and W	Yes

Which one of the following correctly shows the connection of wires?

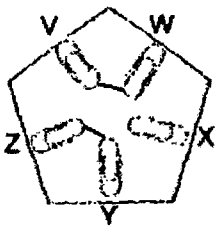
(1)



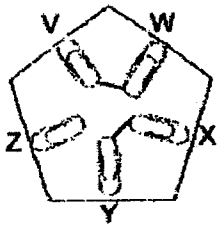
(2)



(3)



(4)



End of Booklet A

AI TONG SCHOOL

2023 END-OF-YEAR EXAMINATION
PRIMARY FIVE SCIENCE

(BOOKLET B)

23 OCTOBER 2023

Total time for booklets A and B : 1 h 45 min

INSTRUCTIONS

Do not turn over this page until you are told to do so.

Follow all instructions carefully.

Answer all questions.

Write your answers in this booklet.

Name : _____ ( )

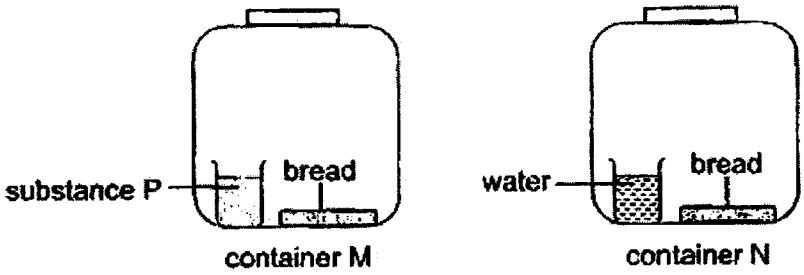
Class : Primary 5 _____

Parent's Signature : _____

44

Section B: 44 marks
Read the questions carefully and write down your answers in the spaces provided.

29. Kai Sheng placed two pieces of bread in two identical containers, M and N, sealed with a cover as shown below. Substance P absorbs water from the surrounding.



(a) After two days, he noticed some green and white spots growing on the bread in container N but not on the bread in container M. State what the green and white spots are. [1]

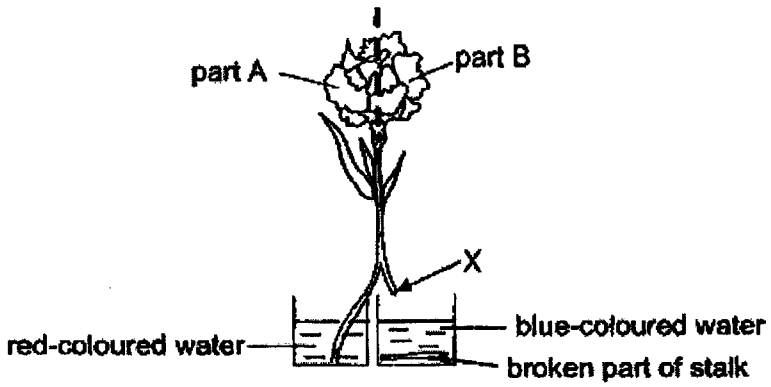
(b) Why did Kai Sheng need to seal the containers tightly with a cover for his experiment? [1]

Kai Sheng kept a pair of leather sandals in a dark and warm cupboard for a year and forgot about it. When he took it out again, his sandals were covered with white spots.

(c) Explain why the white spots were able to form on his sandals. [1]

(Go on to the next page)

30. Erika cut the stalk of a white flower into half. As she was placing half of the stalk in a beaker of red-coloured water, the other half broke at part X as shown below. The broken part of the stalk was left in a beaker of blue-coloured water. She then left the set-up overnight in the classroom.



(a) What would Erika observe at parts A and B of the flower the next day? [1]

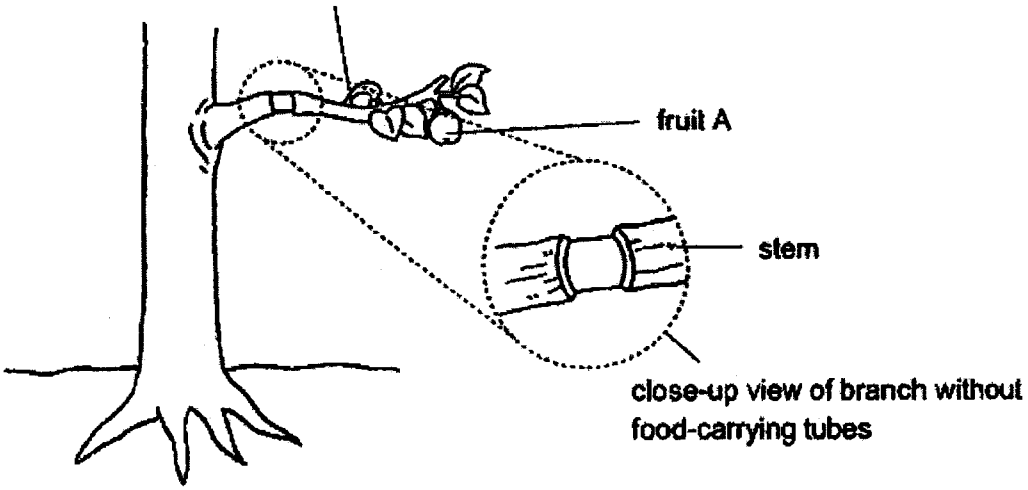
(b) Explain your answer in (a). [2]

Question 30 continues on the next page.

3

Question 30 continues.

Erika pollinated similar flowers to produce fruit A on the plant. To produce bigger fruit A, she removed the outer layer from the stem of the plant which contained the food-carrying tubes.



(c) Explain why bigger fruit A was produced by Erika? [1]

(Go on to the next page)

1

31. An experiment was carried out to investigate photosynthesis in three plants for one day. The plants were placed in different places as shown in the diagram below.

Pot A

placed in open field

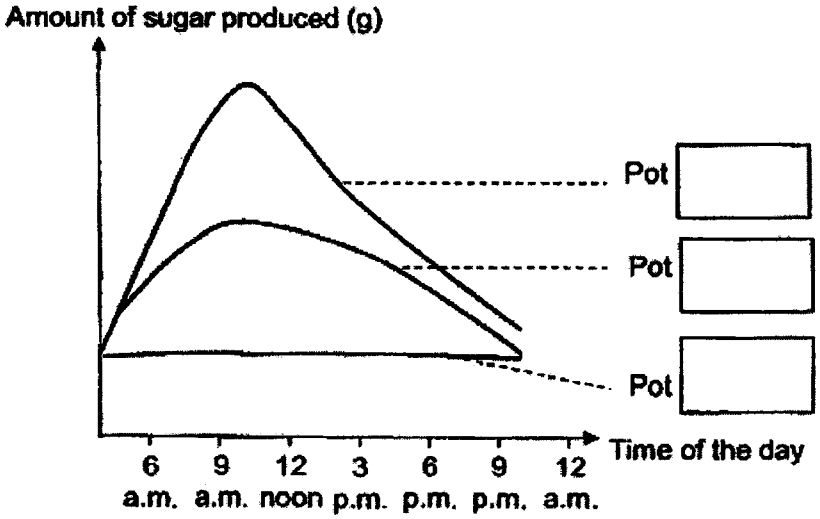
Pot B

placed in a dark room

Pot C

placed in room beside window

The graphs below show the amount of sugar produced in the leaves of the three plants for the day.



(a) Based on the information provided, label the three graphs with A, B and C, to show the amount of sugar produced by each plant. [1]

Question 31 continues on the next page.

1

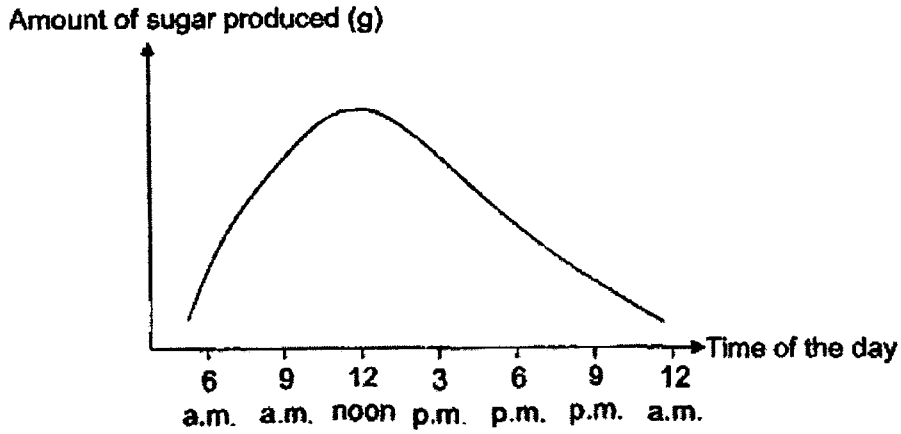
Question 31 continues.

(b) Explain how the following variables affect the results of the experiment if they are not kept constant. [2]

The number of leaves: ___

The amount of water: _____

The graph below shows how the amount of sugar produced in the leaves of the plant in Pot A changed at different times of the day.



(c) The amount of sugar in the plant decreased between 9 p.m. and 12 a.m. Explain why. [1]

_____

_____

(Go on to the next page)

3

32. Hagrid had a mass dance with his classmates during PE lesson. The table below shows the change in Hagrid's heart rate while dancing.

Duration of the dance (minutes)	5	10	15	20	25
Number of heartbeats per minute	70	82	99	125	131

(a) Based on the table above, state the relationship between the duration of Hagrid's dance and the number of heartbeats per minute. [1]

(b) Explain your answer in (a). [2]

(c) Suggest what Hagrid could do to obtain reliable results. [1]

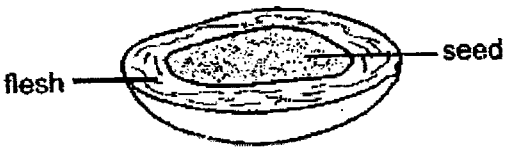
(Go on to the next page)

4

33. Alvin has three mango trees, A, B and C, in his orchard. The fruit from different trees have different characteristics, as shown in the diagrams below.

Fruit Tree A

Thin, sour and fibrous flesh and small seed



Fruit Tree B

Thick, sweet and fibrous flesh and large seed

Fruit Tree C

Thick, sour and non-fibrous flesh and small seed

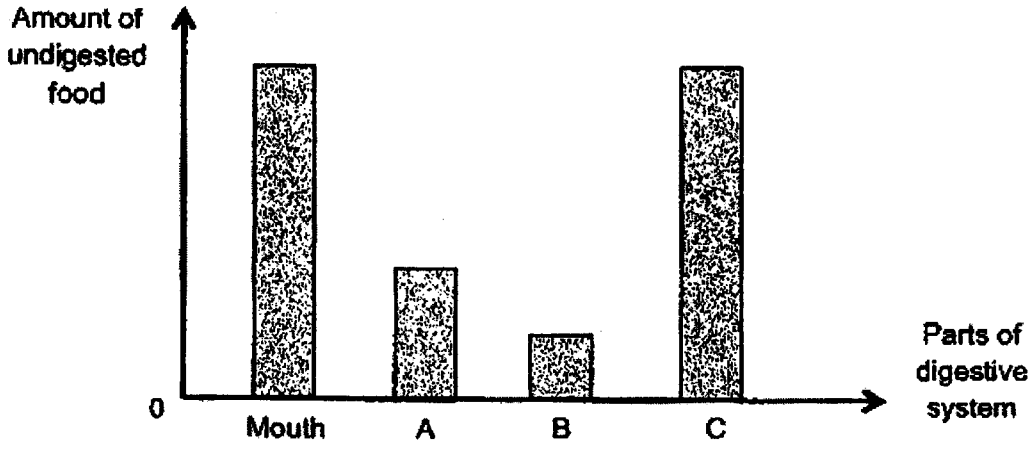
(a) Based on the characteristics of the fruits, suggest and explain which fruit, A, B or C, will most likely to be dispersed first. [1]

(b) Alvin wants to grow a mango tree which produces fruits with thick, sweet and non-fibrous flesh, and small seed. What can he do to obtain fruits with the desired characteristics using the mango trees he has? Explain your answer. [2]

(Go on to the next page)

34. (a) State what digestion is. [1]

The graph below shows the amount of undigested food in different organs of the digestive system after a meal.



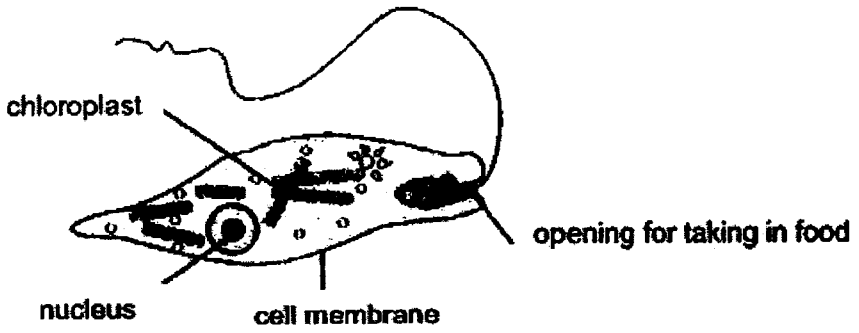
(b) Write the letters, A, B or C in the table provided to match the parts of the digestive system. Explain the reason why. [2]

Parts of the digestive system	Letters	Reason
gullet		
small intestine		

(Go on to the next page)

3

35. The diagram below shows a single-celled organism G.



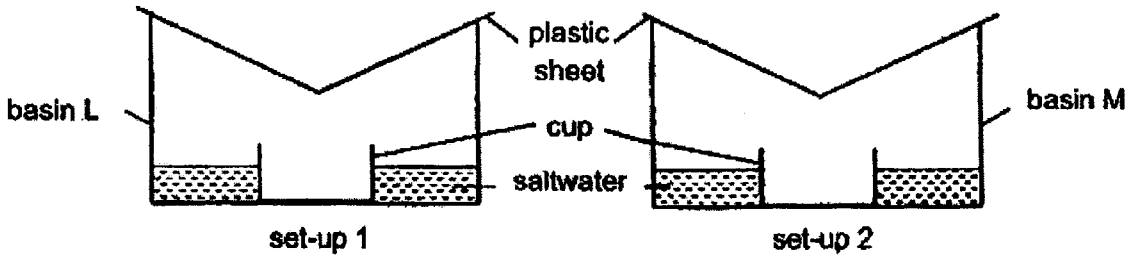
(a) Based on the information provided, explain why organism G can be considered as an animal cell. [1]

(b) State the function of the cell membrane. [1]

(Go on to the next page)

2

36. Judy placed two identical cups into two basins, L and M. Basins L and M are of the same size but made of different materials. She filled the basins with equal amount of saltwater and covered both set-ups with identical plastic sheets. Then she placed them under the sun for a few hours.



After a few hours, she found substance Q in both cups.

(a) What was substance Q? [1]

(b) State the two processes that took place for substance Q to form. [1]

(c) Basin L is made of a better conductor of heat. Explain why this would cause more substance Q to be collected in the cup. [2]

Question 36 continues on the next page.

Question 36 continues.

(d) Suggest what Judy could add to the plastic sheet so that more of substance Q could be collected in the same amount of time for both set-ups. [1]

_____

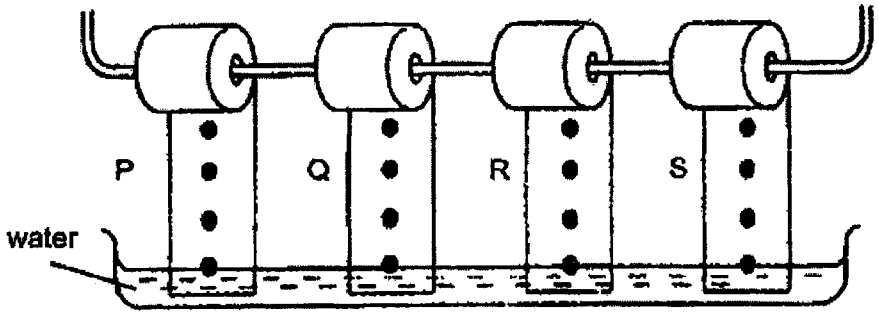
_____

(Go on to the next page)

1

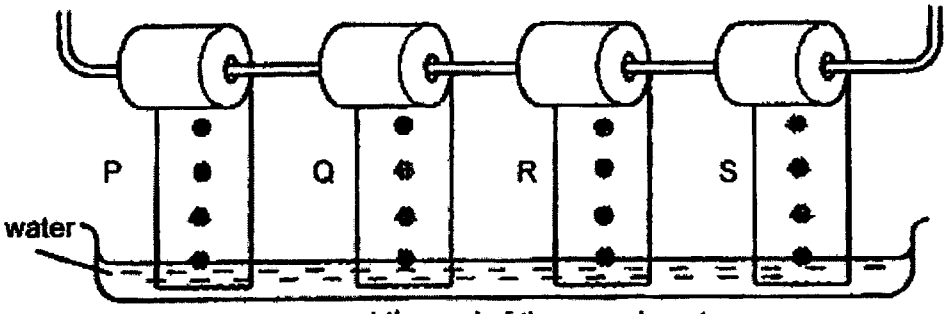
37. Masha conducted an experiment using four different types of fabric, P, Q, R and S. She wanted to find out which fabric could absorb the most amount of water.

She prepared four strips of the same length from each type of fabric. She dotted water-soluble ink at equal intervals and hung the strips in a trough of water as shown in the diagram.



at the start

She observed that as the strips absorbed water, the dots of ink smudged as shown in the diagram.



at the end of the experiment

(a) Arrange the four types of fabric (P, Q, R and S) in order of their ability to absorb water, beginning with the fabric that is least water absorbent. [1]

☐ , ☐ , ☐ , ☐

Least water absorbent — Most water Absorbent

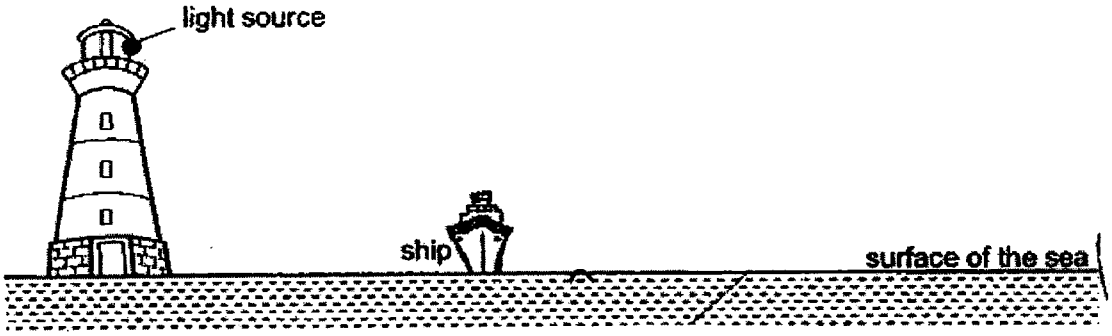
(b) Masha then cut out a strip from her raincoat and repeated the experiment. Would the dots of ink on the strip smudge? Explain your answer. [1]

_____

_____

(Go on to the next page)

38. The diagram shows the position of a light source and a ship in the sea.



(a) In the diagram above, draw a cross (X) on the surface of the seawater to show where the shadow of the ship would be cast. [1]

(b) Explain why the ship casts a shadow. [1]

_____

_____

(c) If a larger ship is at the same position as the ship above, would the shadow cast on the seawater now be *smaller*, *larger* or *of the same* size? Explain your answer. [1]

_____

_____

(d) Explain why using the same light source in part (c) will make the experiment a fair test. [1]

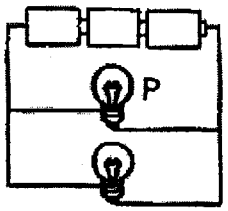
_____

_____

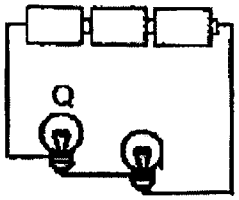
(Go on to the next page)

4

39. David used identical bulbs and batteries in working condition to form the circuits 1 and 2 below.



circuit 1



circuit 2

(a) Which bulb, P or Q, will glow more brightly? Give a reason for your answer. [1]

(b) David wanted to add another idenfical bulb to circuit 1 so that bulb P will be as bright as the bulb Q in circuit 2.

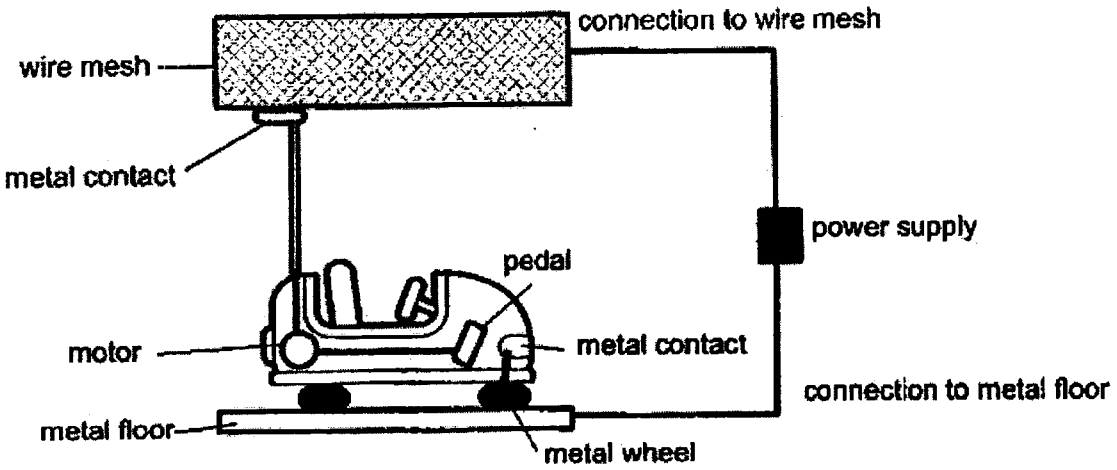
Describe how he should connect the new bulb to circuit 1. [1]

Question 39 continues on the next page.

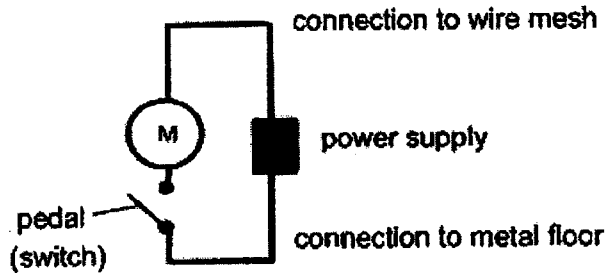
2

Question 39 continues.

The diagram shows a bumper car. The circuit symbols for the motor and pedal for each car are shown on the diagram.

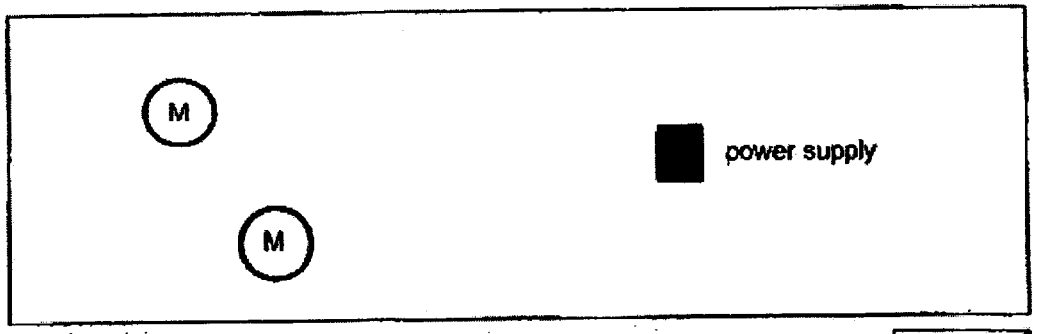


Bumper cars are connected such that when one car breaks down, the other cars can still work. Circuit A below shows the connection for one bumper car.



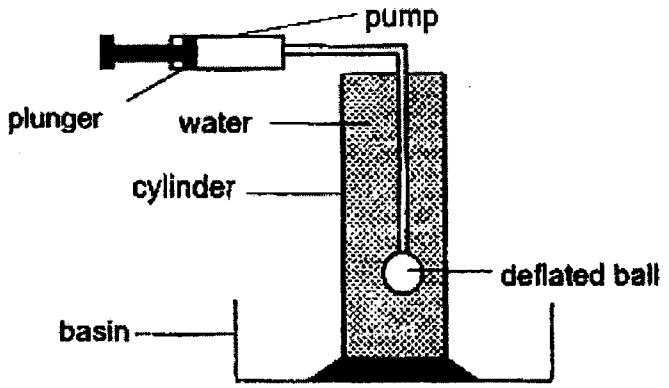
circuit A

(c) Based on the information provided, using only wires and two switches, draw the circuit in the box below to show how two bumper cars should be connected. [2]

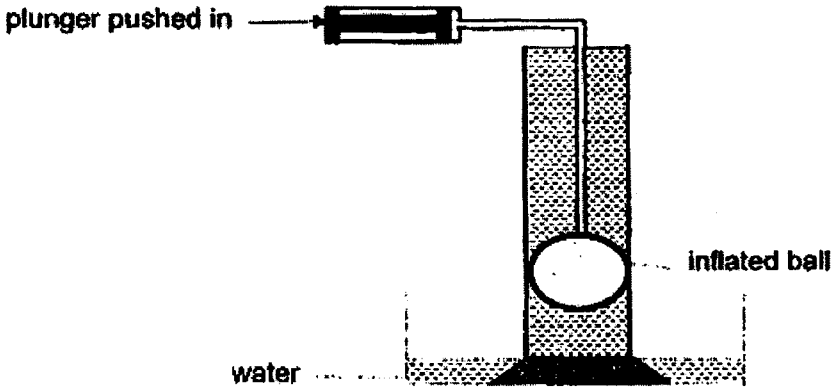


2

40. The diagram below shows an inflatable ball fixed to an air pump. The ball was placed in a cylinder. The cylinder was then filled with water to the brim.



When Bob pumped 200 cm^3 of air into the deflated ball, the ball started to inflate. The water in the cylinder overflowed and was collected in the basin.



(a) Explain why the water overflowed when air was pumped into the ball. [1]

_____

_____

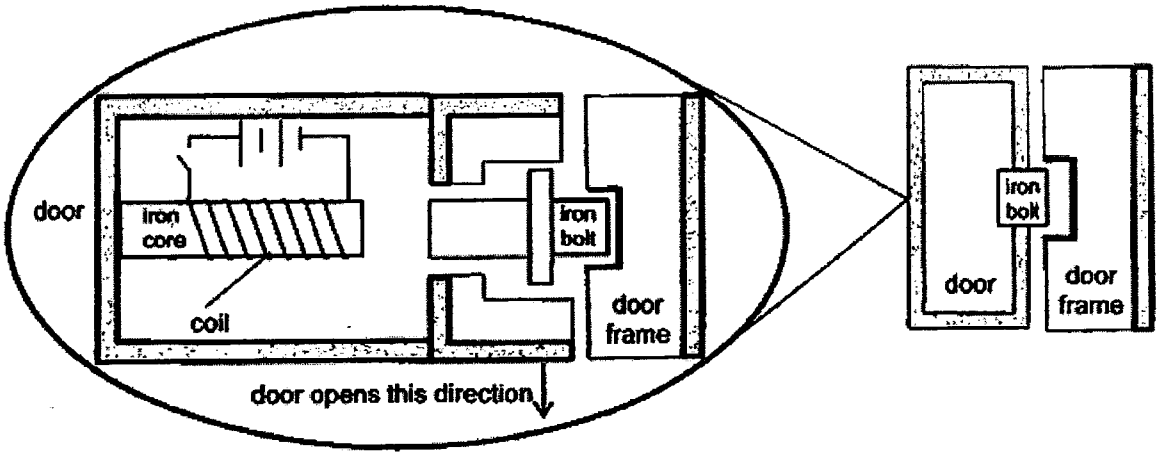
(b) Based on the experiment, state a property of water. [1]

_____

(Go on to the next page)

2

41. Edmund installed an automatic door lock as shown in the diagram below.



(a) When the switch is closed, the iron bolt moved towards the iron core and the door will be unlocked. Explain how this happens. [2]

(b) Explain what will happen if the iron bolt is replaced with a plastic bolt. [1]

(c) Explain what will happen if the iron core is replaced with a magnet. [1]

End of paper

4

SCHOOL : AITONG PRIMARY SCHOOL
LEVEL : PRIMARY 5
SUBJECT : SCIENCE
TERM : END OF YEAR 2023)

CONTACT :

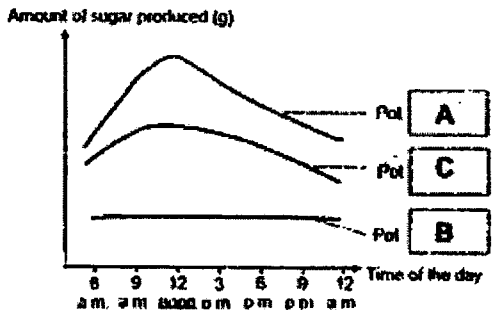
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
2	4	2	3	1	2	4	3	2	2
Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
3	1	1	1	1	3	1	3	2	3
Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28		
1	2	4	4	4	3	3	1		

P5 Science End of Year Examination 2023 – Correction Template

Name: _____( ) **Class: P5**_____ **Date:** _____

Section B

Qn.	Answer	Remarks
29(a)	**Fungi / Mould**	**Not acceptable:** Mole / Dust
29(b)	Point 1: To ensure that the water vapour in the ___surroundings___ does not enter the container. Point 2: It does **not** affect the **growth of bread mould.**	Need to have the idea of water vapour from the surrounding **not entering** the container and affecting the **results of the experiment.**
29(c)	There is **warmth, oxygen** and **water** present for the mould to grow.	
30(a)	Part A of the flower turns ___red___ but Part B of the flower remains ___white___.	**Not acceptable:** • Both parts A and B would be red • B will not turn blue **Partial marks** • **A** is coloured with red-coloured water **but B is not** (need to mention the colour of part B)
30(b)	**Data:** B cannot take in ___water___ but A can take in water. **Explain:** ___water-carrying tube___ tubes **transport** water to all parts of the plant.	**Not acceptable:** • Part B does not have water carrying tubes.

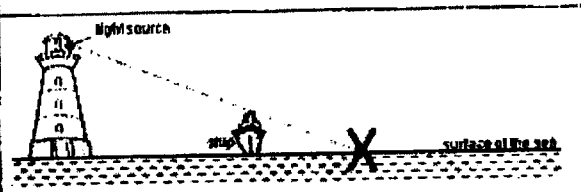
30(c)	Food made by the leaves cannot be transported to other parts of the plant so ___more___ food is stored inside the fruit.	• Need to have the idea of **excess food accumulating** inside the fruit.
31(a)		Marks are awarded only when all 3 options are correct.
31(b)	**Number of leaves:** ___More___ **leaves** trap **more** ___light___, causing the plant to **make more** ___food___. **Amount of water:** **More water** taken in by the plant, causes the plant to **make more food.**	**Partial Marks** • **More leaves** trap **more light.** • **More leaves** make **more food.**
31(c)	There was no ___sunlight___ so the plants cannot make food.	**Partial Marks** • There was no sun.
32(a)	**As the duration of the dance** ___increases___, **the number of heartbeats** ___increases___.	
32(b)	**Point 1: During exercise, the body needs more** ___energy___. **Point 2: The heart rate increases during exercise to pump more** ___blood___ **to the muscles.**	**Alternative answer:** **Point 1: the body respires faster.**

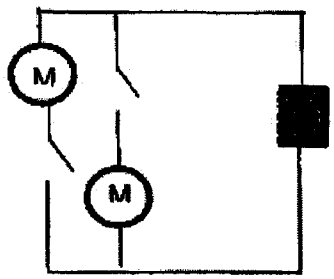
	Point 3: This allows **more** oxygen **and** digested food **in** blood to be transported to the muscles quickly. Point 4: At the same time, **more carbon dioxide and** waste materials **can be removed from the muscles quickly.**	**Not acceptable:** Point 3: More oxygen and food is transported. (Need to write 'digested food' instead of 'food')
32(c)	He can repeat **his experiment a few more times.**	**NOTE: (Students are to learn complete the answer)** Repeat his experiment a few more times to obtain consistent readings. **Partial mark** To **obtain consistent readings.**
33(a)	**Choice:** B **Data:** The flesh is sweet. **Explain:** So it attracts animals to eat the fruit.	
33(b)	Choice: B and C Explain: He can pollinate and fertiliser their flowers so that they can pass their characteristics to their young when they reproduce.	**Not acceptable:** Combine the seeds of B and C
34(a)	Digestion is the process in which food is broken down into simpler substances.	**Not acceptable:** Food is broken down into smaller pieces.

<table>
<tr><td>34(b)</td><td>Parts of Digestive System</td><td>Letters</td><td>Reasons</td><td>No marks awarded if the choice is wrong.</td></tr>
<tr><td></td><td>gullet</td><td>C</td><td>Data: It has the <u>same</u> amount of undigested food as the mouth.

Explain:
No <u>digestion</u> takes place at the gullet.</td><td></td></tr>
<tr><td></td><td>small intestine</td><td>B</td><td>Data: It has the <u>least</u> amount of undigested food.

Explain:
Digestion is <u>completed</u> at the small intestine.</td><td></td></tr>
<tr><td>35(a)</td><td colspan="3">Organism G does not have a cell wall.</td><td>Not acceptable:
Organism G does not have chloroplast.</td></tr>
<tr><td>35(b)</td><td colspan="3">The cell membrane <u>controls</u> the movement of substances going in or out of the cell.</td><td>Not acceptable:
• Allow substances in and out of cell</td></tr>
<tr><td>36(a)</td><td colspan="3">Water</td><td></td></tr>
<tr><td>36(b)</td><td colspan="3">Evaporation and condensation</td><td></td></tr>
</table>

36(c)	Point 1: The **saltwater in basin L** evaporate **faster** than basin M. Point 2: **More warmer water vapour** from the salt water, which touched the cooler **plastic sheet,** Point 3: lost heat and condense into water droplets. Point 4: The water droplets dripped into the cup.	**NOTE:** Need to show comparison. If the source of water vapour is wrong, no mark is awarded.
36(d)	Add ice cubes on the plastic sheet	
37(a)	R, P, Q, S	
37(b)	Choice: No. Explain: The raincoat is made of a waterproof material.	
38(a)		
38(b)	The ship blocks light / is opaque. OR The ship does not allow light to pass through.	**Not accepted:** Light can be blocked.
38(c)	Choice: The shadow would be larger. Explain: A larger boat causes more light to be blocked.	
38(d)	There is only one changed variable, which is the size of the ship. This ensures that the size of the shadow cast is solely due to the size of the boat and not the light source.	**Not accepted:** There is only one changed variable. [0] (Need to name the variable)

39(a)	Choice: Bulb P. Data: It is arranged in ___parallel___ Explain: so ___more___ **electric current flows through the bulbs.**	
39(b)	**The new bulb should be connected in** ___parallel___ **to bulb P** in circuit 1.	**Not accepted:** • place the bulb beside P [0] • add it in series [0]
39(c)		**Correct connection of wires and motors in parallel.** **Correct connection of two switches.**
40(a)	**The air in the ball occupied** ___more___ **space** in the cylinder. **The ball took up the** ___space___ **previously occupied by the water.**	**Not accepted:** **Ball expand [0].**
40(b)	Water has a definite volume. OR Water cannot be compressed. OR Water has no definite shape.	**Not accepted** • Indefinite [0].
41(a)	When the switch is closed, it is a ___closed___ circuit and electric current flows through the circuit. The iron core becomes an ___electromagnet___ and ___attracts___ the iron bolt.	**Electrical current was able to flow to the iron core/door/iron bolt/ through the iron core [0]**

41(b)	Plastic is a non-magnetic material and cannot be attracted by the electromagnet. So the door **cannot be unlocked.**	**door lock will not work [0]**
41(c)	The magnet will attract the iron bolt and the **door cannot be locked.**	