



# Rulang Primary School

## SEMESTRAL ASSESSMENT 2 SCIENCE 2018

Name: \_\_\_\_\_ ( )

Marks: \_\_\_\_\_ / 56

Level: Primary 5

Total Time for Booklets

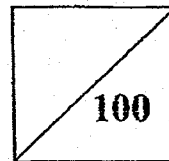
Class: Primary 5 ( )

A and B: 1 h 45 min

Setter: Ms Poon Yin Foong

Date: 30 Oct 2018

Total Marks:



## BOOKLET A

### Instructions to pupils:

1. Do not open this booklet until you are told to do so.
2. You are required to answer all the questions in this booklet.
3. This question booklet consists of 

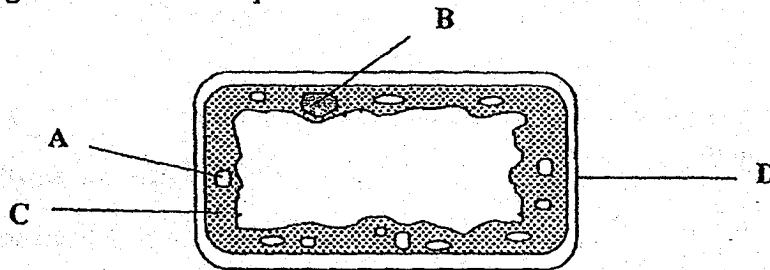
20
----

 printed pages, including the cover page.

**Section A (28 x 2 marks)**

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

1. The diagram below shows a plant cell.



Four pupils made the following statements about the plant cell.

Alex: Part A traps sunlight to make food.

Bala: Part B controls all activities of the cell.

Chloe: Part C controls the movement of substances in and out of the cell.

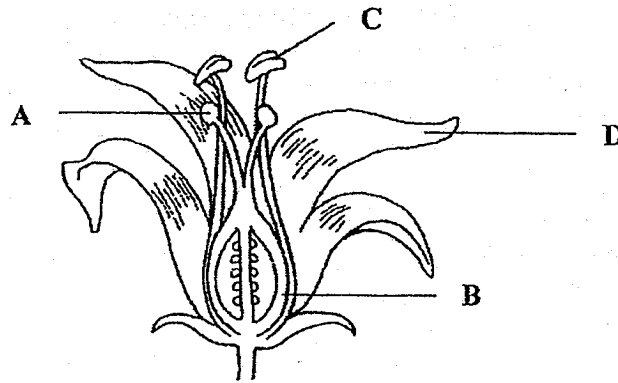
Danny: Part D protects the cell by preventing harmful substances from entering it.

↳ cell wall

Whose statements are correct?

- (1) Alex and Bala only
  - (2) Alex and Chloe only
  - (3) Alex, Bala and Danny only
  - (4) Bala, Chloe and Danny only
2. Ron accidentally cut himself while he was helping his mother with some chores. A few days later, the wound healed. Which one of the following statements best explains why the wound healed by itself?
- (1) Cells grew bigger to replace the damaged cells.
  - (2) New cells are produced to replace the damaged cells.
  - (3) Cells around the wound grew bigger to cover up the wound.
  - (4) Cells from other parts of the body moved to cover up the wound.

3. Bala wanted to find out which parts of a flower must be present in order for it to become a fruit. He removed two parts from flower X and then transferred some pollen grains from the anther of another flower of the same kind to the remaining parts of flower X. After some time, flower X developed into a fruit.



Flower X

Which two parts of flower X did Bala remove at the start of the experiment?

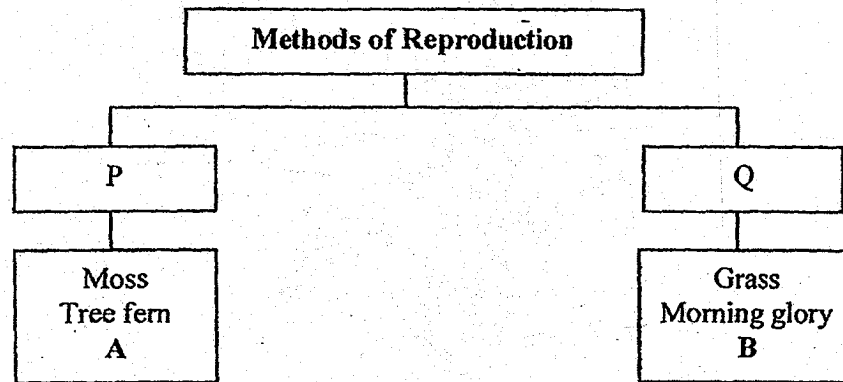
- (1) A and B  
 (2) A and C  
 (3) B and D  
 (4) C and D
4. Study the table below carefully.

Dish	Number of Seeds	Amount of Water given (ml)	Location	Presence of Air
A	3	30	Garden	Yes
B	3	5	Garden	Yes
C	5	30	Garden	Yes
D	5	5	Cupboard	Yes
E	3	30	Cupboard	Yes

Raju wanted to find out if light is needed for germination. Which two dishes should he compare in order to conduct a fair test?

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

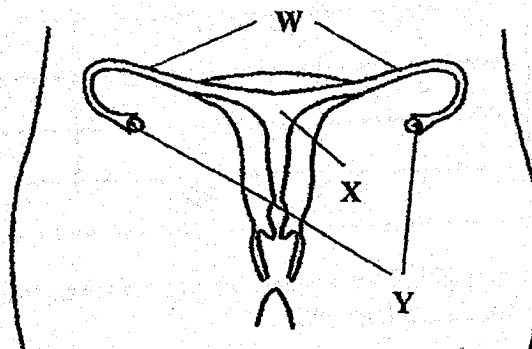
5. The diagram below shows the classification of some plants according to the methods of reproduction.



Which one of the following sets of organisms best represents organisms A and B respectively?

	A	B
(1)	Chilli	Mushroom
(2)	Bird's nest fern	Hibiscus
(3)	Watermelon	Tomato
(4)	Mould	Bird's nest fern

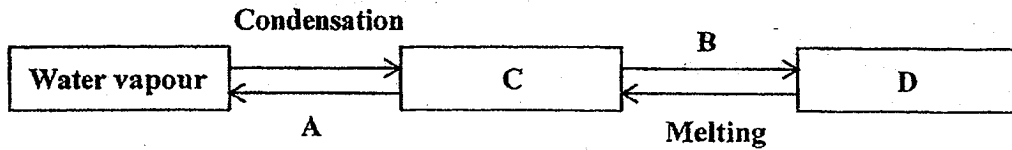
6. The diagram below shows a female human reproductive system.



Which one of the following statements is correct?

- (1) Fertilisation takes place in W.
- (2) W produces one reproductive cell at a time.
- (3) Y produces reproductive cells in large numbers.
- (4) X releases a large number of reproductive cells at any one time.

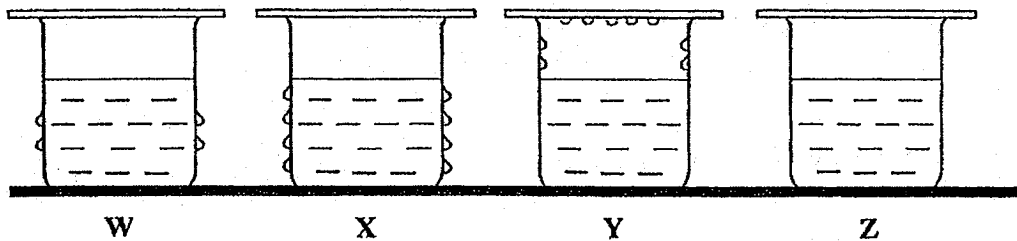
7. The diagram below shows the changes in the different states of water.



Which one of the following sets correctly represents processes A and B and states C and D?

	A	B	C	D
(1)	Freezing	Evaporation	Ice	Water
(2)	Evaporation	Boiling	Water	Steam
(3)	Evaporation	Freezing	Water	Ice
(4)	Boiling	Freezing	Steam	Ice

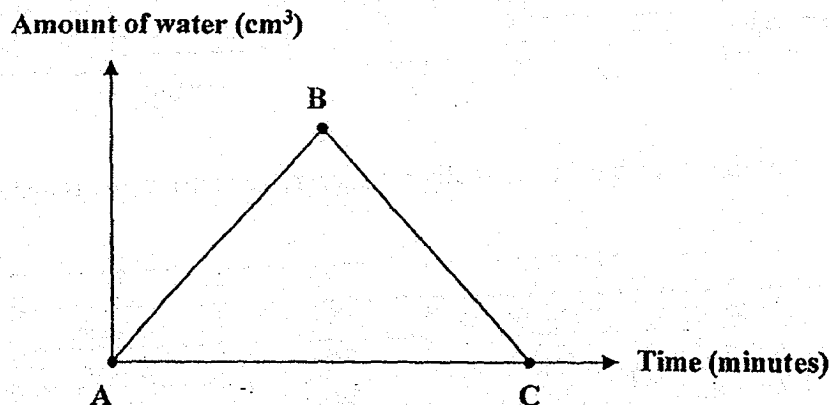
8. Four identical containers, W, X, Y and Z, containing the same amount of water at different temperatures were placed on a table as shown below.



Which one of the following sets shows the temperature of the water in each beaker from the highest to the lowest?

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

9. Adeline heated a block of ice in a beaker. She then measured the amount of water in the beaker during the process and plotted the graph as shown below.



Which one of the following correctly represents the states of water at A, B and C respectively?

	A	B	C
(1)	Solid	Gas	Liquid
(2)	Gas	Liquid	Solid
(3)	Gas	Solid	Liquid
(4)	Solid	Liquid	Gas

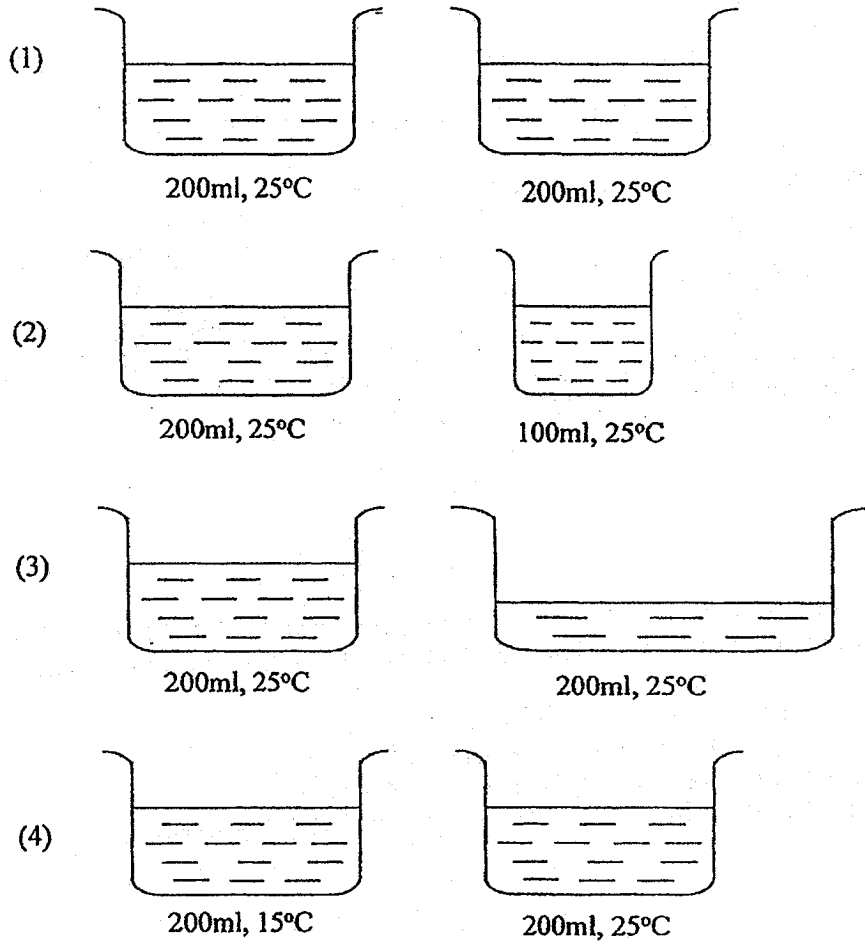
10. The table below shows the boiling points and melting points of 4 different substances, P, Q, R and S.

Substance	Melting point (°C)	Boiling point (°C)
P	-5	20
Q	15	68
R	26	105
S	52	178

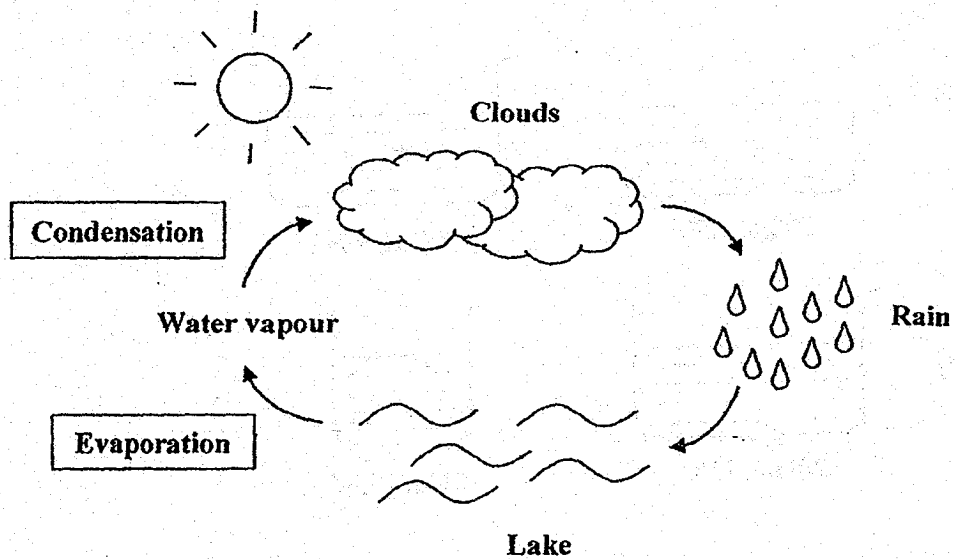
Which substances, P, Q, R or S, are at liquid state at 30°C?

- (1) P and Q only  
 (2) Q and R only  
 (3) P, Q and R only  
 (4) Q, R and S only

11. Jonathan wanted to investigate how exposed surface areas affect the rate of evaporation. Which one of the following sets of experiments should he use?



12. Study the diagram below carefully.

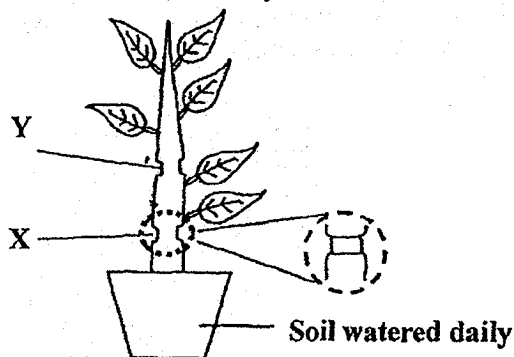


Yong Jian asked his classmate what is likely to happen when the temperature of the water in the lake increases. Which one of the following statements by his classmate is not correct?

- (1) There will be a faster formation of clouds.
- (2) The rate of evaporation of water in the lake will decrease.
- (3) There will still be a constant supply of fresh water on earth.
- (4) Water from the lake will still evaporate and condense to form clouds.



13. Two rings are removed from the stem of a plant at parts X and Y.



Which one of the following sets of observations and conclusions is correct?

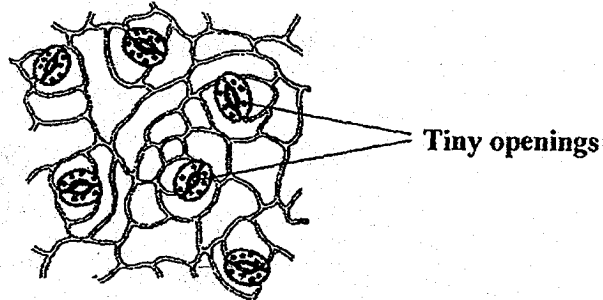
	Observations	Conclusions
(1)	The leaves above Y turn yellow and the leaves between X and Y remain green.	The water-carrying tubes are removed at Y and the food-carrying tubes are removed at X.
(2)	All the leaves remain green.	Only the water-carrying tubes are removed at X and Y.
(3)	The leaves above Y remain green and the leaves between X and Y turn yellow.	The water-carrying tubes are removed at X and the food-carrying tubes are removed at Y.
(4)	All the leaves grow larger.	Only the water-carrying tubes are removed at X and Y.

14. The table below compares the respiratory systems of both a fish and a human. Which of the following pairs of statements are correct?

	Respiratory System of a Fish	Respiratory System of a Human
A	Takes in dissolved oxygen from the water	Takes in oxygen from the surrounding air
B	Carbon dioxide is removed from the blood	Carbon dioxide is removed from the blood
C	Gaseous exchange takes place in the gills	Gaseous exchange takes place in the lungs
D	Gills are protected by the gill covers	Lungs are protected by the ribcage

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

15. Rebecca found some tiny openings on the underside of a leaf using a microscope and sketched her observation as shown below.

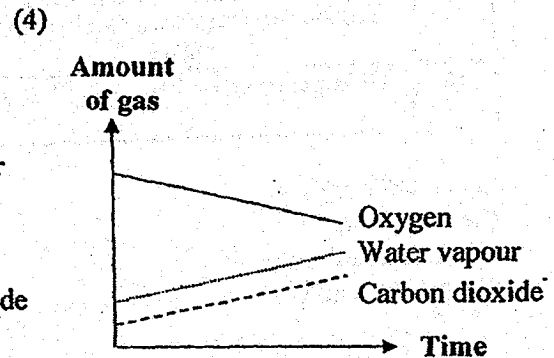
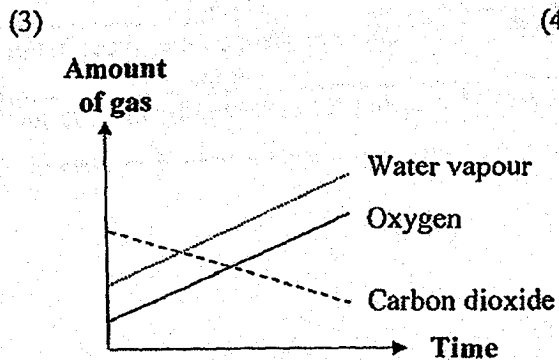
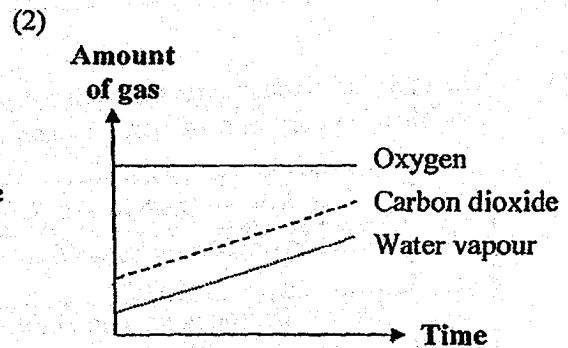
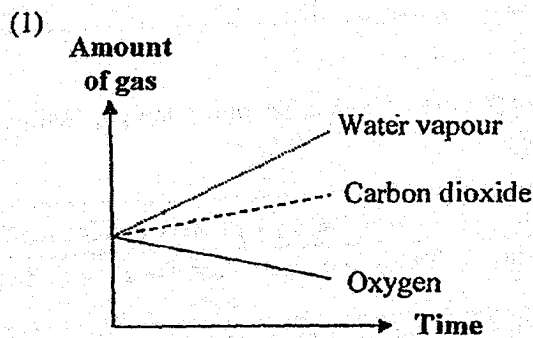


She then made the following statements about the functions of the tiny openings.

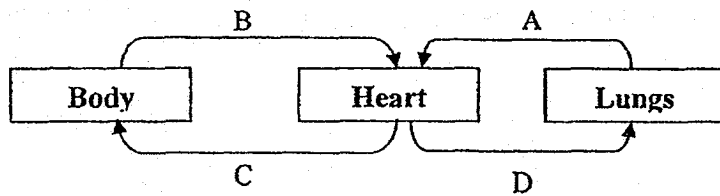
- A: Water vapour is lost through these openings.
- B: They trap sunlight to carry out photosynthesis.
- C: They take in only carbon dioxide during the day.
- D: They take in oxygen and give out carbon dioxide all the time.

Which of the above statements are correct?

- (1) A and D only
  - (2) B and C only
  - (3) A, C and D only
  - (4) A, B, C and D
16. Brian wanted to find out which gases are taken in and given out by animals. He put twenty beetles in an enclosed tank for one hour. Which one of the following graphs below most likely shows how the amount of the different gases in the tank changed after one hour?



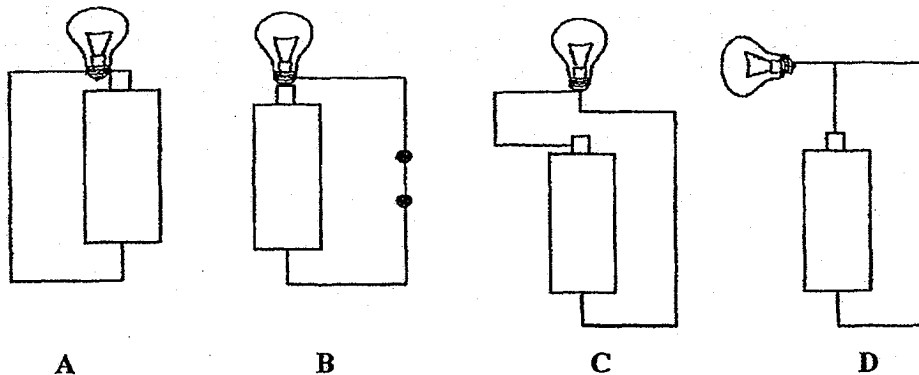
17. The diagram below shows the human circulatory system.



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

	Blood rich in oxygen		Blood rich in carbon dioxide	
(1)	A	D	C	B
(2)	B	C	A	D
(3)	C	D	B	A
(4)	A	C	B	D

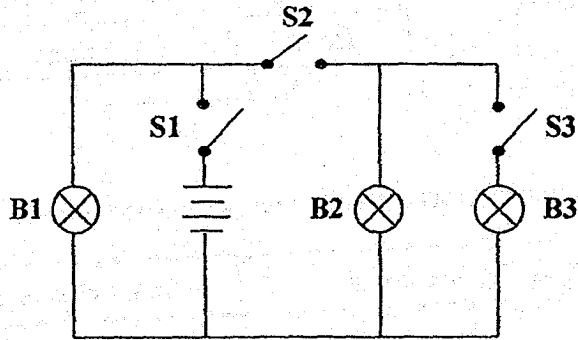
18. Travis set up the following circuits, A, B, C and D. All the bulbs and batteries are identical and working properly.



In which of the following circuits, A, B, C and D, will the bulb not be able to light up?

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

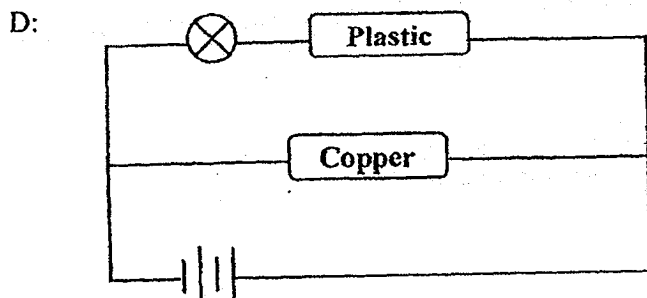
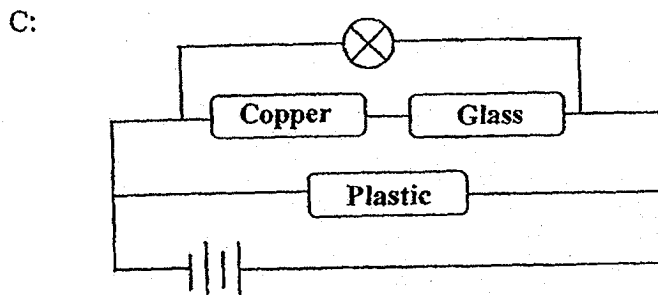
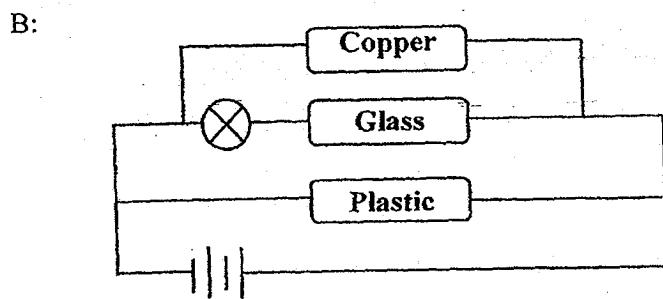
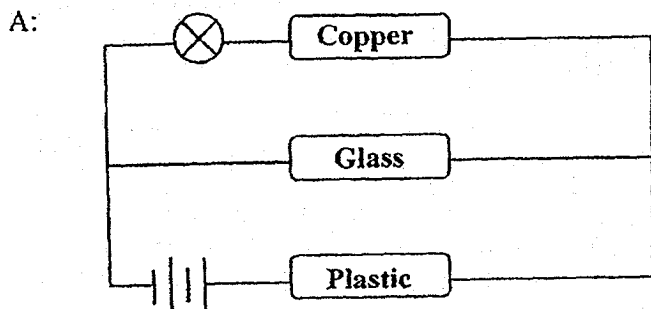
19. Bulbs B1, B2 and B3 and switches S1, S2 and S3 are connected in a circuit shown below. All the bulbs and batteries are identical and working properly.



Which one of the following sets is correct?

	Switches			Do the bulbs light up?		
	S1	S2	S3	B1	B2	B3
(1)	Closed	Open	Closed	Yes	No	Yes
(2)	Open	Open	Closed	No	No	Yes
(3)	Closed	Closed	Open	Yes	Yes	No
(4)	Open	Closed	Open	No	Yes	No

20. All the bulbs and batteries in the four circuit diagrams below are identical and working properly.

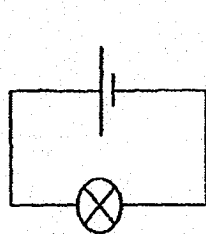


In which one of the following circuits will the bulb light up?

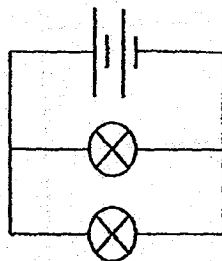
- (1) A  
(3) C

- (2) B  
(4) D

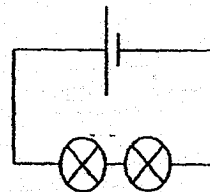
21. Tommy wanted to investigate if the number of batteries in an electric circuit would affect the brightness of the bulbs. All the bulbs and batteries are identical and working properly.



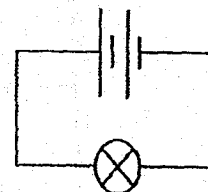
Set-up A



Set-up B



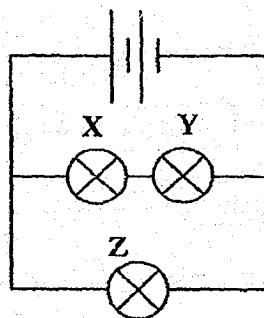
Set-up C



Set-up D

Which two set-ups, A, B, C and D, should he use to ensure a fair test?

- (1) A and B
  - (2) A and D
  - (3) B and C
  - (4) C and D
22. Martin drew the circuit diagram shown below.

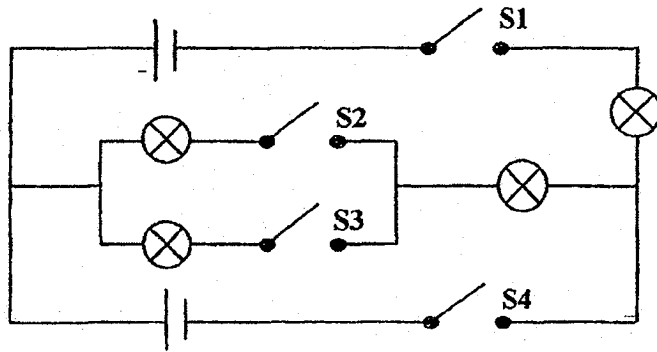


Which of the following statements, A, B, C or D, about the electric circuit are true?

- A: Bulb Y is as bright as bulb Z.
- B: Bulb Z is brighter than bulb X.
- C: If bulb X fuses, bulbs Y and Z will still light up.
- D: If bulb Z fuses, bulbs X and Y will still light up.

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

23. In the circuit diagram below, all the bulbs and batteries used are identical and working properly.

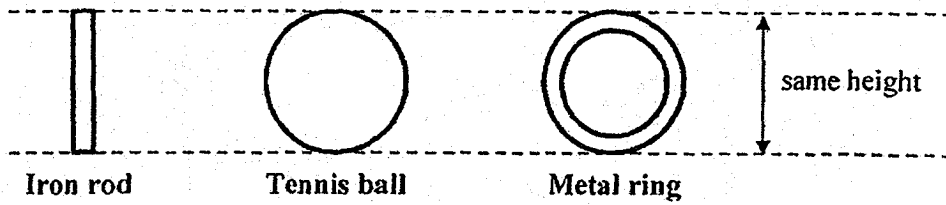


Which of the following switches should be closed so that only two bulbs will light up at any one time?

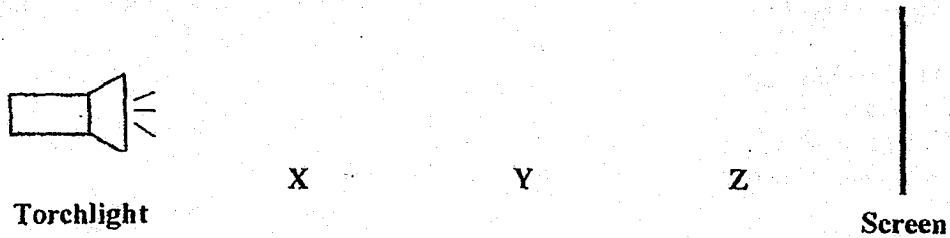
- A: S1 and S2 only
- B: S2 and S3 only
- C: S2 and S4 only
- D: S3 and S4 only

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

24. Ahmad has three objects which are of the same height.



He placed each object at one of the positions, X, Y and Z, between a torchlight and a white screen as shown in the diagram below.



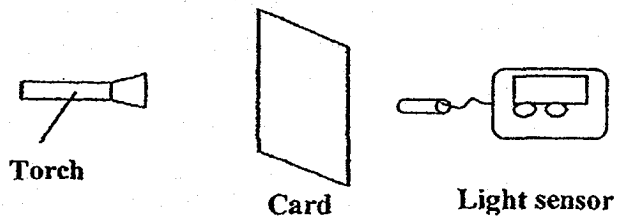
Which of the following shadows, A, B, C or D, are possible shadows of the three objects that were cast on the screen?

Shadow A	Shadow B	Shadow C	Shadow D

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

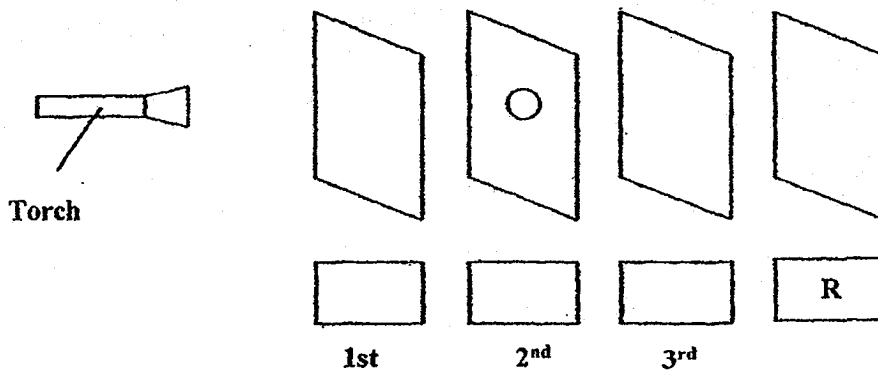


25. A light sensor which reads from a scale of 0 to 10 was used to determine the amount of light that was able to pass through four cards, P, Q, R and S, made of different materials as shown below. The results were recorded in the table below.



Card	Reading on the sensor (unit)
P	9
Q	1
R	0
S	10

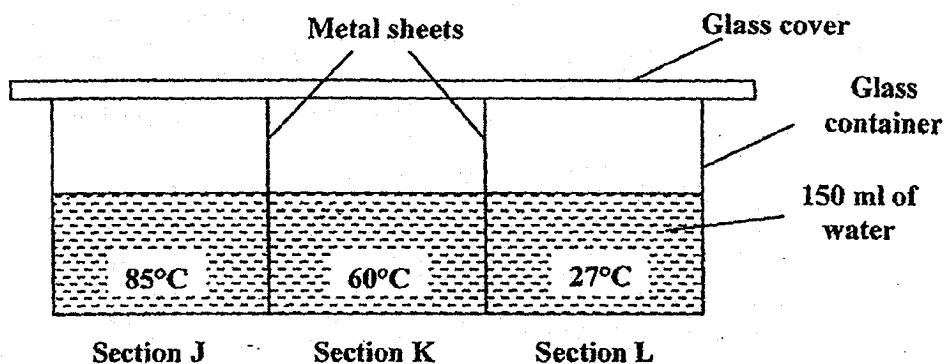
A high reading indicates that a greater amount of light was detected. The cards were then arranged in a straight line. A circular hole was cut out from one of the cards. When a torch was switched on, a bright circular patch of light was observed on card R only.



By using only the information from the experiment and the readings from the light sensor, how were the cards arranged?

	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
(1)	S	Q	P
(2)	Q	S	P
(3)	P	S	Q
(4)	S	P	Q

26. A large glass container is separated by two similar metal sheets into sections J, K and L. It is covered with a glass cover. Each section is filled with 150ml of water at different temperatures as shown below. The room temperature is  $27^{\circ}\text{C}$ .

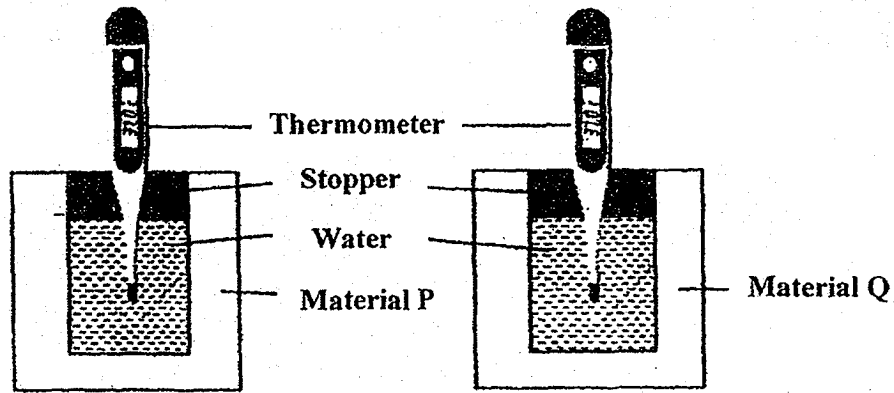


Which of the following statements about what would be observed after a period of time are correct?

- A: Heat flows from section J to section K to section L.
- B: Water in section K gains heat from water in section J.
- C: The temperature of water in section L will drop after an hour.
- D: The temperatures of water in sections J, K and L will be the same after one day.

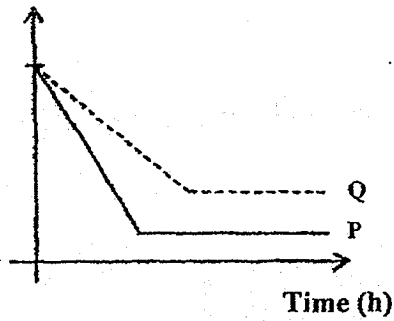
- (1) A and B only
- (2) A and C only
- (3) A, B and D only
- (4) B, C and D only

27. Mark has two similar blocks each made of two different materials P and Q. Material P is a better conductor of heat than material Q. Both blocks are placed in the same compartment in a refrigerator at the same time and their temperatures monitored using a thermometer as shown below.

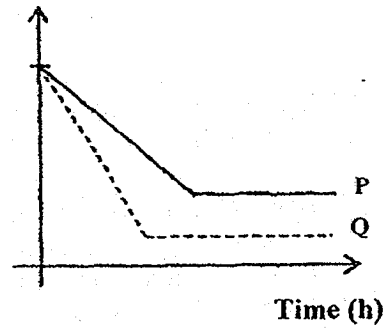


Which one of the following graphs shows the temperatures of both blocks over time?

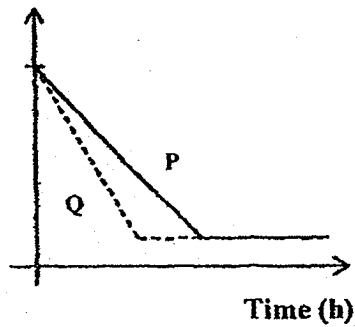
- (1) Temperature ( $^{\circ}\text{C}$ )



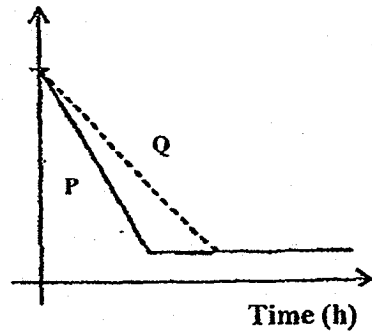
- (2) Temperature ( $^{\circ}\text{C}$ )



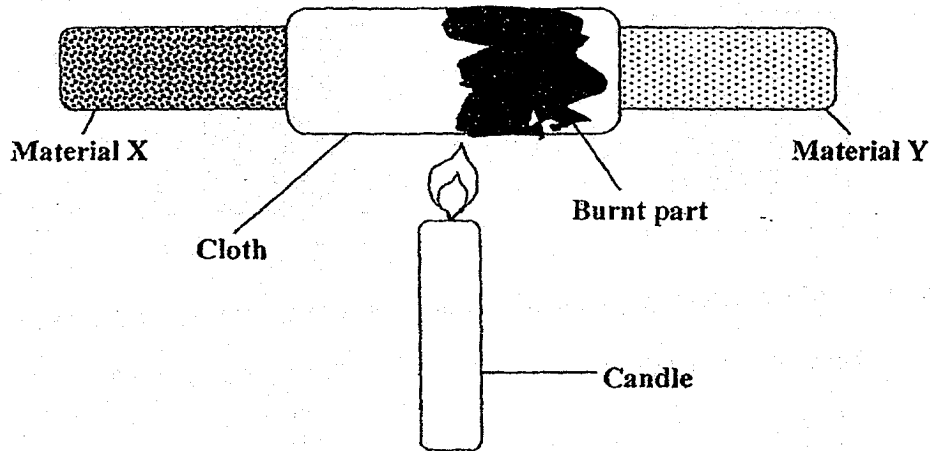
- (3) Temperature ( $^{\circ}\text{C}$ )



- (4) Temperature ( $^{\circ}\text{C}$ )



28. Paul carried out an experiment on a piece of rod. Half of the rod is made of material X and the other half is made of material Y. The rod was wrapped in the middle with a thin cloth. A candle flame was placed underneath the middle of the rod as shown below. After a short while, the part of the cloth covering material Y was burnt, but not the part covering material X.



Which one of the following statements best concludes what was observed from the experiment above?

- (1) Material X felt cooler than material Y.
- (2) Material Y gains heat faster than material X.
- (3) Material X is a better conductor of heat than material Y.
- (4) Material Y is a better conductor of heat than material X.



# Rulang Primary School

## SEMESTRAL ASSESSMENT 2 SCIENCE 2018

Name: \_\_\_\_\_

Marks: \_\_\_\_\_ / 44

Level: Primary 5

Date: 30 Oct 2018

Class: Primary 5 ( )

Parent's

Signature: \_\_\_\_\_

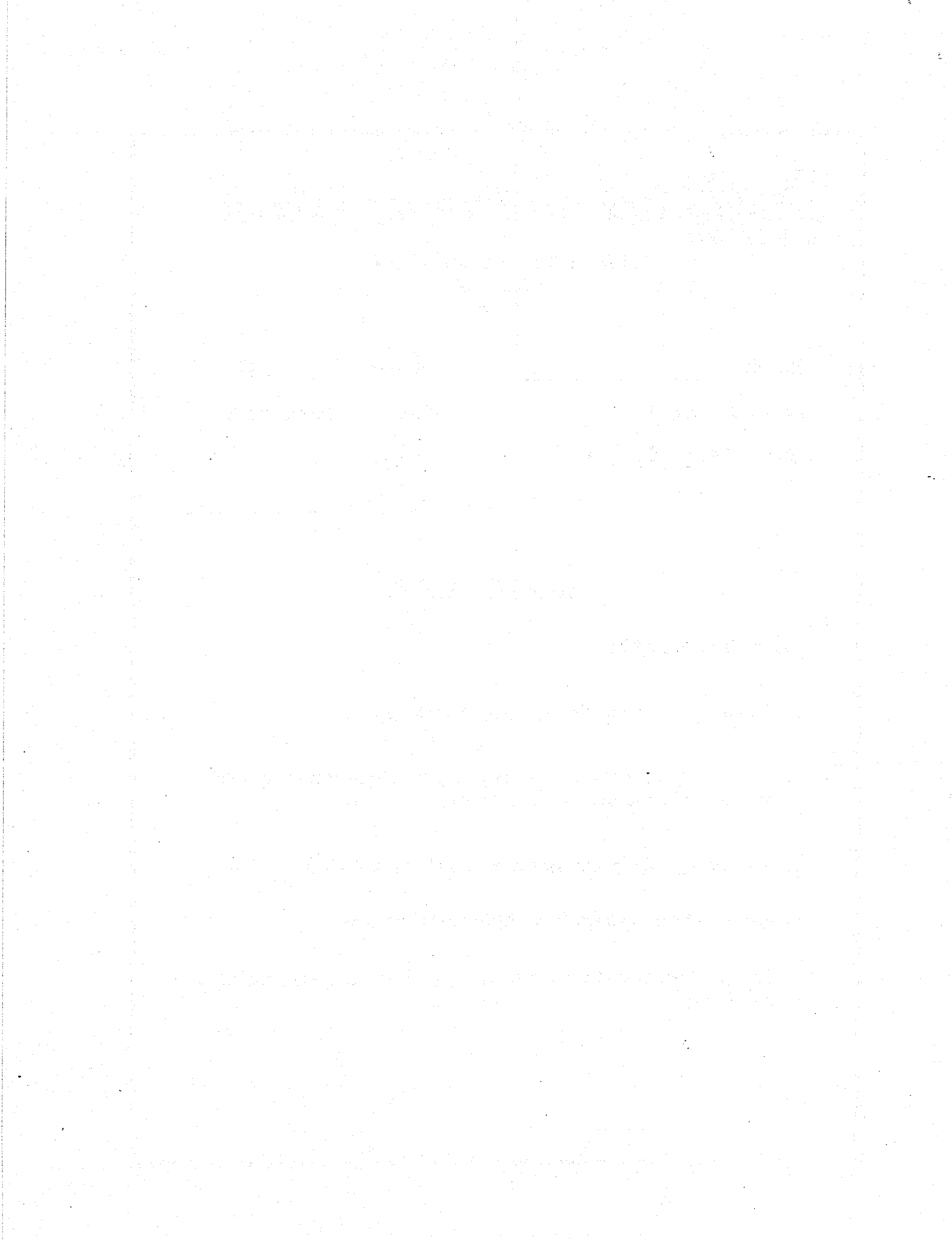
## BOOKLET B

### Instructions to pupils:

1. Do not open this booklet until you are told to do so.
2. You are required to answer **all** the questions in this paper using your own words / expressions as far as possible.
3. All drawings / diagrams must be clearly shown and labelled.
4. Marks will be deducted for wrongly spelt key words.
5. This question booklet consists of 

16
----

 printed pages, including the cover page.



**Section B (44 marks)**

Write your answers to questions 29 to 40 in this booklet.

29. Daryl observed three types of cells under the microscope. He recorded his observations in the table below. A tick (✓) indicates the presence of the cell part.

Cell part	Cell A	Cell B	Cell C
Nucleus	✓	✓	✓
Cell wall			✓
Chloroplast		✓	
Cell membrane	✓	✓	✓

(a) Daryl made a mistake in his observation. Which cell, A, B or C, did he most likely observe wrongly? Give a reason for your answer. (2 m)

---



---



---

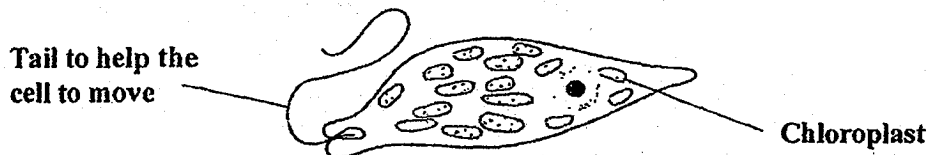
(b) Daryl indicated that cell A was taken from the root of a plant but his teacher said that it was incorrect. Give a reason why his teacher said that the answer was incorrect. (1 m)

---



---

(c) Daryl found a single-celled organism taken from the school pond as shown in the diagram below.



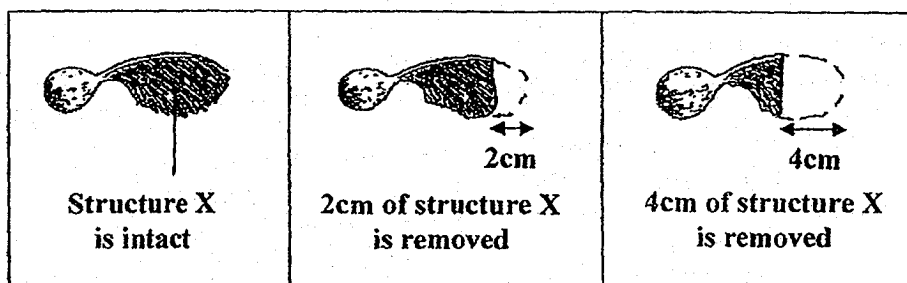
Explain why the organism needed to move towards a light source to survive. (1 m)

---

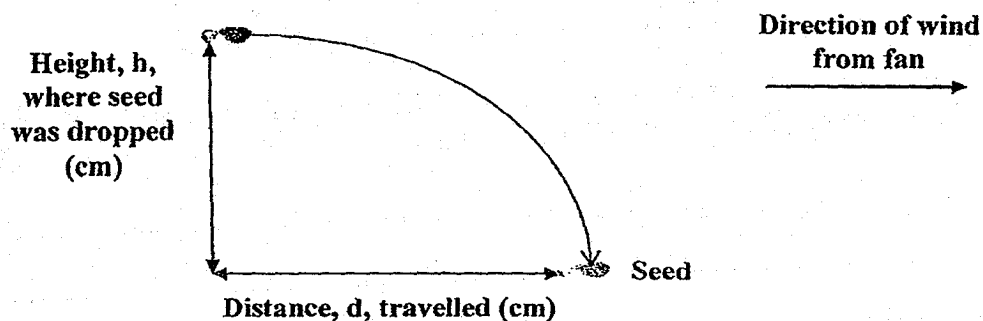


---

30. Wendy wanted to find out if the distance travelled by the seed of plant P was affected by the length of its structure when dropped from a height in front of a fan.



She dropped the seed with structure X intact from a height,  $h$ , and measured the distance,  $d$ , travelled by it. She repeated the experiment twice by using the same seed, first with 2cm of structure X removed, and finally with 4cm of structure X removed.



She recorded the distance travelled by the seed in the table below.

Length of structure X removed from the seed (cm)	Distance travelled by the seed (cm)
0	125
2	85
4	20

- (a) Based on the information above, what is the relationship between the distance,  $d$ , travelled by the seed and the length of structure X removed from the seed? (1 m)

---



---



Wendy removed the whole of structure X from the seed as shown below.



**Structure X removed**

- (b) What would be a possible distance,  $d$ , travelled by the seed when dropped from the same height? Explain your answer clearly. (2 m)

---

---

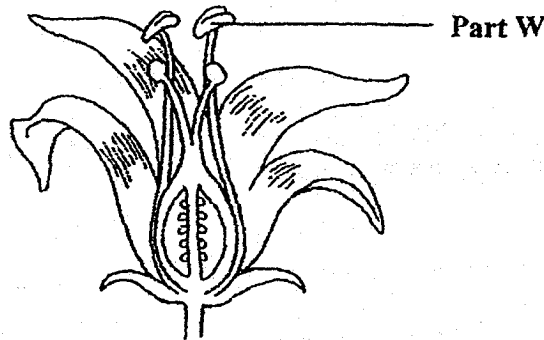
---

- (c) Wendy concluded that not removing structure X will allow the young of plant P to grow healthily. Explain why this is so. (2 m)

---

---

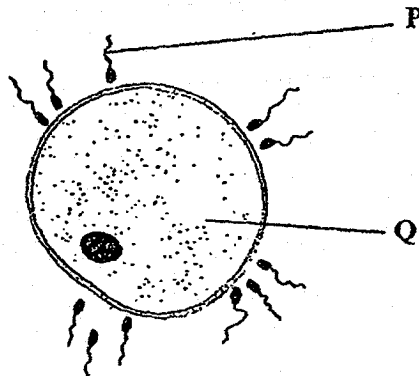
31. The diagram below shows the cross section of a flower.



(a) Which organ of the human reproductive system performs the same function as part W? (1 m)

\_\_\_\_\_

(b) Study the diagram below and identify P and Q. (1 m)

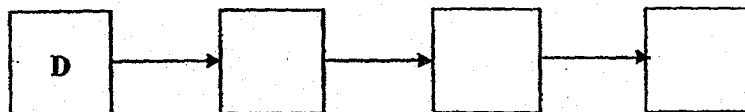


P: \_\_\_\_\_

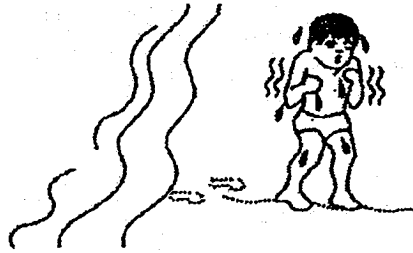
Q: \_\_\_\_\_

(c) Arrange the following statements in the correct order and write the corresponding letters in the boxes provided. Statement D has already been indicated in the first box. (1 m)

- A: The fertilised Q divides to form many cells.
- B: A foetus develops and grows in the womb.
- C: P fuses with Q.
- D: P travels into the female reproductive organ.

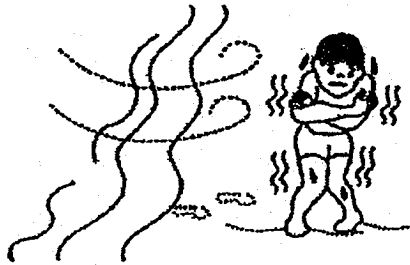


32. John went for a swim at the beach. When he came out of the water, he felt cold.



**John's body was wet after swimming**

**A gust of wind blew all of a sudden and he felt even colder.**



**A gust of wind blew over his body**

**Explain clearly why he felt even colder with the sudden gust of wind. (2 m)**

---

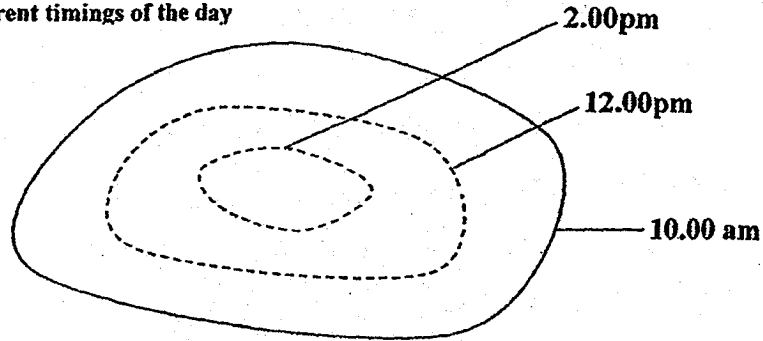
---

---

---

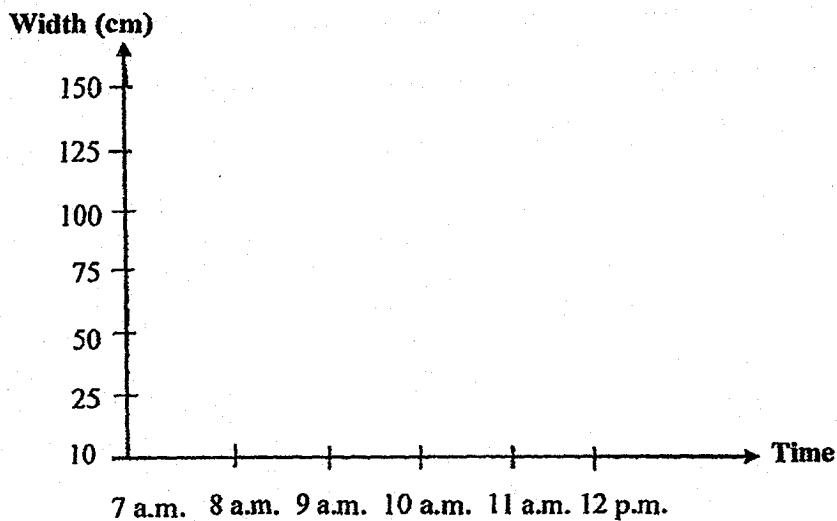
33. After a heavy rain, Paul noticed a puddle of water in the playground at 10.00am. The puddle became smaller as time passed by. He measured the width of the puddle at different times of the day and recorded them in his notebook.

Shape of water puddles at different timings of the day

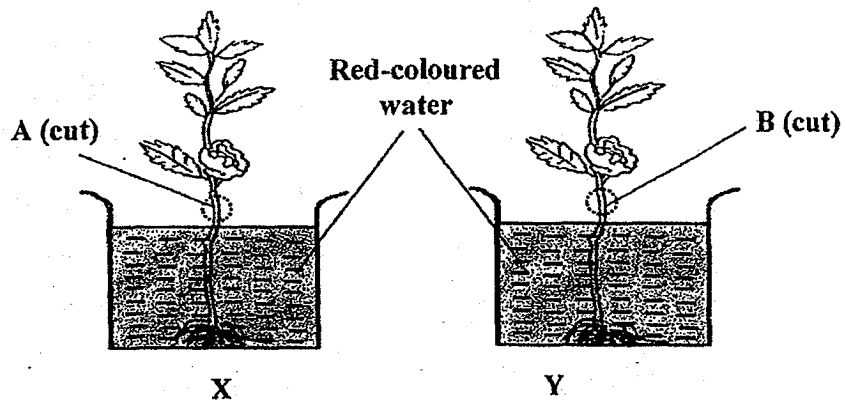


- (a) Draw a ring in the above diagram to show the size of the puddle at 11.00a.m. (1 m)
- (b) What could have caused the puddle to become smaller if no water was soaked into the ground? (1 m)
- 
- 

- (c) The graph below shows how a puddle of water of a width of 150cm changed on a cold day. Draw a different graph below to show how a puddle of water of a width of 150cm changed on a warmer day. (1 m)



34. Chantel set up an experiment by removing parts of either food-carrying tubes or water-carrying tubes of two similar plants, X and Y. The plants were then placed in beakers containing the same amount of red-coloured water as shown in the diagram below.



The observations of the plants were recorded in the table below.

Plant	Observations after three days
X	Swelling on the stem above A observed. The plant is still growing well.
Y	Swelling on the stem above B observed. The plant withered and dried up on the fifth day.

- (a) Explain why the stem above A of plant X swelled. (2 m)

---



---

- (b) Chantel observed that plant Y withered and dried up on the fifth day. Explain what had happened. (2 m)

---



---

35. Study the figures below. Diagrams A and B show how gases are transported in a fish and human respectively.

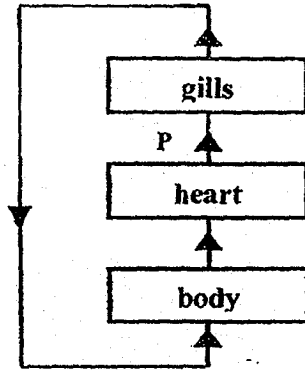


Diagram A (fish)

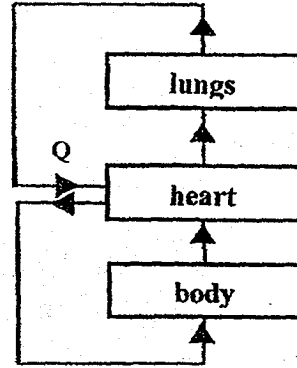


Diagram B (human)

- (a) State a difference between the amount of carbon dioxide found in the blood flowing in P and Q. (2 m)

---

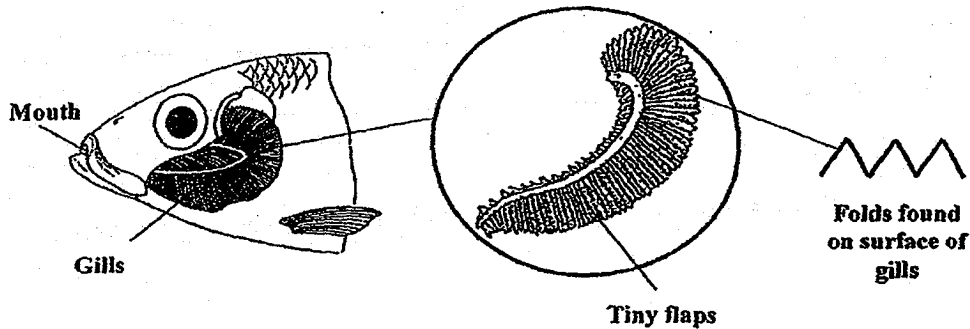


---



---

Fish use gills to breathe in water. The diagram below shows the gills of a fish.



- (b) The tiny flaps are folds found on the surface of the gills. Explain why the gills of a fish have many tiny flaps. (1 m)

---

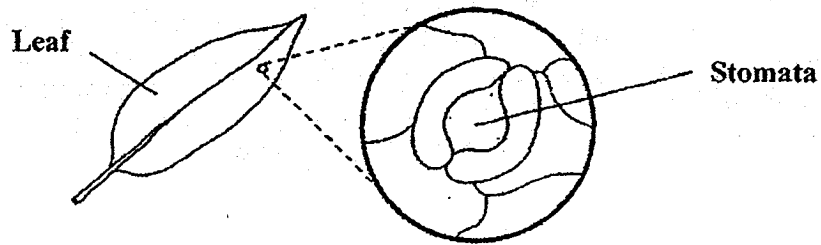


---

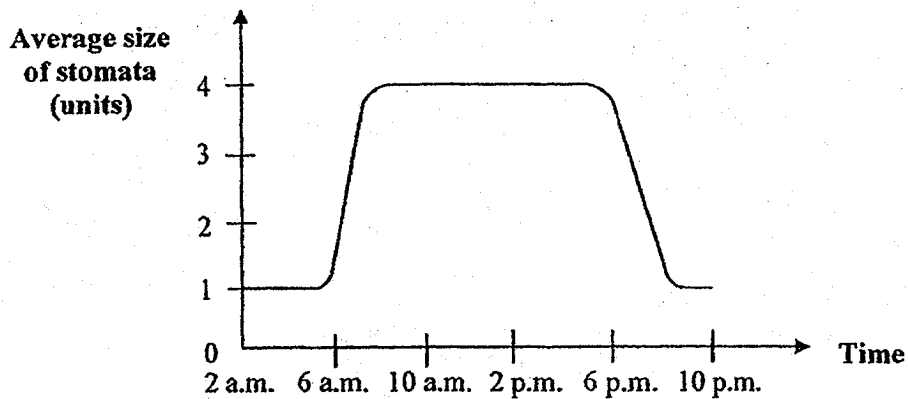


---

36. Leaves have tiny openings called stomata on their surfaces. Some gases like oxygen, carbon dioxide and water vapour move through the stomata.

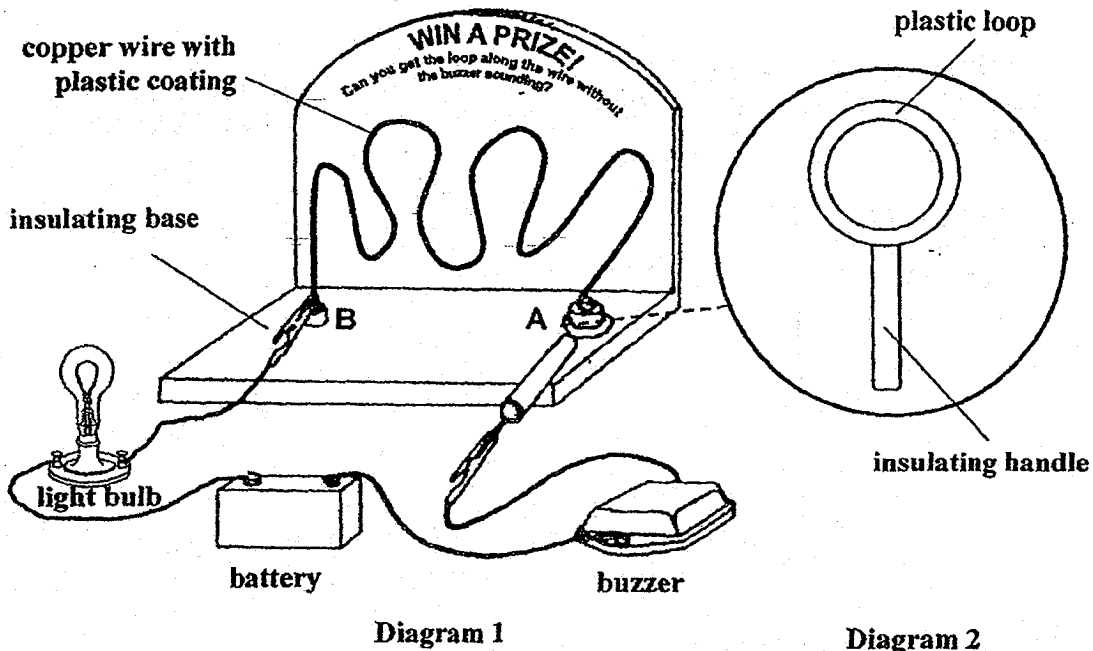


Radhika measured the changes in the size of the stomata on the underside of a leaf of a plant placed near the window at different times of the day. She plotted her results as shown below.



- (a) Based on her results, what effect did light have on the size of stomata? (1 m)
- 
- 
- (b) How does the change in the size of stomata in (a) help in photosynthesis? (1 m)
- 
- 
- (c) The change in the size of stomata in the presence of light can also be a disadvantage to the plant. What is this disadvantage? (1 m)
- 
-

37. Students from ABC Primary School made an electrical game for their school's carnival. To win a prize, the player has to pass a loop from point A to point B without touching the copper wire. Diagram 1 shows the electrical game while diagram 2 shows a close-up view of how the plastic loop and insulating handle are connected. The light bulb, battery and buzzer are all in good working condition.



- (a) When the students tried to play the game, they realised that it did not work. List two changes that needed to be made to the game so that it would work. (2 m)

---



---



---

- (b) The students made the changes and the game worked. The students then blindfolded their teacher and asked him to guess if a participant won or lost the game. Explain how their teacher was able to conclude accurately that the participant had lost the game. (2 m)

---



---



---



- (c) Instead of having both the bulb light up and the bell ring at the same time to indicate the participant had lost the game, the students wanted to be able to choose to make either the bulb light up or the bell ring instead. How should they modify the set-up to achieve this? (1 m)

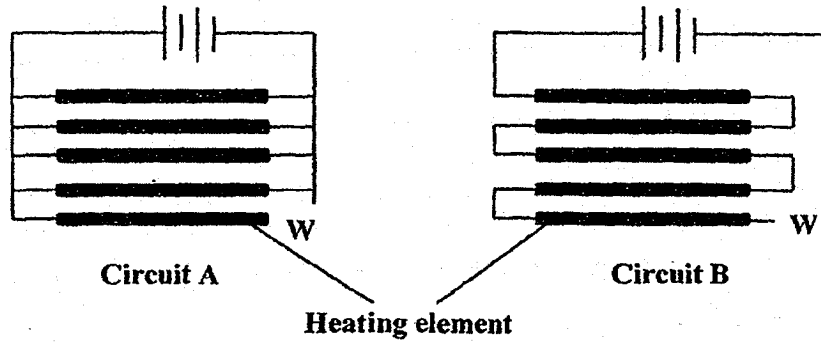
---

---

---

---

38. A heating element gives out heat when electricity flows through it. The diagrams below show how a heating element can be connected in a circuit in two different ways.



- (a) There is a gap marked "W" in both circuits. In which circuit, A or B, would the heating element work? Explain your answer. (2 m)

---

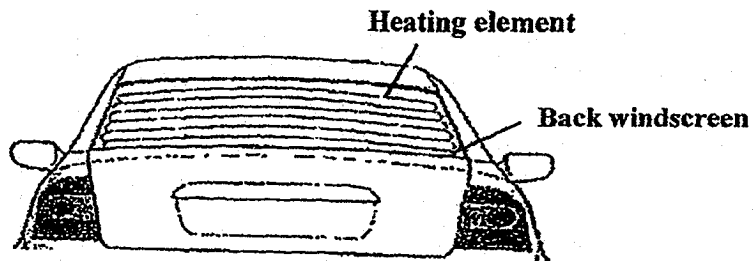


---



---

A heating element is usually installed at the back windscreen of a car as shown below. It is connected to the car battery and used during heavy rain.



- (b) State two advantages of using circuit A to connect the heating element to the car battery. (2 m)

---

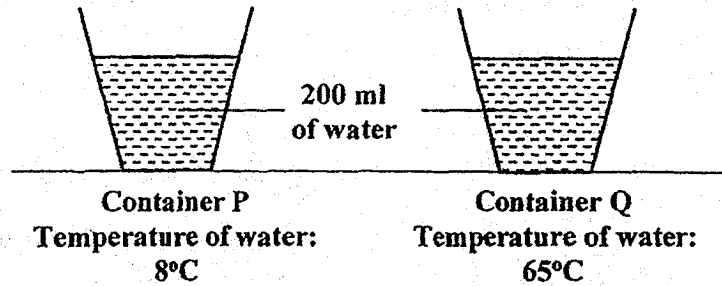


---



---

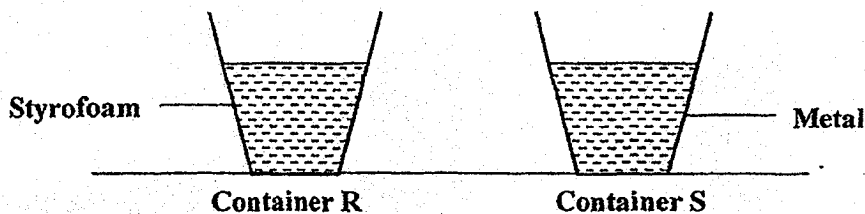
39. Faizal filled two identical containers, P and Q, made of the same material with equal amounts of water at different temperatures. He then placed them in a room with a temperature of 27°C.



- (a) The set-up was left in the room for about 30 minutes. Put a tick (✓) in the correct boxes to indicate the possible changes taking place during the 30 minutes. (1 m)

	Loses heat	Gains heat	Temperature increases	Temperature decreases
Water in container P				
Water in container Q				

Faizal then set up another experiment with containers R and S, made of different materials. He filled each container with water at 70°C.



- (b) What was the aim of Faizal's second experiment? (1 m)

---



---

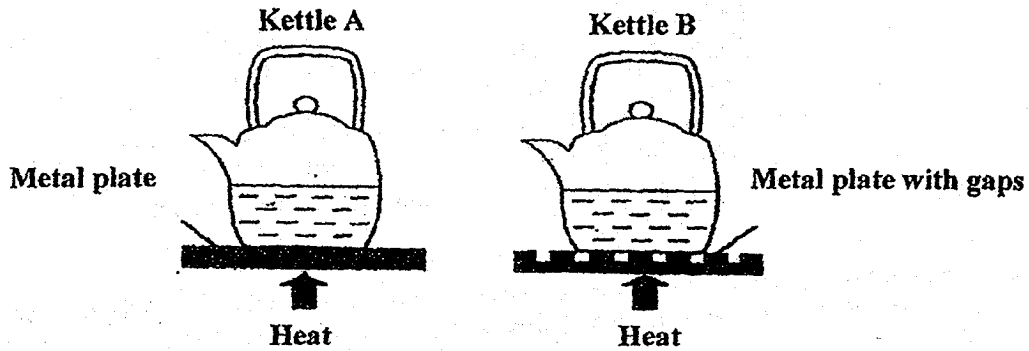
- (c) What should Faizal do to ensure that a fair test was conducted? (1 m)

---



---

40. Nurul placed two identical kettles, A and B, on two metal plates made of the same material. The kettles contained the same amount of water at room temperature. The plates were heated as shown below.

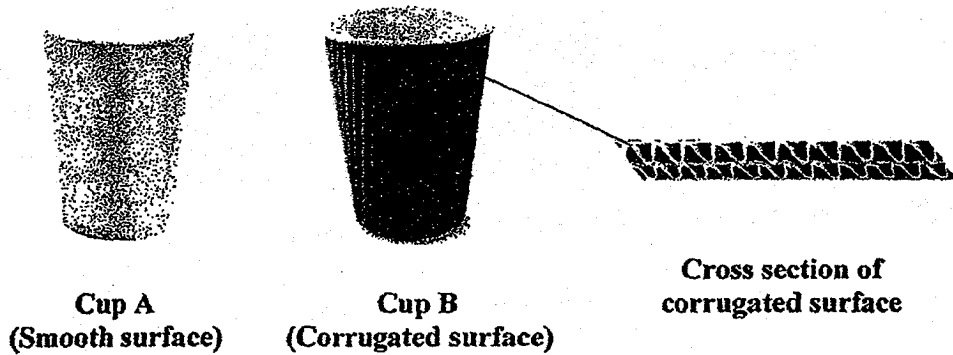


- (a) In which kettle, A or B, did the water boil first? Explain your answer. (2 m)

---

---

Jon started a cafe and decided to use paper cup B instead of paper cup A to contain the hot coffee.



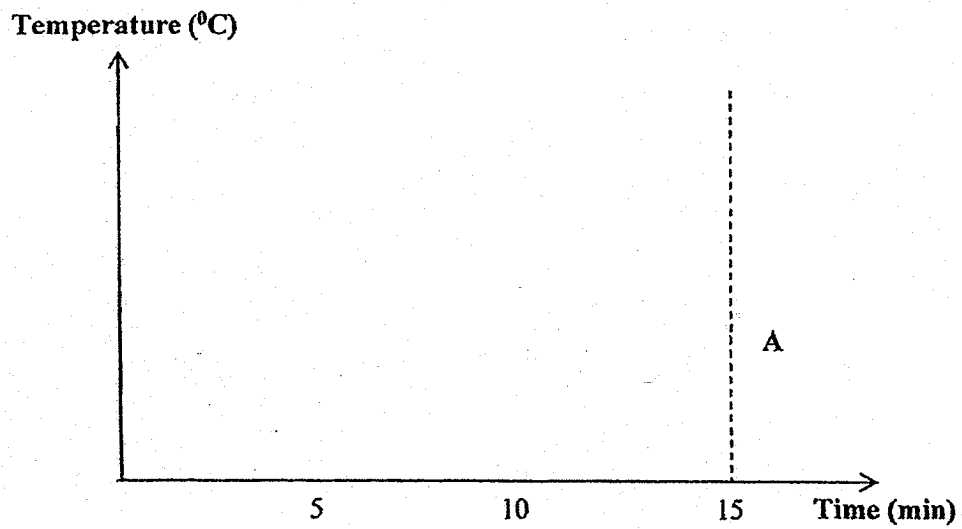
- (b) Explain why Jon used paper cup B to contain the hot coffee for his customers. (2 m)

---

---

---

- (c) The graph below shows the change in temperature of the coffee in cup A. Draw the graph in the diagram below to show the temperature of the coffee if a similar cup made of a better conductor of heat was used. (1 m)



**END OF PAPER**

THE UNIVERSITY OF CHICAGO  
DIVISION OF THE PHYSICAL SCIENCES  
DEPARTMENT OF CHEMISTRY

1955

RECEIVED

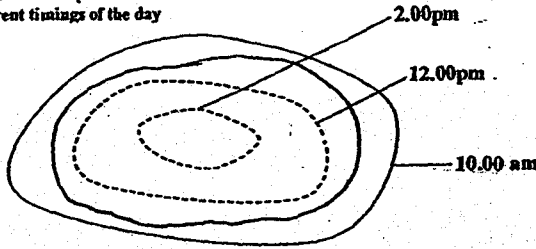
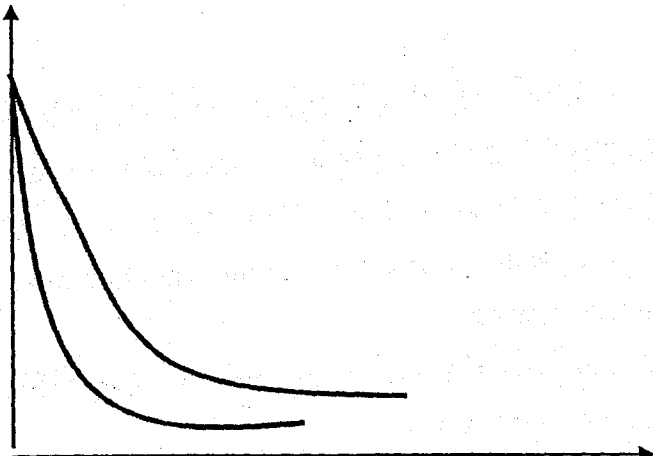
SCHOOL : RULANG PRIMARY SCHOOL  
 LEVEL : PRIMARY 5  
 SUBJECT : SCIENCE  
 TERM : 2018 SA2

**SECTION A**

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

**SECTION B**

Q29)	<p>a)He observed cell B wrongly. Cell B ahs chloroplasts which contain chlorophyll, thus cell B is part of a plant and must have a cell wall.</p> <p>b)Cell A has no cell wall but a root cell should have a cell wall.</p> <p>c)The organism has chloroplasts which contain chlorophyll to trop sunlight to make food for the organism.</p>
Q30)	<p>a)As distance, travelled by the seed decreased, the length of structure X removed from the seed increases.</p> <p>b)It is 5cm. There is no wing-like structure to help it stay afloat for a longer period of time.</p> <p>c)If structure X is not removed from the fruit, it will travel further away from the parent plant. This will prevent overcrowding and reduce competition for space, sunlight, nutrients, mineral salts and water.</p>
Q31)	<p>a)It is the testes.</p> <p>b)P: Sperm</p> <p>Q: Egg</p>

	c) D → C → A → B
Q32)	When the strong wind blew, water evaporates faster to become water vapour. During the process, more heat is lost from his body to the surrounding air.
Q33)	<p>a)</p> <p style="text-align: center;">Shape of water puddles at different timings of the day</p>  <p>b) The water gained heat from the sun and evaporated into water vapour.</p> <p>c)</p> 
Q34)	<p>a) Only the food-carrying tubes were cut in plant X. The food made by the leaves cannot travel down to the roots and accumulated there.</p> <p>b) As Chantel had removed the water-carrying tube from plant Y, water absorbed by the roots cannot be transported to the leaves of plant Y. The leaves of plant Y cannot photosynthesis and make food for the plant so plant Y eventually withered.</p>



Q35)	<p>a) The blood is richer in carbon dioxide in P but the blood is poorer in carbon dioxide in Q.</p> <p>b) The tiny flaps allows a larger exposed surface area for dissolved oxygen from the water to be absorbed into the bloodstream of the fish. The increases the rate of respiration for the fish.</p>
Q36)	<p>a) Light causes the size of stomata to increase.</p> <p>b) More carbon dioxide is taken in when the plant makes food.</p> <p>c) If the stomata are bigger, more water vapour will be lost through the stomata.</p>
Q37)	<p>a) The plastic loop should be changed to a conductor of electricity.</p> <p>b) Their teacher was able to hear the buzzer and feel the heat from the light bulb when a participant lost the game . When the loop touched the copper wire, the circuit was closed. Hence, the buzzer made a sound which the teacher heard when blindfolded.</p> <p>c) They should connect the bulb and buzzer in parallel arrangement with a switch for each of them.</p>
Q38)	<p>a) It is circuit A. Circuit A can still work as the circuit is closed and the elements are arranged in parallel.</p> <p>b) The elements will be hotter. If one of the elements is not working well, the other elements can still be heated up.</p>
Q39)	<p>a) Water in container P – Gains heat , Temperature increases Water in container Q – Loses heat , Temperature decreases</p> <p>b) The aim of his experiment is to find out which material, Styrofoam or metal is a better conductor of heat.</p> <p>c) The thickness of the containers must be the same.</p>
Q40)	<p>a) Kettle A. There is a larger surface area of contact with the metal plate so there is more heat gain by kettle A.</p> <p>b) The corrugated surface provides less surface area in contact with the hand. Hence, there is less heat gain by the hand from the coffee.</p>

