



HENRY PARK PRIMARY SCHOOL
FIRST SEMESTRAL ASSESSMENT 2017
PRIMARY 6
SCIENCE
SECTION A (56 MARKS)

INSTRUCTIONS TO CANDIDATES

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

Name: _____ ()

Class: Primary 6 (

Date: 12 May 2017

Total Time for Sections A and B: 1 h 45 min

Section	Marks
A	/ 56
B	/ 44
Total	/100

Parent's Signature: _____

Booklet A (56 marks)

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

1. John observed two animals and recorded his observations in the table below.

A tick (✓) indicates the characteristic the animals have.

Observation	Animal K	Animal L
It has six legs.		✓
Eggs are laid in water.	✓	✓
There are four stages in its life cycle.		✓

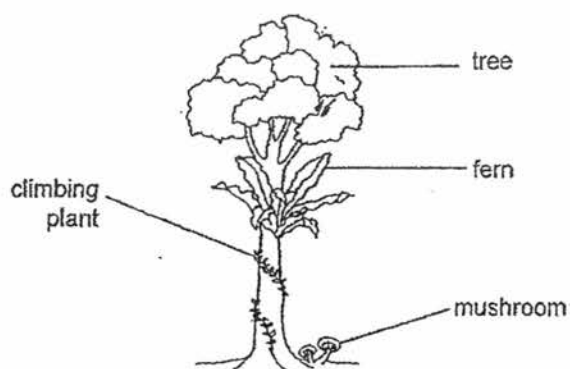
Based on John's observation, which of the following statement(s) is/are correct?

- A: Animal L lives longer than Animal K.
 B: Animals K and L are insects that cannot fly.
 C: The young of Animals K and L live in water.

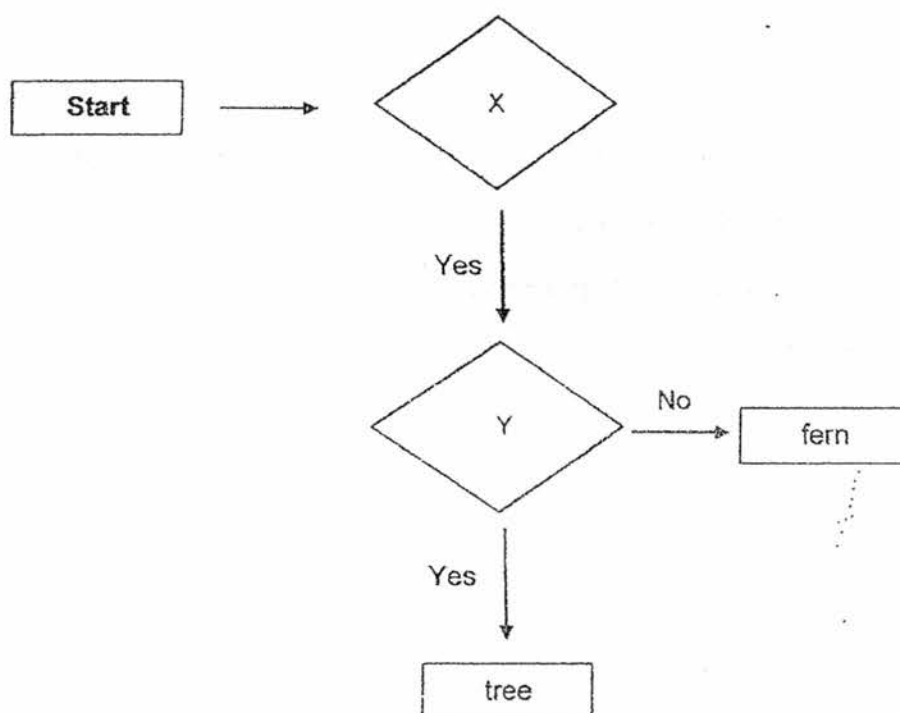
- (1) A only
 (2) C only
 (3) B and C only
 (4) A, B and C



2. The diagram below shows four living things.

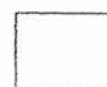


Study the flowchart below.



What could questions X and Y be?

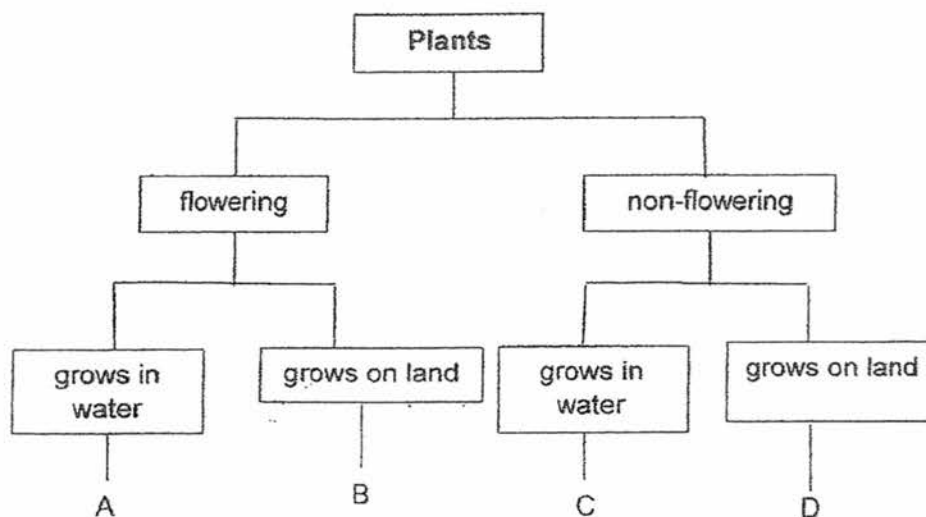
	X	Y
(1)	Reproduce from seeds?	Able to make its own food?
(2)	Able to make its own food?	Reproduce from seeds?
(3)	Grow above ground?	Reproduce from spores?
(4)	Has weak stem?	Reproduce from seeds?



3. The following table gives information on four plants, W, X, Y and Z, based on two characteristics. A tick (✓) shows that the plant has the characteristic.

Characteristic	W	X	Y	Z
Bears fruit		✓		✓
Grows on land	✓			✓

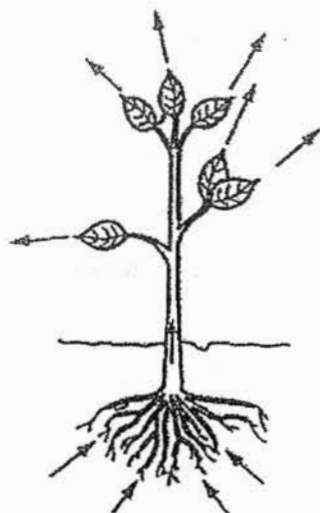
From the information above, where do plants W, X, Y and Z belong in the following classification table?



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



4. The arrows in the diagram show the path taken by a substance through a plant.

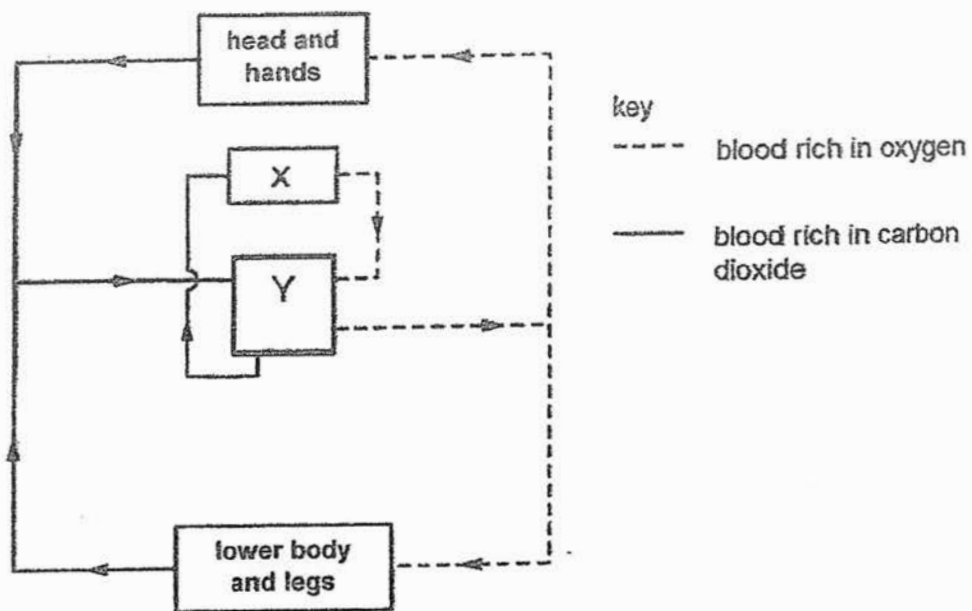


Which one of the following substances follows this path?

- (1) water
- (2) sugar
- (3) oxygen
- (4) carbon dioxide

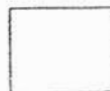


5. The diagram below shows how blood travels in a human body.



Which organ does the part labelled X represent?

- (1) heart
- (2) lungs
- (3) stomach
- (4) small intestine



6. The table below shows some information on three cells, X, Y and Z.

A tick (✓) indicates the presence of the part of a cell.

		Cell X	Cell Y	Cell Z
Part	Nucleus	✓	✓	✓
	Chloroplast	✓		
	Cell wall	✓	✓	

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

	Cell X	Cell Y	Cell Z
(1)	cheek	leaf	root
(2)	root	leaf	cheek
(3)	root	cheek	leaf
(4)	leaf	root	cheek



7. Billy found a fruit as shown below.



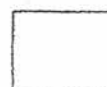
He wants to find out whether this fruit disperses its seeds by animals.

He plans to do the following :

- A: Place it in water to see if it floats.
- B: Open it to see if it has small seeds.
- C: Open it to see if it is fleshy and juicy.
- D: Examine it to see if it has a smooth skin.

Which of the above plans are useful to his investigation?

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



8. Which of the following are examples of interactions between living and non-living things in an environment?

A: A cow feeding on grass.

B: A plant making food using sunlight.

C: An earthworm making a tunnel in muddy soil.

D: A fish taking in dissolved oxygen from the water.

(1) A and B only

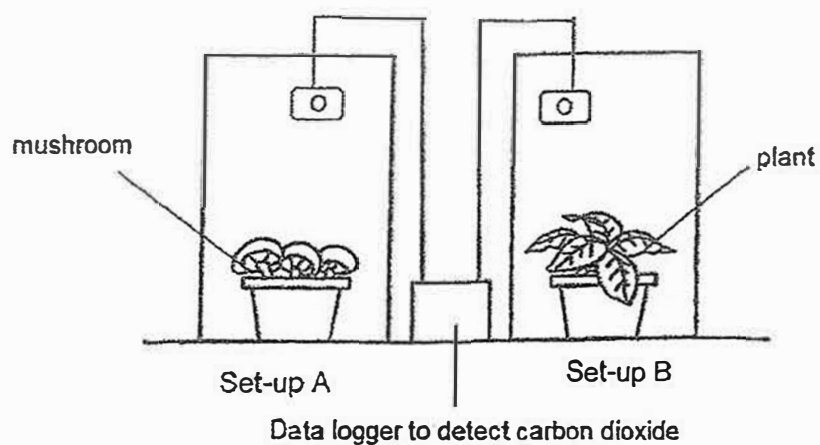
(2) A and D only

(3) C and D only

(4) B, C and D only



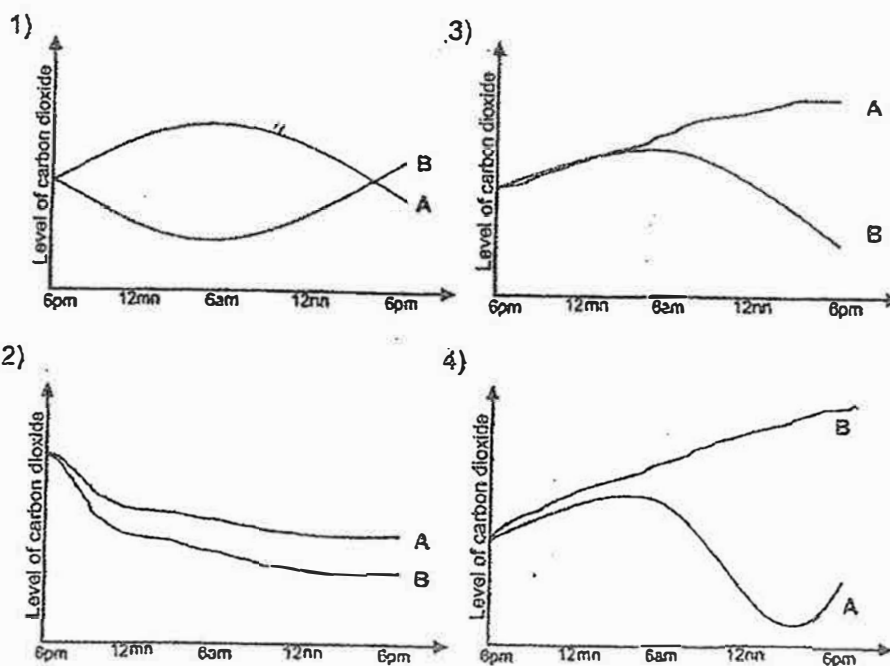
9. Janet conducted an experiment as shown below.



Both set-ups were placed in an area where bright light was available.

The duration of experiment was 24 hours and Janet plotted a graph to show the results of the experiment.

Which one of the following graphs shows correctly the level of carbon dioxide in each set-up?



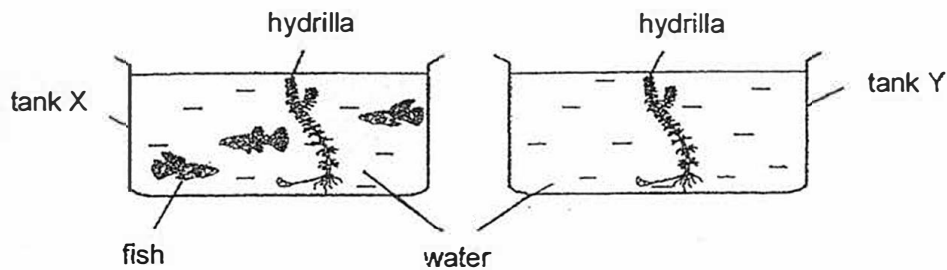
Key:

12 mn – 12 midnight

12 nn – 12 noon

10. Two identical tanks, X and Y, as shown below, were set up near an open window.

The hydrilla in each tank was of the same size at the beginning of the experiment.



After two weeks, it was observed that the hydrilla in tank X had grown bigger than the hydrilla in tank Y.

Which of the following is/are possible reason(s) for the observation?

- A: The hydrilla in tank X absorbed more sunlight.
- B: The hydrilla in tank X absorbed more dissolved oxygen.
- C: The hydrilla in tank X absorbed more dissolved nutrients.
- D: The hydrilla in tank X absorbed more dissolved carbon dioxide.


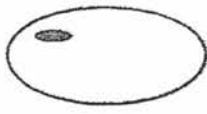

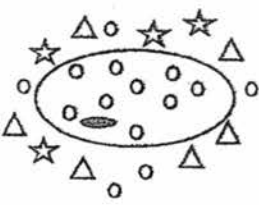
- (1) D only
- (2) C and D only
- (3) B and D only
- (4) A, C and D only



11. Vijay conducted an experiment to find out the properties of cell membranes.

He placed two animal cells, X and Y, in water containing two dissolved substances, 'Myco' and 'Zyto'.

The duration of the experiment is 30 minutes.

Before the experiment	 Animal cell X	 Animal cell Y
After placing the cells in the new environment containing 'Myco' and 'Zyto' in the water	 Animal cell X	 Animal cell Y

Key:

○ water

☆ Zyto

△ Myco

Vijay wrote the statements as shown below.

- A: 'Myco' and 'Zyto' are unable to enter Cell Y.
 B: Water can enter Cell Y more easily than Cell X.
 C: Both Cell X and Y allow only water to move in and out.

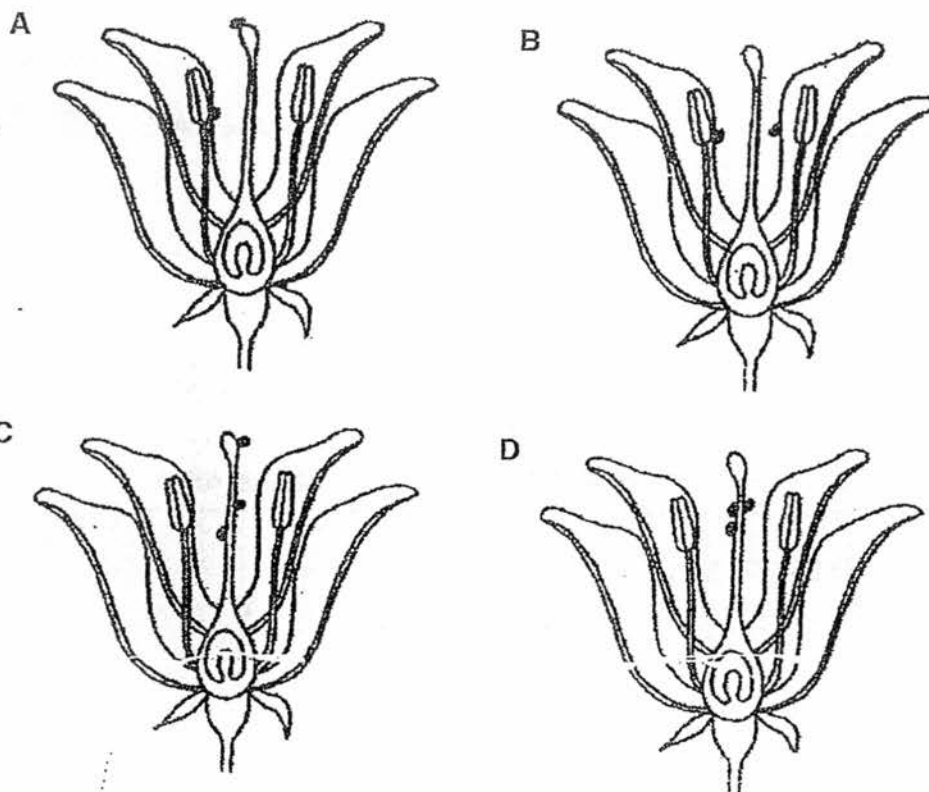
Which of Vijay's statements are correct?

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



12. The diagram below shows the different parts of a flower.

If the black dots in the diagrams below represent pollen grains, which of the following flower(s) has/have been pollinated?

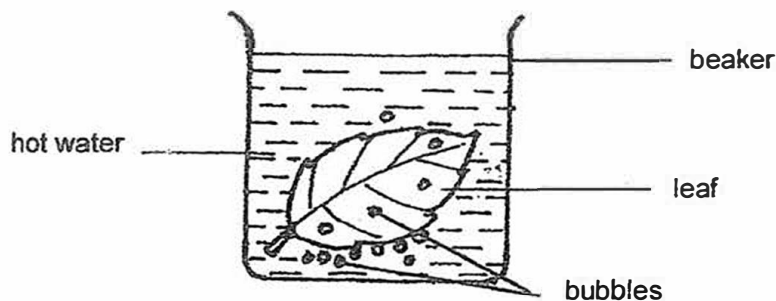


- (1) A only
- (2) D only
- (3) A and C only
- (4) B, C and D only



13. Jerrel plucked a leaf and placed it in a beaker of hot water. After some time, bubbles were seen appearing on the upper and lower surfaces of the leaf.

He also observed that there were more bubbles on the lower than on the upper surface.



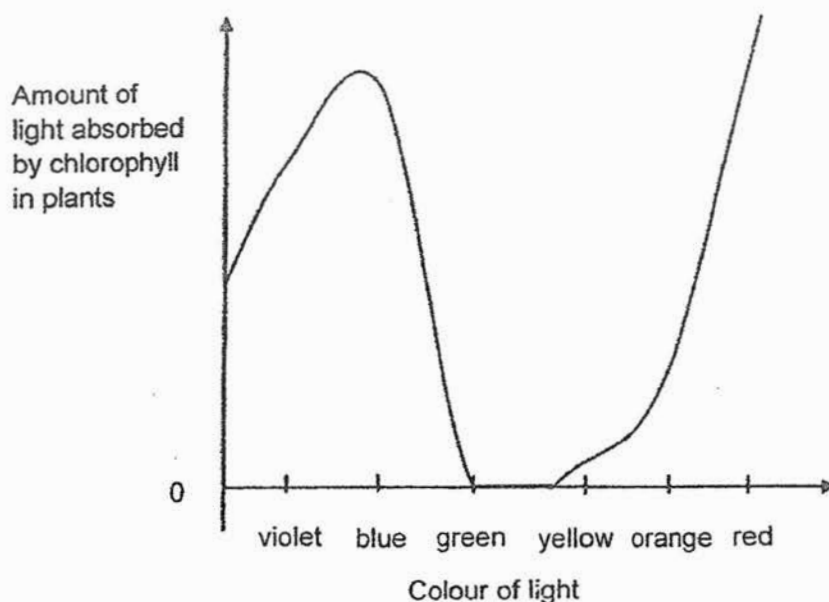
Which of the following statements correctly explain his observation?

- A: The openings in the leaf give out water.
- B: Air in the leaf expands due to heat and escapes.
- C: Air enters the upper surface and escapes from the lower surface.
- D: There are more openings on the lower surface than on the upper surface.

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



14. The graph below shows the amount of different coloured lights absorbed by chlorophyll during photosynthesis in plants.



Two plants, X and Y, were exposed to different coloured lights. A leaf was then plucked from each plant and tested for starch.

The results are shown in the table below.

Leaf from	Results of iodine test
Plant X	Iodine solution remained brown
Plant Y	Iodine solution turned dark blue

Which one of the following correctly identifies the coloured light that each plant was exposed to?

Colour of light plant was exposed to		
	Plant X	Plant Y
(1)	red	blue
(2)	green	red
(3)	red	green
(4)	blue	yellow



15. Which of the following are common properties of solids and liquids?

A: They have mass.

B: They can be compressed.

C: They have definite shape.

D: They have definite volume.

(1) A and D only

(2) B and C only

(3) A, B and C only

(4) A, C and D only

16. Which of the following show(s) correctly what happen(s) when a piece of ice is melting?

A: The ice gains heat.

B: The ice absorbs water vapour.

C: The temperature of the ice increases.

D: The temperature of the ice remains at 0°C.

(1) A only

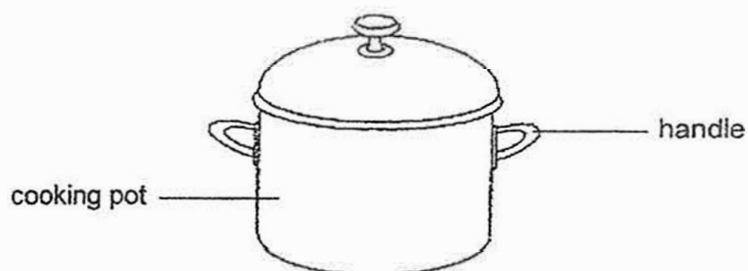
(2) A and D only

(3) B and C only

(4) A, C and D only



17. The diagram below shows a cooking pot with handles.



Study the properties of the four materials shown below.

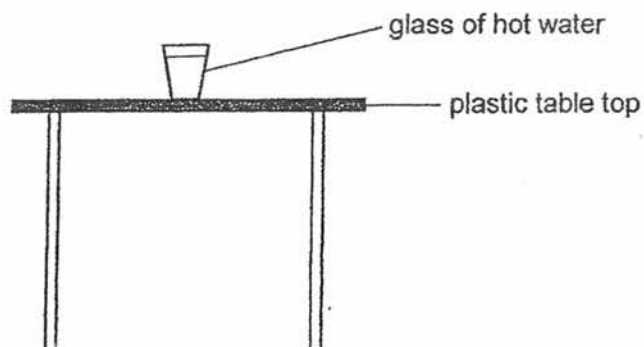
Material	Property of material	
	Can bend easily	Can conduct heat easily
A	yes	no
B	yes	yes
C	no	no
D	no	yes

Which materials are most suitable for making the handles and the cooking pot?

Material for making		
	Handle	Cooking pot
(1)	A	B
(2)	C	B
(3)	C	D
(4)	D	C

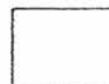


18. Ferrell placed a glass of hot water on a table with a plastic top.

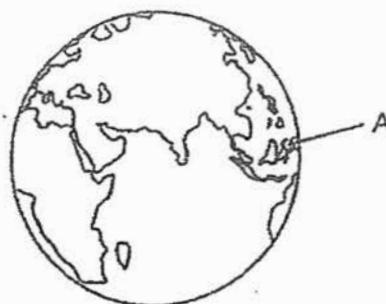


What could he do to cool the hot water faster?

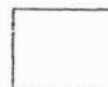
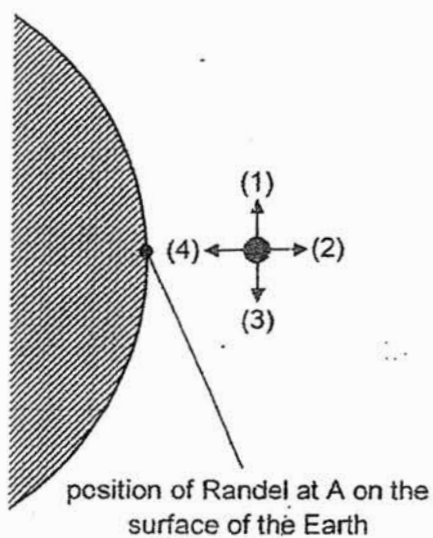
- (1) Place the glass in a wooden box.
- (2) Place the glass on a ceramic plate.
- (3) Wrap the glass with a piece of paper.
- (4) Place the glass on a piece of aluminium sheet.



19. Randel drops a ball at position A of the Earth.



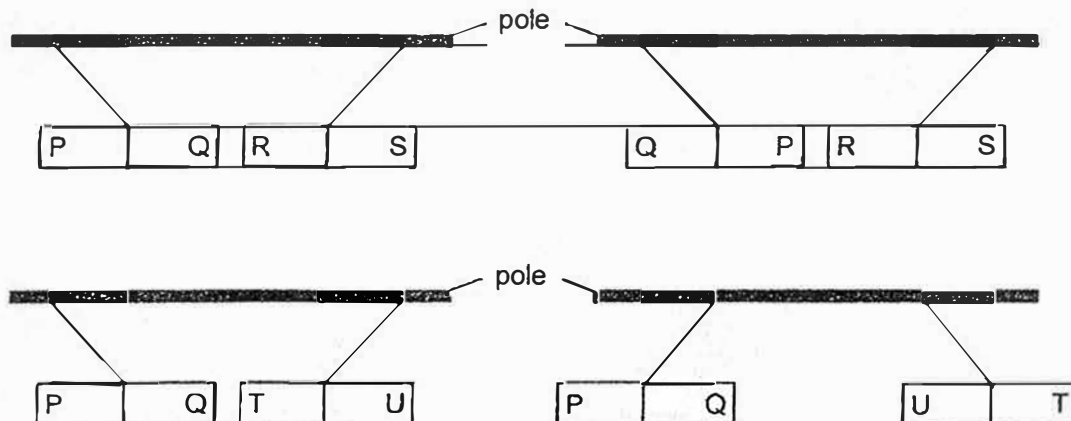
In which direction, (1), (2), (3) or (4), will the ball move at position A of the Earth?



20. Anne carried out an experiment with three metal bars, PQ, RS and TU. Each of the metal bars is of the same size. She hung each metal bar to a pole using a string and brought them close to each other.

She wanted to find out which of them are magnets.

The results of her experiment are shown below.



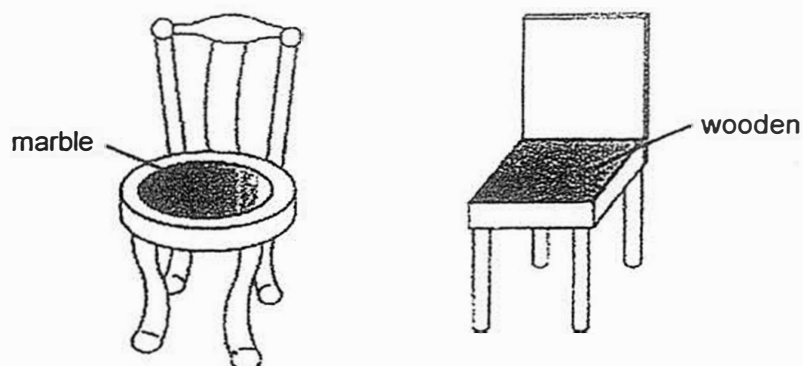
Which one of the following is correct?

	Metal Bars		
	PQ	RS	TU
(1)	magnet	magnet	not a magnet
(2)	magnet	not a magnet	magnet
(3)	not a magnet	magnet	not a magnet
(4)	not a magnet	not a magnet	magnet



21. There are two chairs in an air-conditioned room.

Li Mei touched the seat of each chair. Her hand felt cooler on the marble seat.

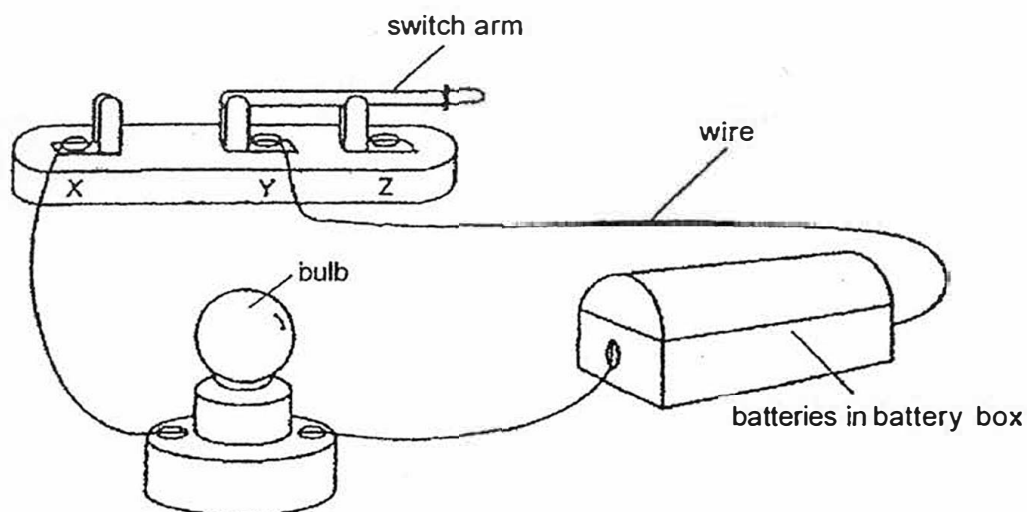


Which one of the following reasons best explains why Li Mei's hand felt cooler on the marble seat as compared to the wooden seat?

- (1) More heat flowed from Li Mei's hand to the marble seat.
- (2) More heat flowed from Li Mei's hand to the wooden seat.
- (3) Marble is a poor conductor of heat as compared to wood.
- (4) The wooden seat was losing heat faster than the marble seat.



22. Travis set up an electrical circuit as shown in the diagram below. The bulb did not light up.



What should Travis do to make the bulb light up and why?

- (1) Change the bulb because it is faulty.
- (2) Change the batteries because they are flat.
- (3) Connect the wire to Z instead of Y because it closes the circuit.
- (4) Connect the switch arm to X instead of Z because it closes the circuit.



23. Matthew has four experimental set-ups, A, B, C and D, using water in containers made of the same material.

The table below shows the different conditions at the start of the experiment.

Conditions	Experimental Set-up			
	A	B	C	D
Room temperature (°C)	28	28	31	28
Volume of water (ml)	400	300	400	400
Exposed surface area of water (cm ²)	80	80	80	100

Matthew wanted to investigate the following :

X : how the rate of evaporation of water was affected by the amount of water

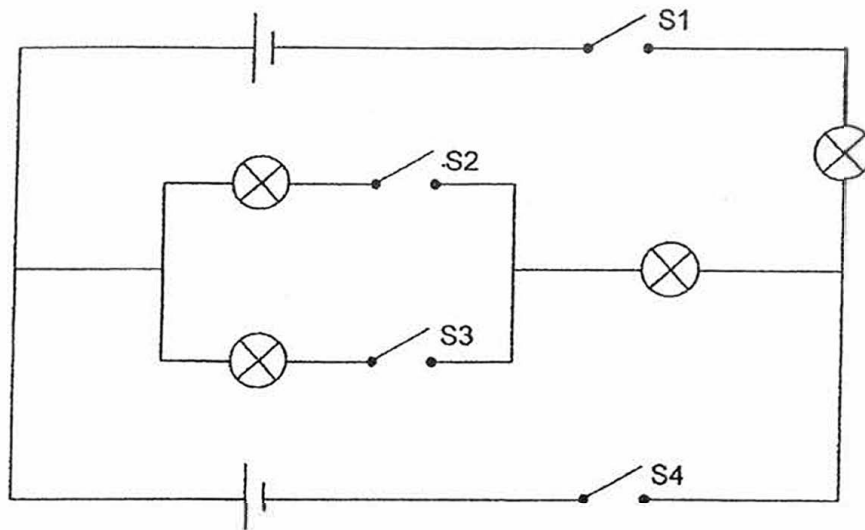
Y : how the rate of evaporation of water was affected by the exposed surface area

Which of the following experimental set-ups should Matthew compare to ensure a fair test?

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



24. In the circuit below, the bulbs and batteries used are identical. All the bulbs and batteries are working properly.



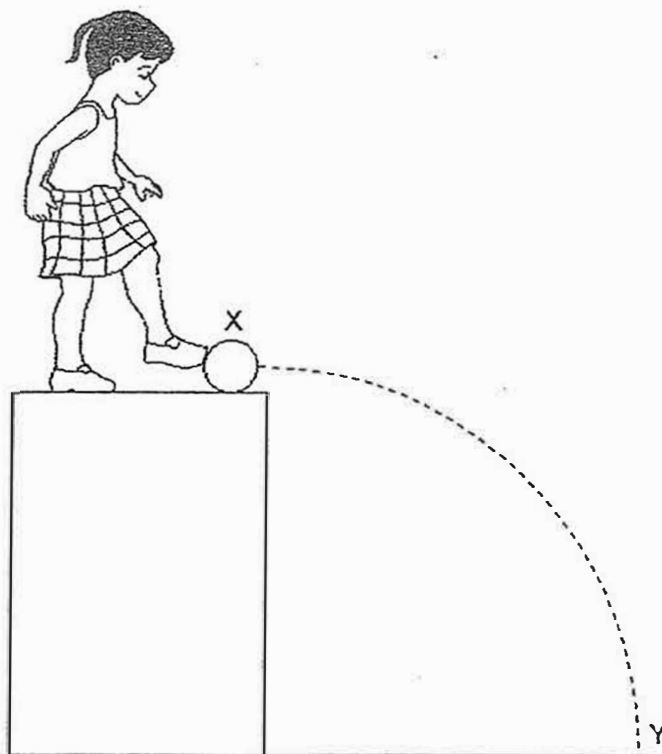
Which of the following switches should be closed so that only two bulbs will light up?

- 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



25. Felicia kicked a ball from X to Y as shown in the diagram below.



Which of the following statements are correct?

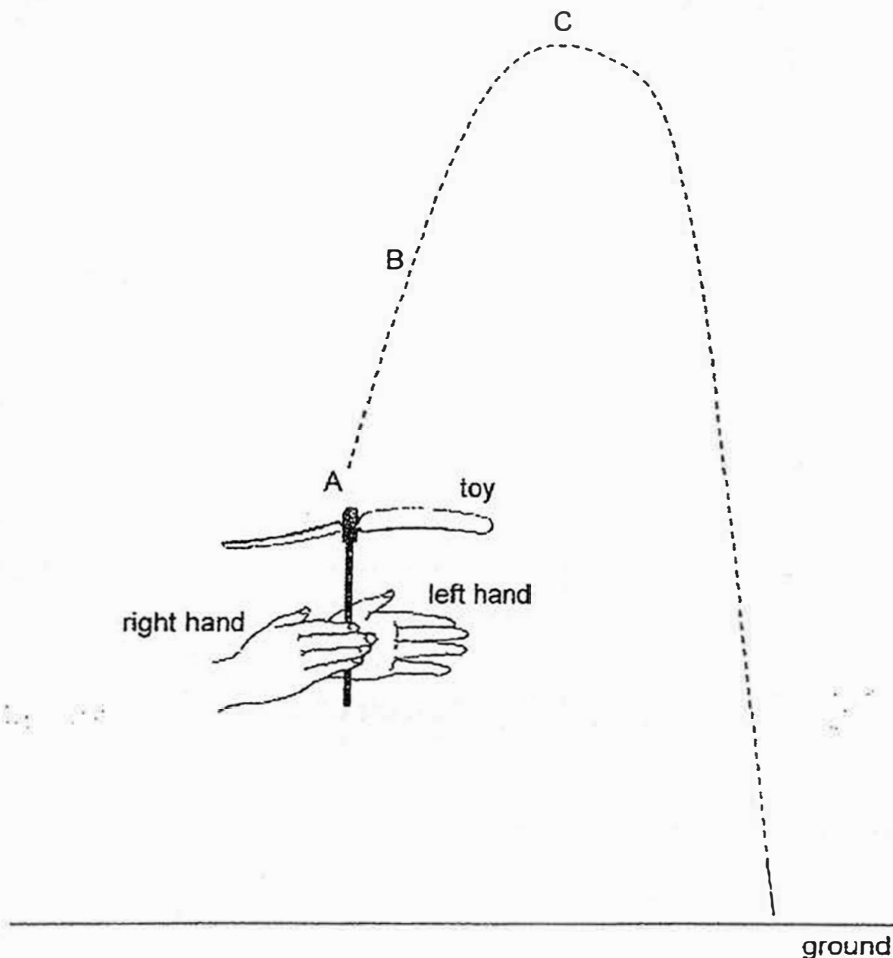
- A: The mass of the ball remained the same.
- B: The force exerted by Felicia moved the ball.
- C: The kinetic energy of the ball increased from X to Y.
- D: The potential energy of the ball increased from X to Y.

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



26. Timothy held a toy between his hands as shown below. At A, he rotated the toy by sliding his right hand forward and left hand backwards before releasing it.

The toy flew from A to B and then to C before falling to the ground.



Which one of the following correctly describes the energy of the toy at A, B and C?

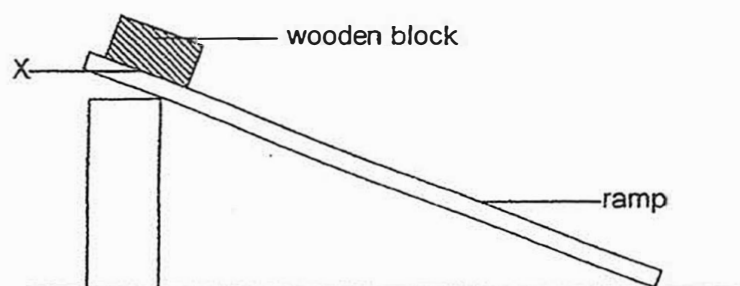
	A	B	C
(1)	kinetic energy	potential energy	kinetic energy
(2)	potential energy	potential energy and kinetic energy	potential energy
(3)	kinetic energy	potential energy and kinetic energy	potential energy and kinetic energy
(4)	potential energy and kinetic energy	potential energy and kinetic energy	potential energy and kinetic energy



27. Four ramps, A, B, C and D, each of the same length and thickness but made of different materials, were used in an experiment.

A wooden block was placed at point X of ramp A and the distance moved by the block down the ramp was recorded.

The experiment was repeated with the remaining ramps, B, C and D.



The results obtained are shown in the table below.

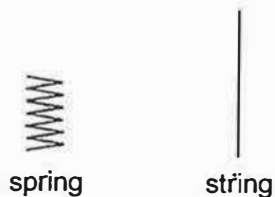
Ramp	Distance moved by wooden block (cm)
A	45
B	81
C	27
D	67

The experiment was carried out to find out how _____.

- (1) the mass of the ramp affected the amount of friction between the surfaces
- (2) the material of the ramp affected the amount of friction between the surfaces
- (3) the thickness of the ramp affected the amount of friction between the surfaces
- (4) the material of the wooden block affected the amount of friction between the surfaces

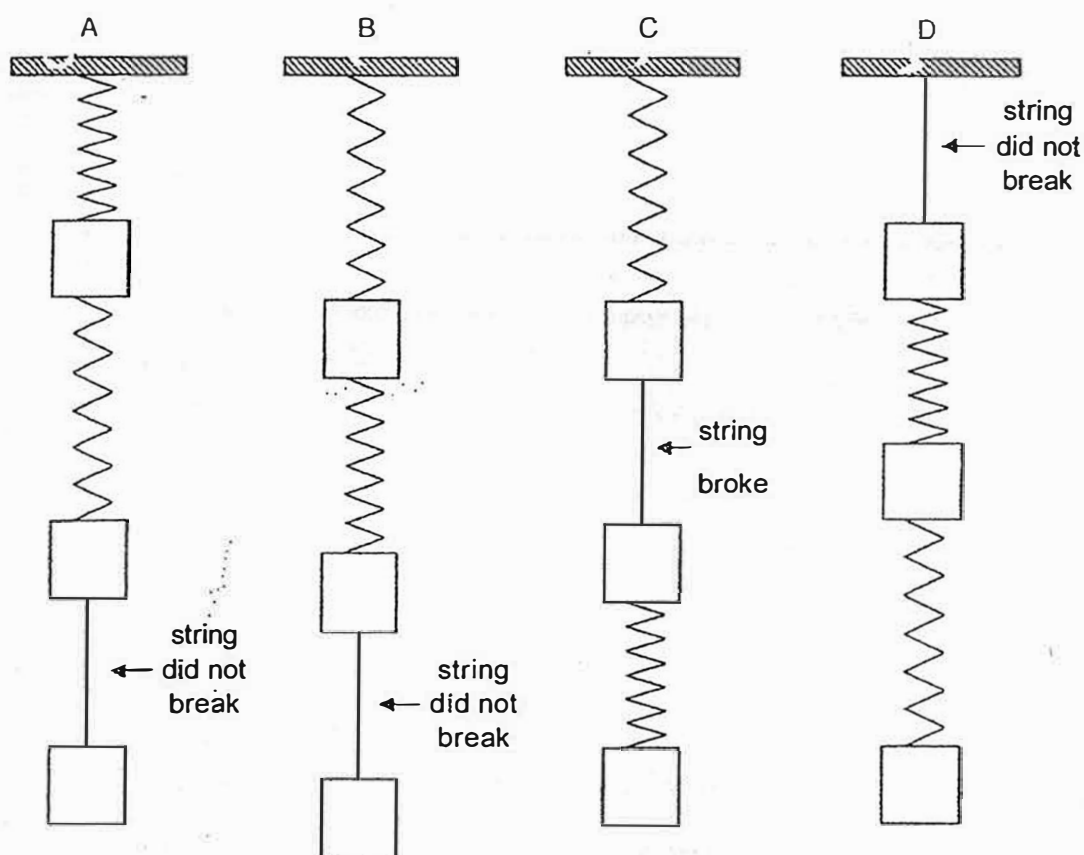


28. Gopal experimented with two identical springs and a string, each attached to a block of equal mass. The diagrams of each of the springs and the string before the experiment are shown below.



The string broke when more than one block was hung on it.

Which of the following are likely to happen?



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

End of Booklet A



FIRST SEMESTRAL ASSESSMENT 2017

PRIMARY 6

SCIENCE

SECTION B (44 MARKS)

INSTRUCTIONS TO CANDIDATES

1. Do not turn over this page until you are told to do so.
2. Follow all instructions carefully.
3. Answer all questions.

Name: _____ ()

Class: Primary 6 ()

Date: 12 May 2017

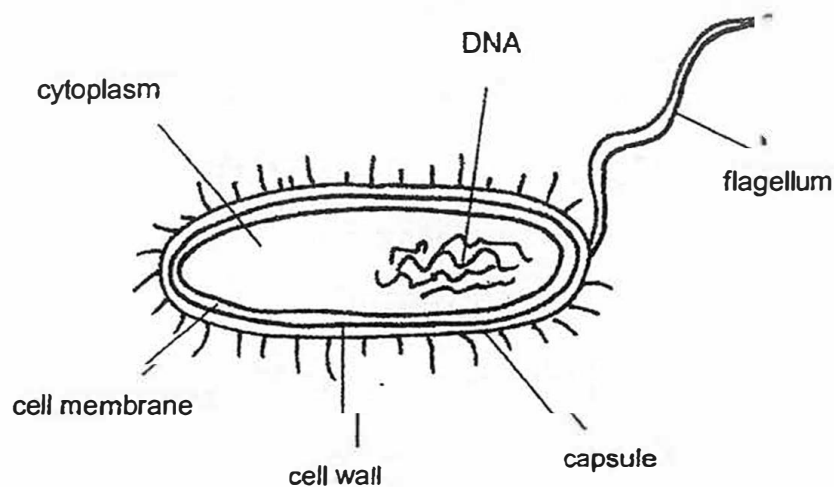
Total Time for Sections A and B: 1 h 45 min

Marks for Section B: _____

Booklet B (44 marks)

Write your answers to questions 29 to 41 in the spaces given.

29. The diagram below shows a simplified drawing of a bacterial cell.



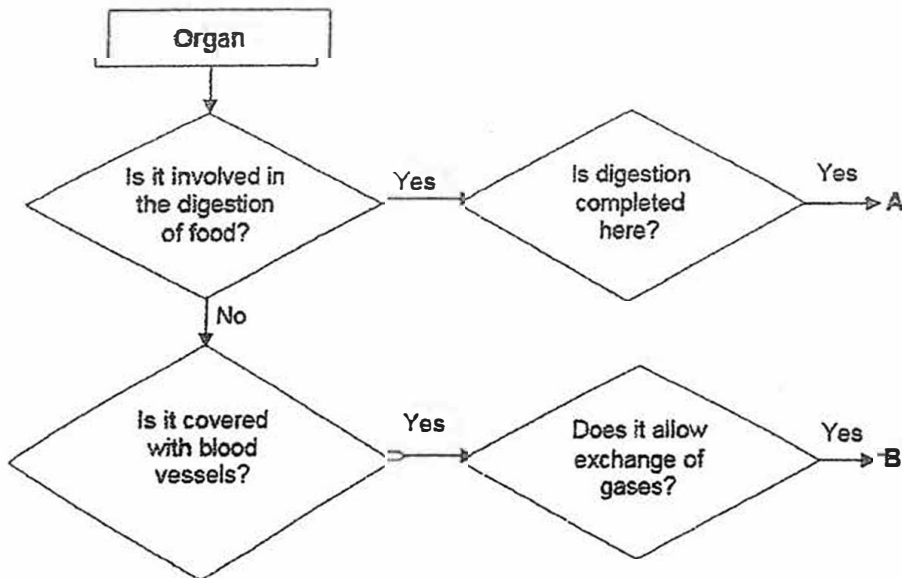
- a) Which part of the bacterial cell is also found in plant cells but not in animal cells? [1]

- b) Based on the diagram above, state how the bacterial cell gets energy for its life processes. [1]

- c) Give a reason for your answer in (b). [1]



30. The flow chart below shows the functions of various organs in the human body.



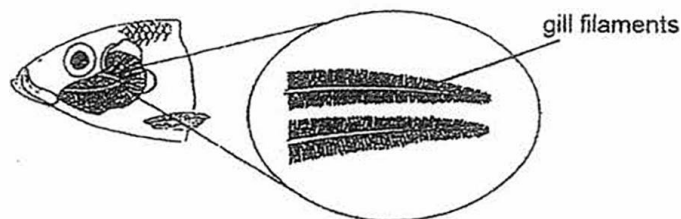
a) Which organs do the letters A and B represent?

[1]

A : _____

B : _____

b) The diagram below shows the gills of a fish. They are made up of many tiny filaments covered with blood vessels.



Give a reason why the gills are made up of many tiny filaments covered with blood vessels.

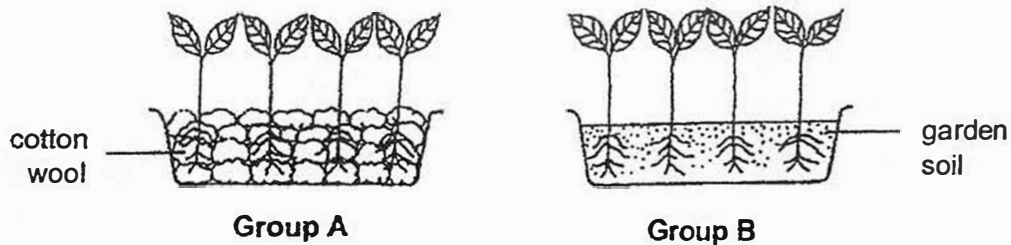
[2]

(i) Having many tiny filaments : _____

(ii) Covered with blood vessels : _____



- 31 Jenny grew two groups of seedlings, A and B, as shown below. Group A was grown in cotton-wool while group B was grown in garden soil. Both groups of seedlings were placed in sunlight and watered every day.

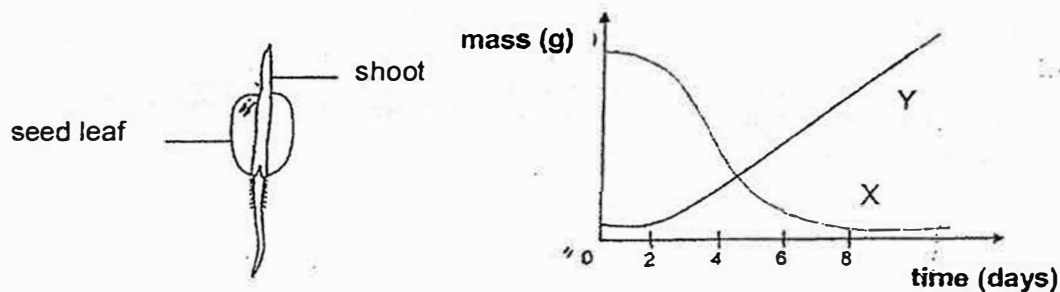


After some time, Jenny observed that the seedlings in group A withered and died but those in group B remained healthy.

- a) Give a reason for Jenny's observation.

[1]

The diagram below shows a seed growing into a seedling and the graph showing the changes in mass of the seed leaf and the shoot of the seedling.



- b) Write 'X' and 'Y' in the boxes below to represent the changes in mass of the seed leaf and shoot. Give a reason for your answer.

[2]

Change in mass of seed leaf:

Reason :

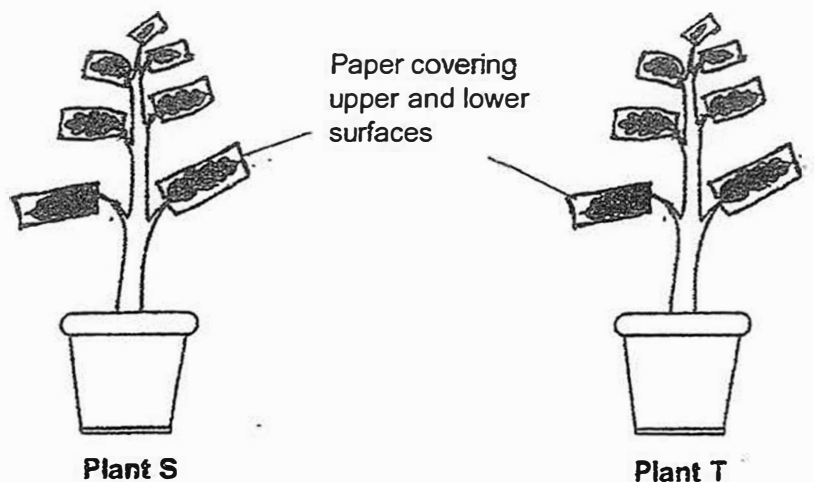
Change in mass of shoot:

Reason :

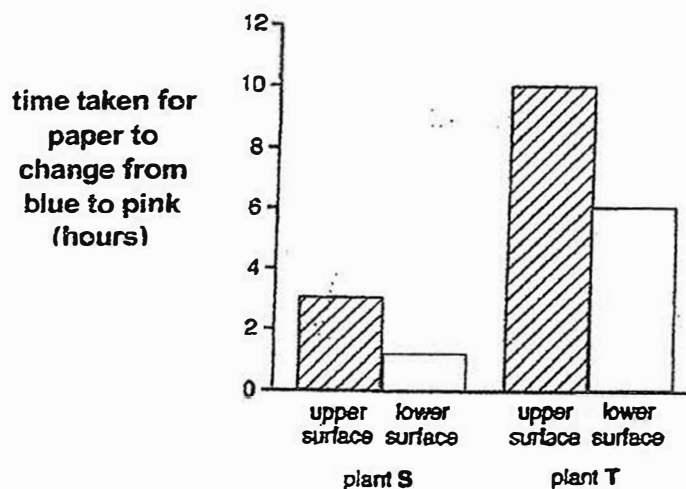


32. Water is lost through the stomata of leaves.

Ali wants to find out how quickly water is lost through the stomata of two different types of plant, S and T. He attaches paper to the upper and lower surfaces of leaves on each plant. The paper changes colour from blue to pink on contact with water.



The results of his experiment are shown in the bar graph below.

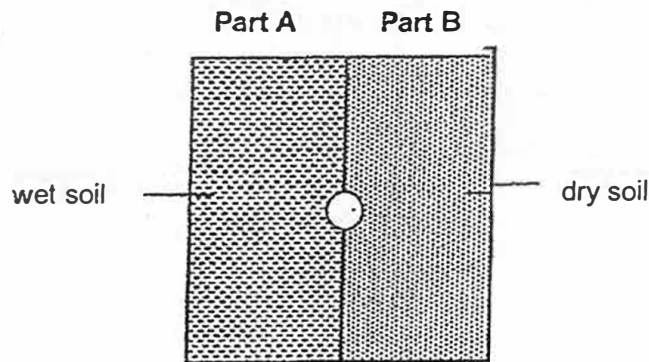


- a) Based on the bar graph above, what is a similarity in the results of Plant S and T? [1]

- b) Which plant, S or T, does Ali need to water more often when placed in the same location? Give a reason for your answer. [2]



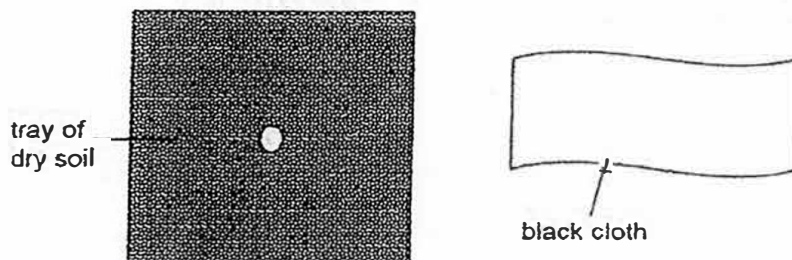
33. Ming wanted to find out the suitable living conditions for organism P. He used a tray consisting of two parts, A and B. He filled part A with wet soil and part B with dry soil.



He placed a number of organism P in the middle of the tray in the area marked by the circle. After one hour, most of the organism P were found in part A.

- a) Why did Ming place organisms P in the middle of the tray at the beginning of his experiment? [2]

- b) An organism Q can survive well in dry soil. Ming thought that organism Q might prefer dark conditions. Ming was given a piece of black cloth and an identical tray with dry soil as shown below.



How could he carry out an experiment to find out if organism Q prefers dark condition? [1]

Write the missing step in the blank below.

Step 1 : Place a number of organism Q in the middle of the tray.

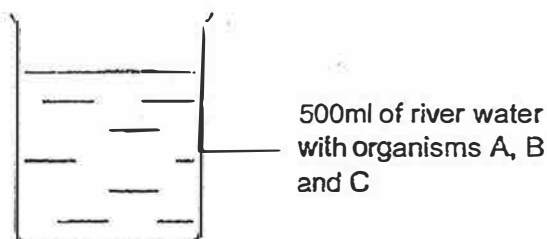
Step 2 :

Step 3 : Count the number of organism Q in each section of the tray.

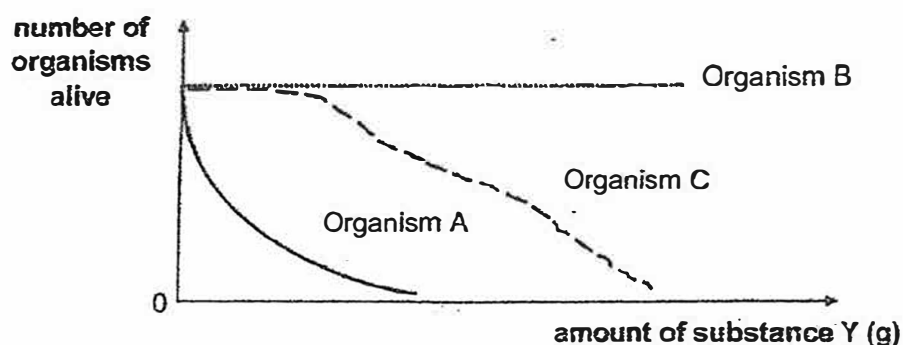


34. Minah wanted to find out if Y, a substance found in insecticides, affects organisms A, B and C, found commonly in rivers.

She prepared five beakers, each containing 500ml of river water and the same number of organisms A, B and C. One of the beakers is shown below.



He added different amount of substance Y to each of the five beakers. Two days later, he counted the number of each type of organisms still alive in the beakers. The graph below shows his findings.



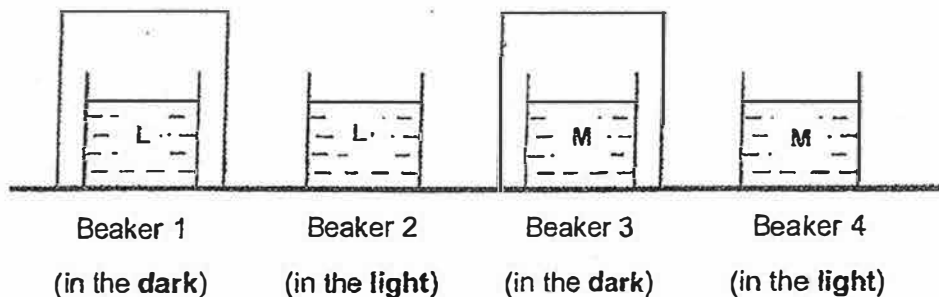
- a) State the independent variable in Minah's experiment. [1]

- b) What is the relationship between the amount of substance Y in the water and the number of organism A? [1]

- c) Suggest a control set-up to show that any change in the number of the organisms was caused by substance Y. [2]



35. Ben found two organisms, L and M, in a pond. He wanted to find out whether they are animals or plants. He filled four beakers, 1, 2, 3 and 4, with pond water. He placed organism L in beakers 1 and 2 and organism M in beakers 3 and 4. Beakers 1 and 3 were placed in the dark. Beakers 2 and 4 were placed in the light as shown below.



He added a drop of liquid X in each beaker. The table below shows the colour change of liquid X in the presence of more oxygen or more carbon dioxide.

Colour of liquid X	Where there is more oxygen present	Where there is more carbon dioxide present
	yellow	red

At the end of three hours, Ben obtained the results as shown below.

Beaker	Colour of liquid X
1	red
2	yellow
3	red
4	red

- a) Based on the results, write 'plant' or 'animal' in the blank next to organisms L and M. [1]

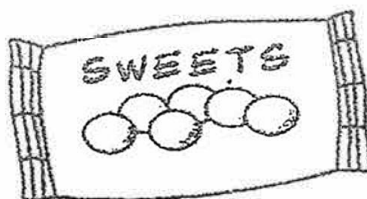
Organism L : _____

Organism M : _____

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



36. The diagram below shows a packet of sweets which Jun Hao bought from a candy store.



He measured the mass of the packet of sweets and the mass of one sweet using an electronic weighing scale as shown below.



The results of his measurement are shown below.

Mass (g)	
One packet of sweets	One sweet
50.0	2.0

Based on the results, Jun Hao concluded that there are 25 sweets in the packet.

He opened up the packet of sweets and counted that there were only 23 sweets instead.

Give two reasons why Jun Hao's conclusion was not correct.

[2]

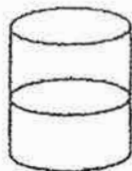
Reason 1 : _____

Reason 2 : _____



37. Li Peng carried out an experiment with four containers, A, B, C and D. They are of different sizes and shapes and are made of different materials.

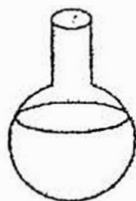
She poured water into each container until it was half-filled. The containers were left in the same room.



Container A – metal tin



Container B – plastic plate



Container C – glass flask



Container D – porcelain pot

- a) Li Peng wanted to compare how **fast** the water evaporates in each container. What should she measure? [2]

- b) Her classmate, Kim Seng, told her that using the four containers of water, A, B, C and D, to investigate how the exposed surface area of water affects the rate of evaporation of water is not fair. [2]

Give two reasons to support Kim Seng's claim.

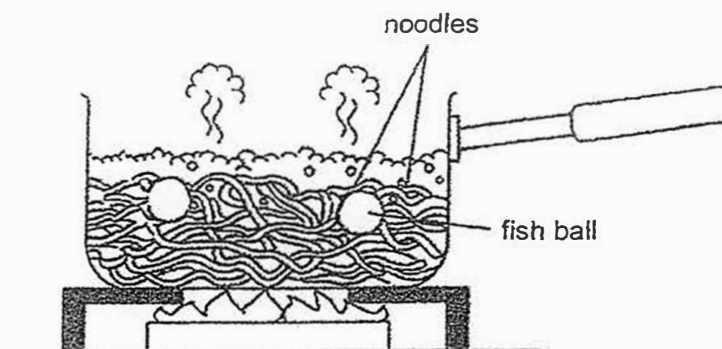
Reason 1 : _____

Reason 2 : _____



38. Boon Kee put some noodles and fish balls at room temperature into a metal pot of boiling soup.

The soup was boiling at 104°C .



- a) Just after adding the noodles and fish balls, will the temperature of the boiling soup be, **lower than** or **the same as** or **higher than**, 104°C ? [2]

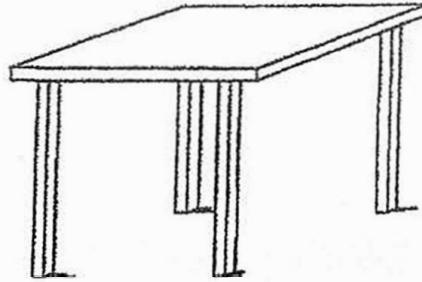
Explain your answer.

- b) Boon Kee found that the temperature at the centre of the fish ball was 92°C after three minutes. [1]

Give a reason why it was lower than the temperature of the boiling soup.



39. Felix wanted to move a table across the room. He pushed the table but it did not move. When he pushed the table with more force, it started moving while making a screeching sound.



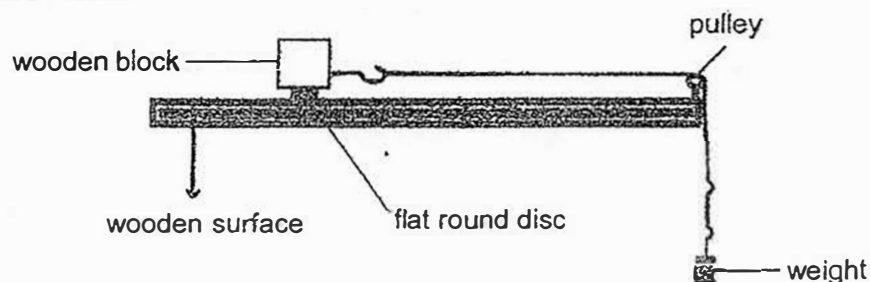
- a) Name the force that prevented Felix from moving the table easily. Explain your answer. [1]

- b) Name another force that was acting on the table as it was pushed across the room. [1]

Felix carried out an experiment with three flat round discs, P, Q and R, each made of a different material. He pasted disc P on one side of a wooden block as shown in the diagram below.



He placed the wooden block on a wooden surface and noted the number of identical weights needed to start the block moving. He repeated the experiment with discs Q and R.



Question 39 continues on the next page



Question 39 continued

The results of his experiment are shown below.

Type of flat round disc	Number of weights		
	Trial 1	Trial 2	Trial 3
P	9	8	8
Q	4	4	3
R	6	5	5

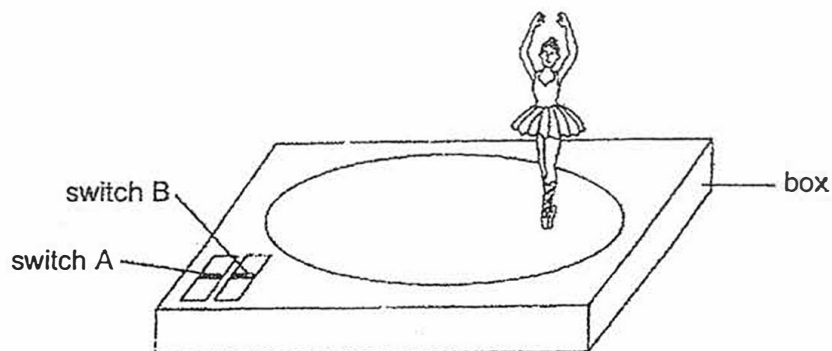
- c) Besides using the same pulley, wooden block and surface, state another variable that has to be kept the same for the investigation to be fair. [1]

- d) For Felix's investigation, why did he carry out more than 1 trial for each type of disc? [1]

- e) What was Felix trying to find out from this investigation? [1]



40. The diagram below shows a toy Tricia bought from a store.

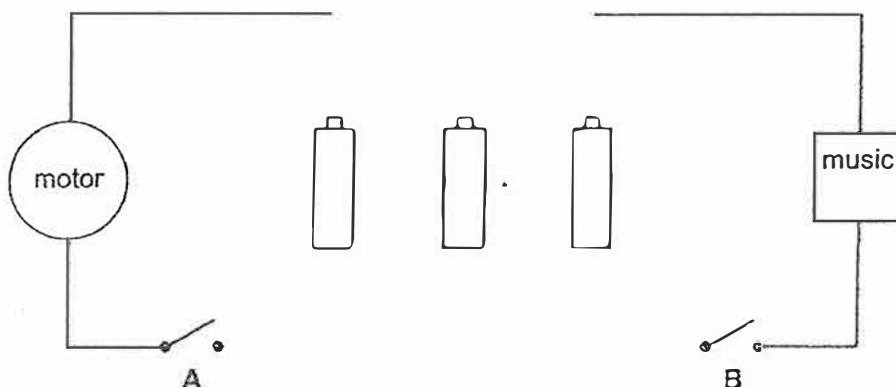


The toy works on batteries and her observations of how the toy works are shown below.

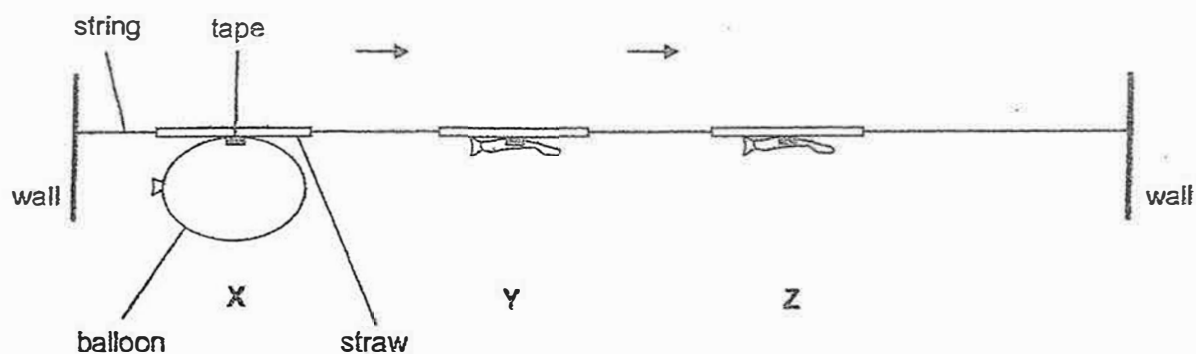
Switched ON	Observation
A only	Dancer moved in a circle. There was no music.
B only	Dancer did not move. There was music.
Both A and B	Dancer moved in a circle and there was music.

- a) From Tricia's observation above, how many circuit set-up(s) is/are hidden in the box? Give a reason for your answer. [2]

- b) The circuit diagram below shows the possible set-up hidden in the box. It is **not** complete. Draw wires to complete the circuit diagram. [2]



41. In an experiment, a string is passed through a straw. An inflated balloon was then taped firmly to the straw as shown below.



The inflated balloon was held stationary at X. Then, air was released from the balloon and it moved forward as shown by the arrows. At Y, all the air had escaped but the straw continued to move forward until it came to a complete stop at Z.

- a) Explain why the straw continued to move forward from Y towards Z. [1]

- b) Give a reason why the straw came to a complete stop at Z. [1]

- c) Suggest two methods to make the balloon move further than point Z. [2]

Method 1 :

Method 2 :

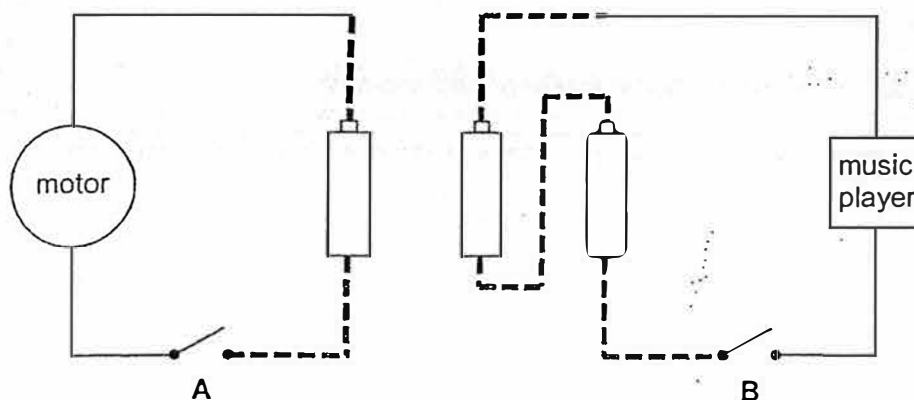
End of Booklet B



QN	Answer
29.	(a) Cell wall (b) It feeds on decaying matter (c) It has no chloroplasts to make its own food
30.	(a) A: small intestine B: Lungs (b)(i) Increases the surface area for exchange of gases (ii) Oxygen can be absorbed into the blood and carbon dioxide can be removed.
31.	(a) There were more nutrients in the garden soil. (b) X. The food (in the seed leaves) has been used up by the seedling. Y. The shoot increases in size as the seedling grows.
32.	(a) Time taken for the paper to change from blue to pink is longer on the upper surface. (b) Plant S. Water is lost faster / there is more stomata.
33.	(a) To keep the distance between P and the types of soil equal to ensure fair test (b) Cover the tray with the black cloth.
34.	(a) Number of (substance) Y. (b) As the amount of Y increases, the number of A decreases. (c) Have a beaker with 500ml of river water and the same number of organisms A, B and C without substance Y
35.	(a) Organism L: Plant, Organism M: Animal (b) In the presence of light, L. carry out photosynthesis and release oxygen but M cannot photosynthesise.
36.	<ul style="list-style-type: none"> • The packet/plastic (of sweets) has mass. • The air (trapped) inside the packet has mass.
37.	(a) Measure the amount of water evaporated over a fixed time. (b) The amount of water in each container is not the same. AND The material of each container is not the same.

38.	(a) Lower than 104°C. The noodles/fish balls gain heat from the soup (b) The fish ball took more time to gain heat from the (boiling) soup.
39.	(a) Frictional force as it opposes motion (b) Gravitational force (c) Number / mass / thickness of disc (d) Ensure that the results are reliable. (e) To find out which (type of) material of the discs affect the amount of force needed to move the block.
40.	(a) 2. One switch was to make the dancer move, the other was to control the music.
41.	(a) The straw still has kinetic energy. (b) All the kinetic energy of the straw has been converted to other forms of energy. (c) Blow more air into the balloon / Lubricate the string

40b



Section A

1.	2	11.	1	21.	1
2.	2	12.	3	22.	4
3.	3	13.	2	23.	1
4.	1	14.	2	24.	3
5.	2	15.	1	25.	4
6.	4	16.	2	26.	4
7.	2	17.	3	27.	2
8.	4	18.	4	28.	3
9.	3	19.	4		
10.	2	20.	2		