ANGLO-CHINESE SCHOOL
(JUNIOR)

SEMESTRAL ASSESSMENT 1 (2015)
PRIMARY 5

SCIENCE

BOOKLET A

FRIDAY 8 MAY 1 hour 30 minutes

Name : _____ ( )

Class : P5 _____

INSTRUCTIONS TO PUPILS

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

Follow all instructions carefully.

There are 25 questions in this booklet.

Answer ALL questions.

INFORMATION FOR PUPILS

The total marks for this booklet is 50.

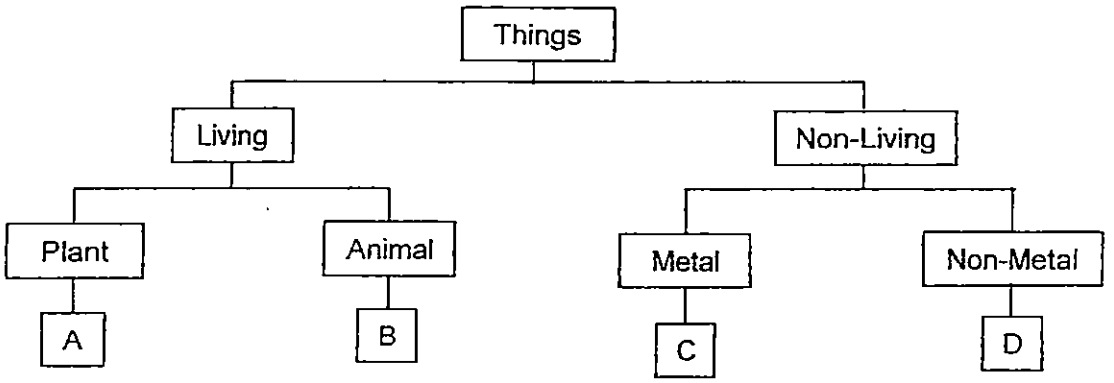
The total time for Booklets A and B is 1 hour 30 minutes.

This question paper consists of 16 printed pages (inclusive of cover page).

Section A (50 marks)

For each question from 1 to 25, four options are given. One of them is the correct answer. Choose the correct option (**1, 2, 3 or 4**) and shade the correct oval on the Optical Answer Sheet (OAS).

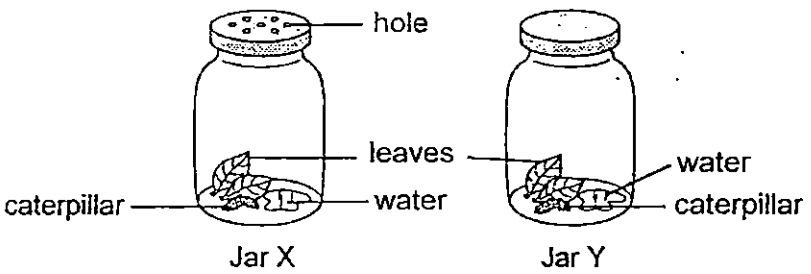
1 Study the flowchart.



Which of the following things can be classified correctly into the flowchart above?

	A	B	C	D
(1)	mushroom	frog	iron	glass
(2)	moss	dog	copper	plastic
(3)	fern	fish	nickel	steel
(4)	grass	ant	ceramic	clay

2 Study the set-ups shown below.



The caterpillar in Jar Y died before the caterpillar in Jar X. The aim of the experiment is to show that _____.

(1) air is required to keep living things alive
(2) food is required to keep living things alive
(3) water is required to keep living things alive
(4) warmth is required to keep living things alive

3 Which of the following statements about fungi and bacteria are true?

A Both can be useful to man
B Both can make their own food
C Both can cause food to be spoiled
D Bacteria can only be seen with a microscope, but all fungi can be seen by the unaided eye

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

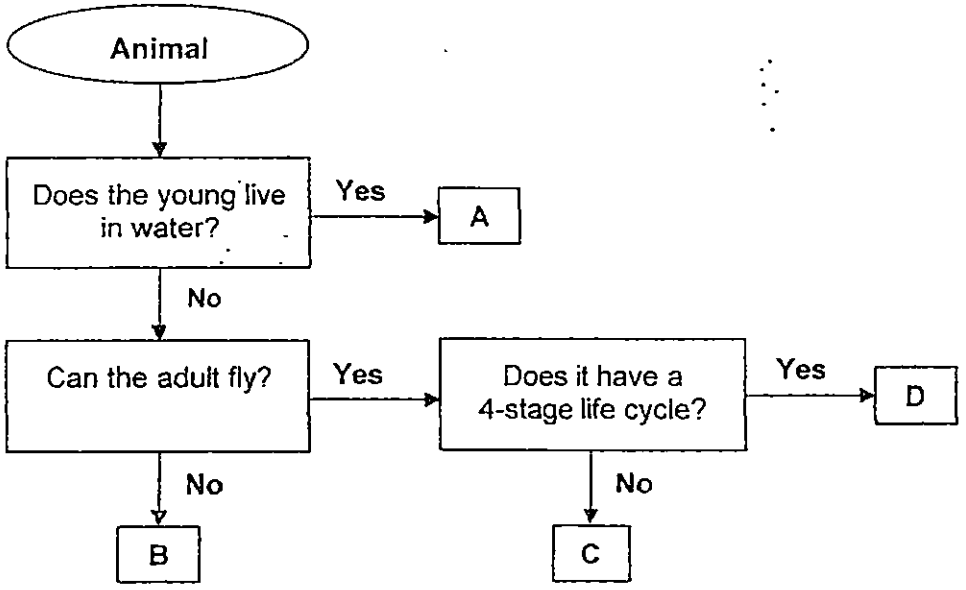
4 John listed some similarities between the life cycle of a butterfly and a housefly.

A They both lay eggs.
B They have the same number of stages.
C Their young look different from their adult.
D At the pupa stage of their life cycles, the young eats a lot.

Which one of the following is correct?

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

5 Study the flowchart shown below.



Which of the following correctly shows where a mosquito, mealworm beetle and a grasshopper can be placed?

	Mosquito	Mealworm beetle	Grasshopper
(1)	A	D	C
(2)	D	B	C
(3)	A	B	D
(4)	C	A	B

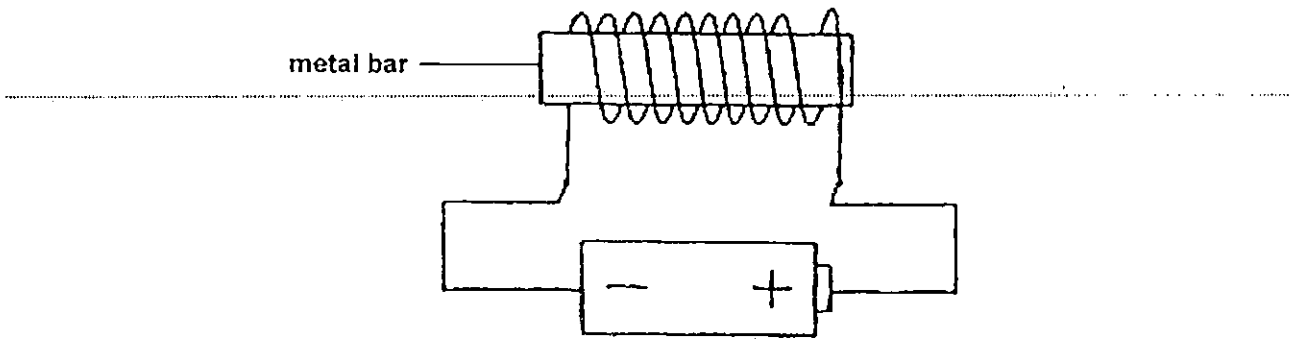
6 The table shows the properties of 3 objects, X, Y and Z.

Property \ Object	X	Y	Z
Can float on water?	No	Yes	Yes
Has a fixed shape?	Yes	Yes	No
Can be compressed?	No	No	No

Which of the following can be X, Y and Z?

	X	Y	Z
(1)	coin	styrofoam	marbles
(2)	oxygen	cork	plastic ruler
(3)	coin	cork	oil
(4)	stone	styrofoam	eraser

7 The metal bar in the following set-up **did not** become an electromagnet.

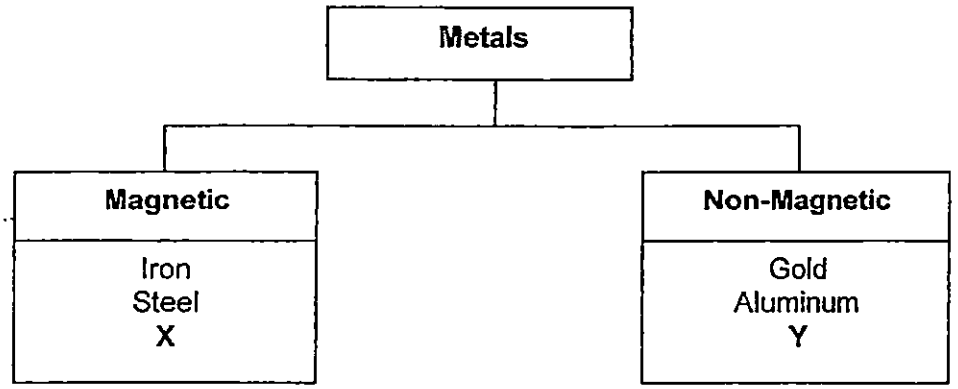


Which of the following are possible reasons for the metal bar not becoming an electromagnet?

A It needs a switch to work.
B The bar was made of copper.
C The battery was not able to provide energy.
D The wire was coiled around the metal bar too many times.

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

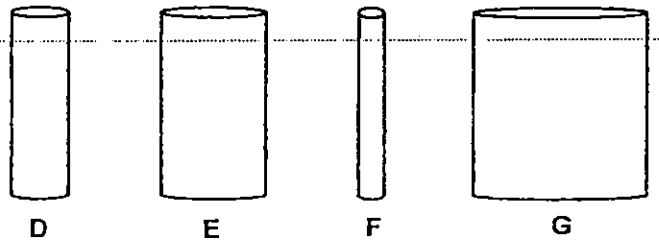
8 Some metals are classified into two groups as shown below.



Which of the following best represent **X** and **Y**?

	X	Y
(1)	Silver	Copper
(2)	Nickel	Silver
(3)	Copper	Silver
(4)	Silver	Nickel

9 Eddy had four magnets, D, E, F and G as shown below.



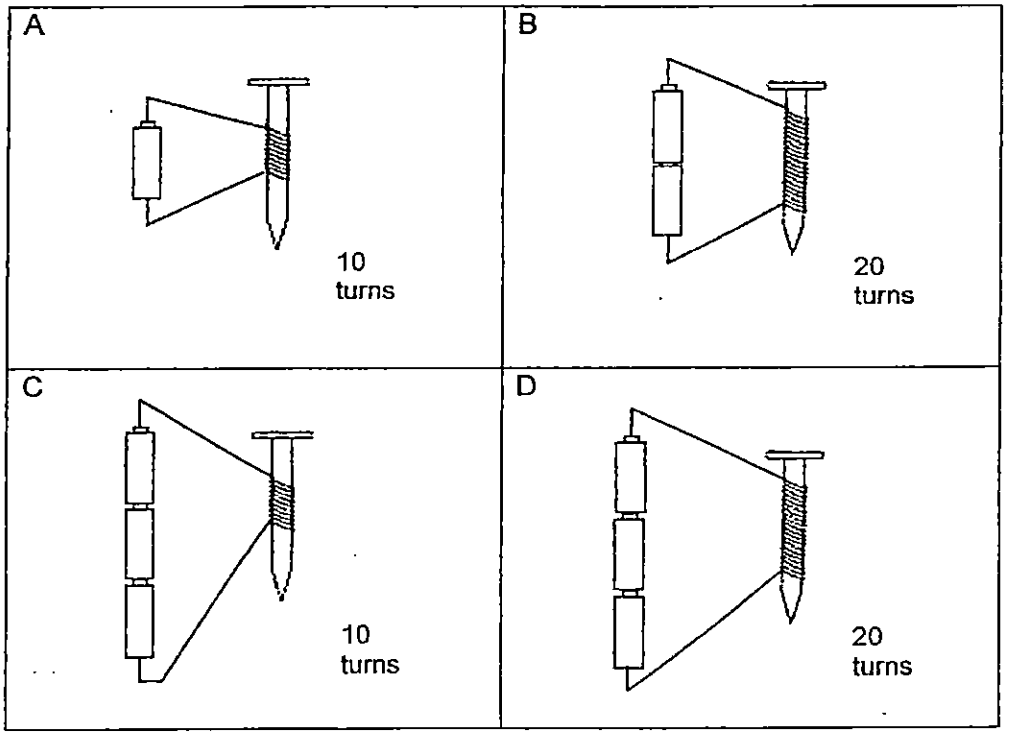
To compare the strength of the magnets, he brought each of them near a pile of pins. The table below records the number of pins attracted by the four magnets.

Magnet	Distance between magnet and pins (cm)	Number of pins attracted
D	4	18
E	4	16
F	4	11
G	4	13

Which of the following statements is correct?

(1) Magnet G is weaker than magnet F.
(2) Magnet G is as strong as magnet E.
(3) Magnet D is stronger than magnet E.
(4) All the magnets are of the same strength.

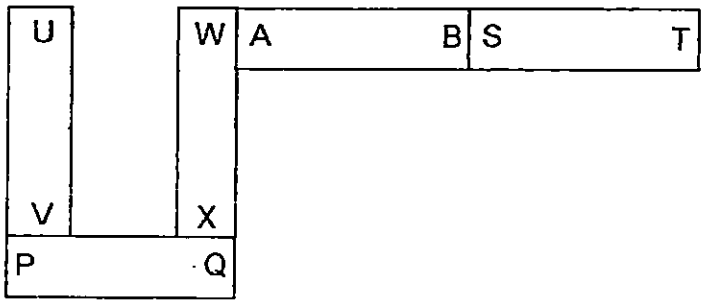
10 Jasper wants to find out if the number of coils around an iron nail affects the strength of an electromagnet. He sets up two arrangements.



Which two arrangements shown above should he use to conduct a fair test?

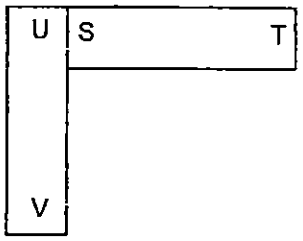
(1) A and B
(2) A and C
(3) B and D
(4) C and D

11 The diagram below shows how 5 magnets can be arranged to attract one another.

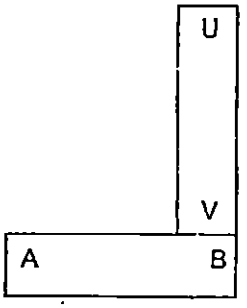


Which one of the following arrangements is correct?

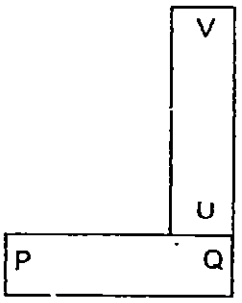
(1)



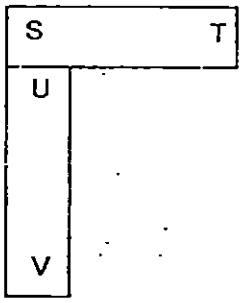
(2)



(3)



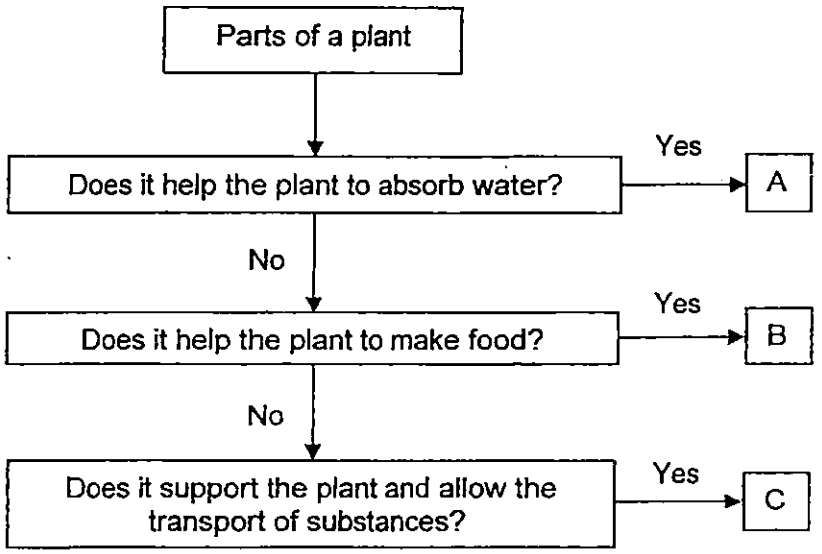
(4)



12 Which of the following is **not true** of the human skeletal system?

(1) It supports our body
(2) It gives our body its shape
(3) It protects the brain, heart and lungs
(4) It is made of bones and muscles which work together to allow us to move

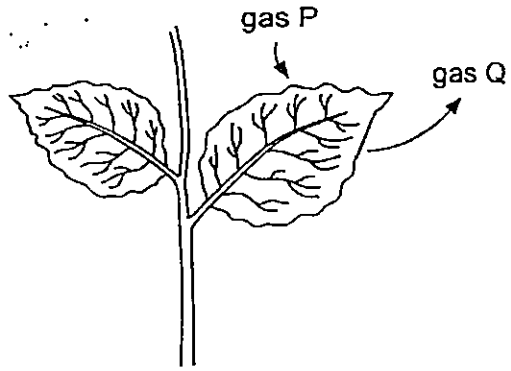
13 Study the flowchart below.



Which of the following correctly represent A, B and C?

	A	B	C
(1)	root	stem	leaf
(2)	stem	leaf	root
(3)	leaf	stem	root
(4)	root	leaf	stem

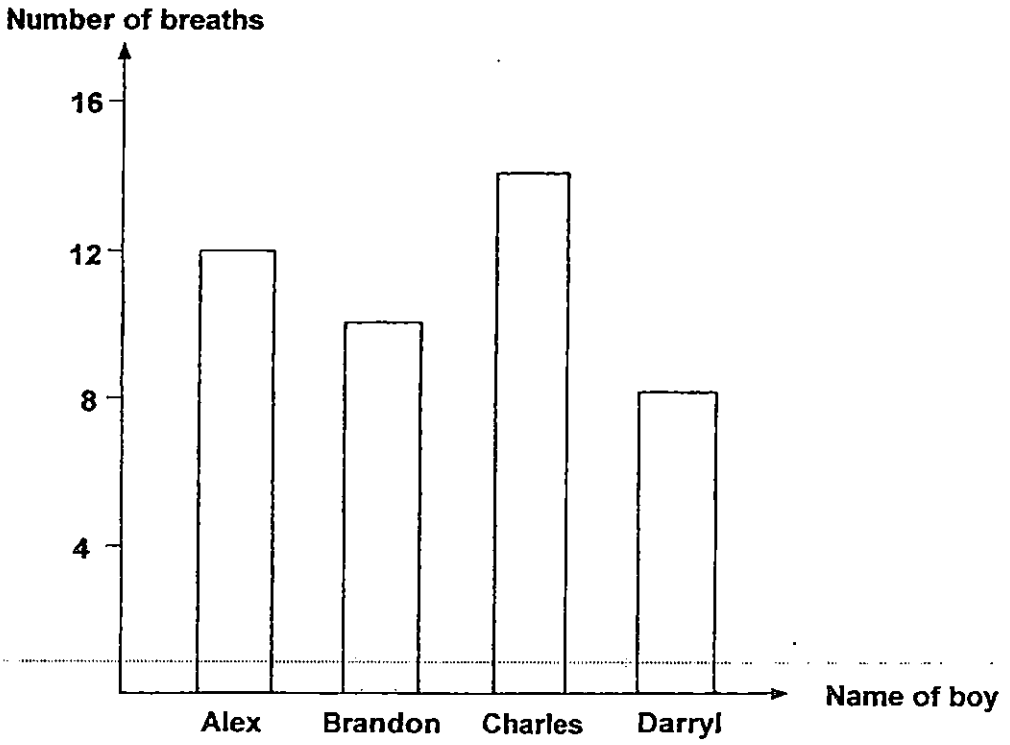
14 The diagram below shows gaseous exchange taking place in a plant at midnight.



What are gases P and Q likely to be?

	P	Q
(1)	carbon dioxide	water vapour
(2)	oxygen	carbon dioxide
(3)	carbon dioxide	oxygen
(4)	water vapour	oxygen

15 During a balloon-blowing competition, Alex, Brandon, Charles and Darryl were each given identical balloons and told to inflate the balloons to the fullest, using the least number of breaths. The graph below shows the number of breaths needed by each boy to inflate his balloon to the fullest.

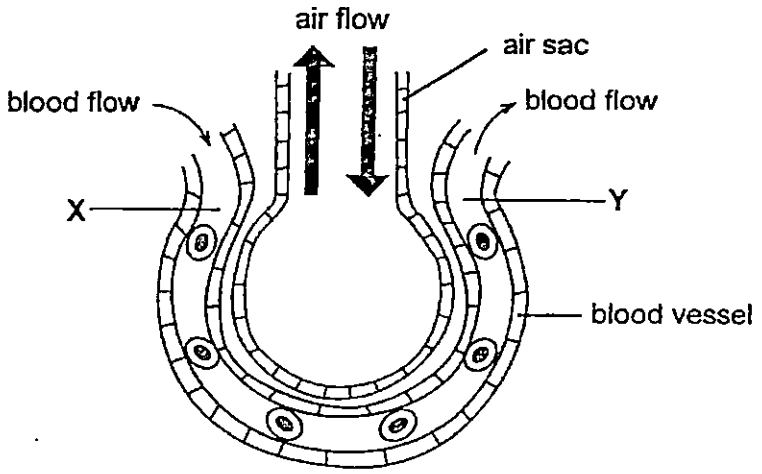


Lung capacity is the greatest amount of air a person can take in with each breath. Which of the following statements are true?

A Charles has the greatest lung capacity
B Alex has a greater lung capacity than Darryl
C Brandon has a greater lung capacity than Alex
D Darryl can inflate the balloon with the least number of breaths

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

16 The diagram below shows an air sac and a blood vessel in the lungs of a man. Blood flows through the blood vessel from point X to Y.



Which of the following describes the oxygen and carbon dioxide levels of the blood at points X and Y?

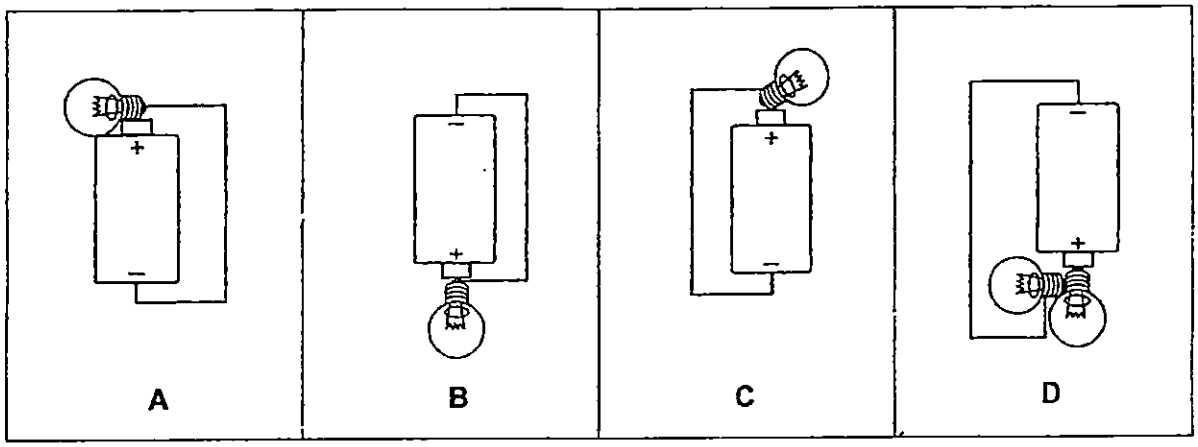
	X		Y	
	Oxygen	**Carbon Dioxide**	**Oxygen**	**Carbon Dioxide**
(1)	high	high	low	low
(2)	low	low	high	high
(3)	high	low	low	high
(4)	low	high	high	low

17 Which of the following statements about cells are correct?

A All living things are made of many cells.
B Cells have different shapes, sizes and functions.
C Cells reproduce to replace old and damaged cells.

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

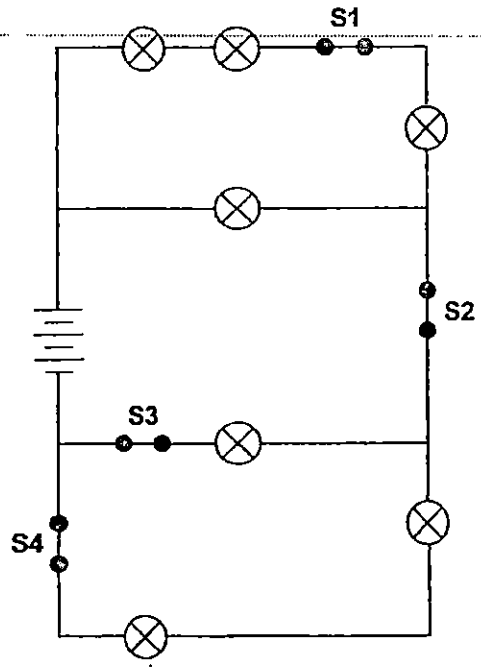
18 Study the diagrams below carefully.



In which circuits would the bulbs light up?

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

19 Study the electrical circuit diagram below carefully.

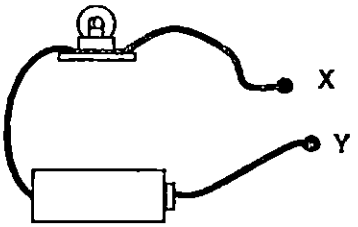


Which switch, S1, S2, S3 or S4, must you open if you want only 5 light bulbs to be lighted up?

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

20 Ryan used a circuit tester to test a circuit card. He connected the points X and Y of the circuit tester to the various clips 1, 2, 3, 4, 5 and 6 on a circuit card to see if the bulb would light up. He recorded the results of his experiment in the table below.

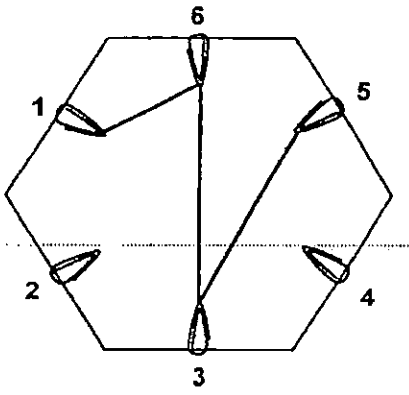
Connection tested	Did the bulb light up?
1 and 4	No
2 and 4	No
3 and 5	Yes
5 and 6	Yes
1 and 6	No



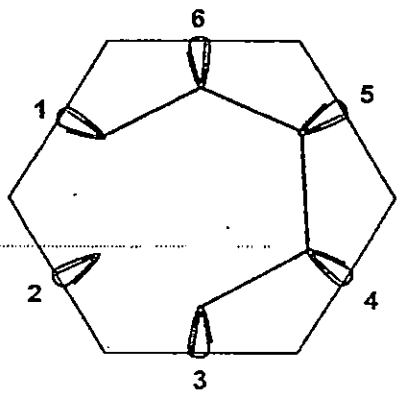
circuit tester

Which of the diagrams represent the circuit card that was tested?

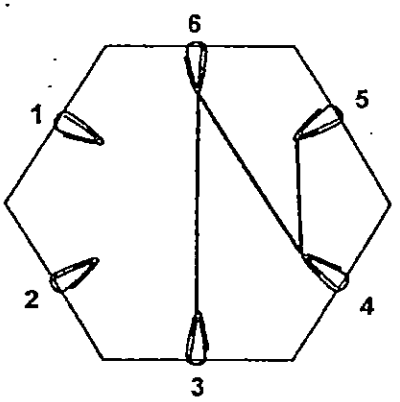
(1)



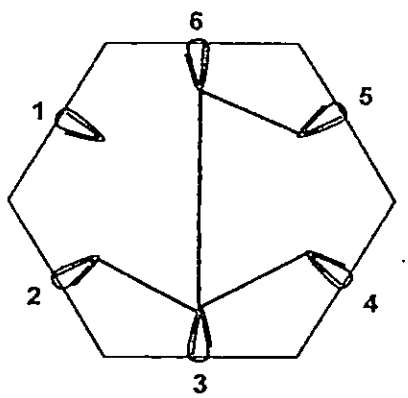
(2)



(3)



(4)



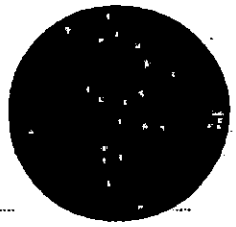
21 Calvin wanted to find out which of the 4 battery-powered toys, W, X, Y and Z used the most electricity. He connected the toys to an electric circuit and recorded the time taken for the batteries to be totally used up.

Which of the following should he do to ensure that his experiment is a fair test?

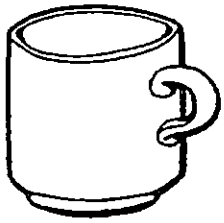
A Only fully charged batteries should be used.
B Only the same type and number of batteries must be used.
C Each toy must be switched on for the same amount of time.
D Only one toy should be connected to the test circuit at each time.

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

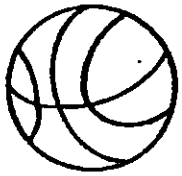
22 The diagram below shows a shadow.



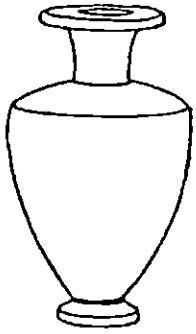
Which of the following objects below can cast the shadow above?



A



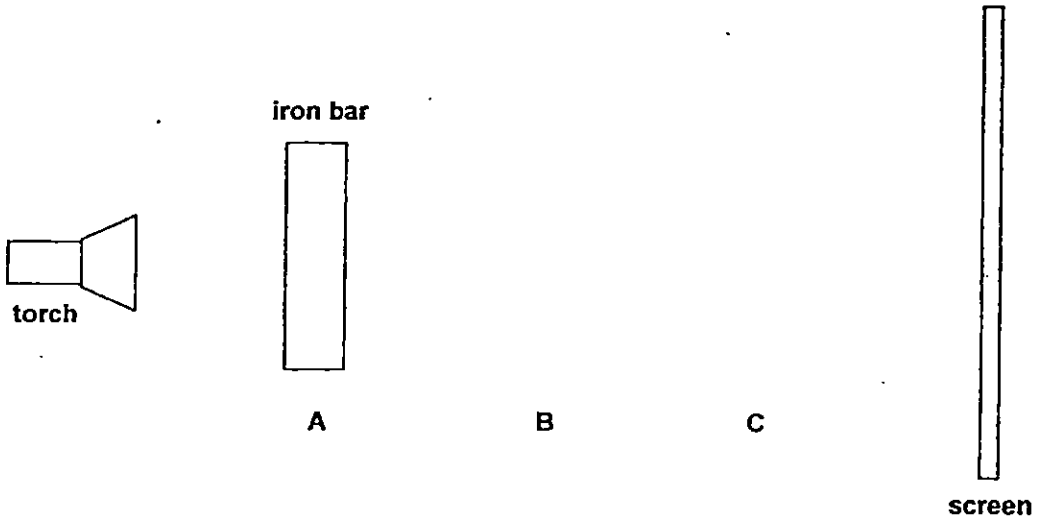
B



C

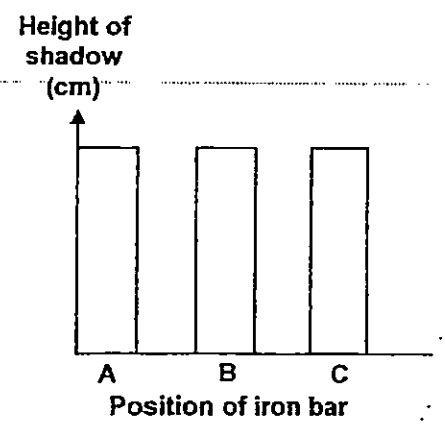
(1) A and B only
(2) A and C only
(3) B and C only
(4) A, B and C

23 In the set-up below, the iron bar casts a dark shadow on the screen when the torchlight is shone on it.

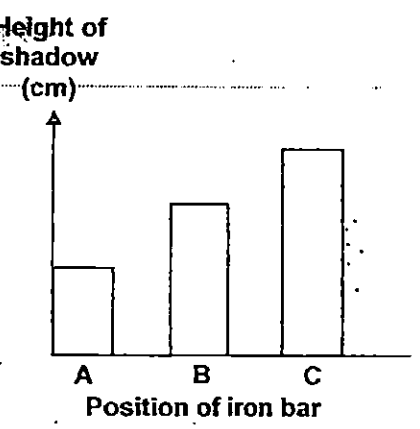


The iron bar is placed at positions A, B and C during the experiment. Which of the following graphs shows the correct height of the shadow formed on the screen for A, B and C?

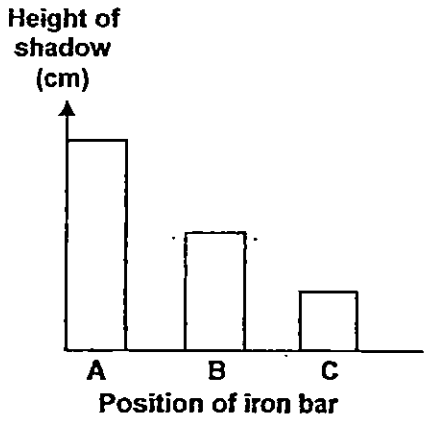
(1)



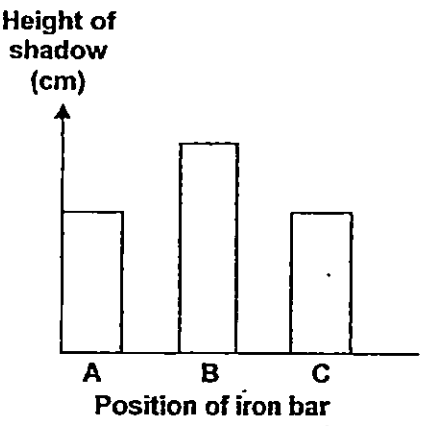
(2)



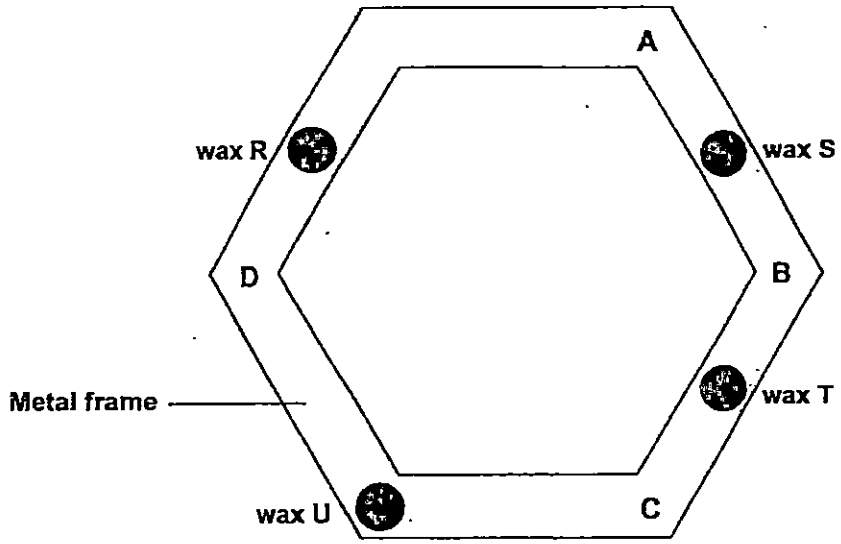
(3)



(4)



24 The diagram below shows a hexagonal metal frame with four drops of wax at R, S, T and U.



Malcolm placed a lit candle under one of the four points, A, B, C and D. He then recorded the time taken for the drops of wax to melt, in the table below.

Drop of wax	Time taken for the drop of wax to melt (seconds)
R	91
S	52
T	16
U	35

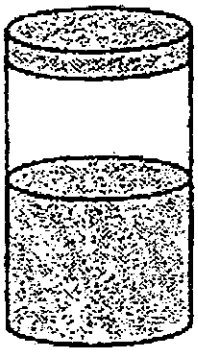
At which **point** did Malcolm place the lit candle under?

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

25 Tyler filled three bottles with 400ml of water and 3 similar ice cubes each. He then wrapped each bottle with different numbers of similar sized sheets of newspaper.

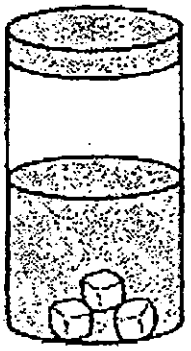
Bottle	Amount of water (ml)	Number of ice cubes	Number of sheets of newspaper
A	400	3	1
B	400	3	6
C	400	3	15

After 20 minutes, he removed the newspaper and the results are shown below.



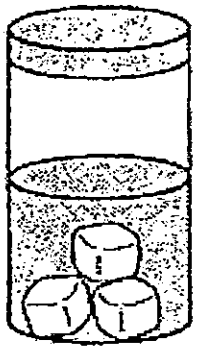
No ice cubes observed

A



Small ice cubes observed

B



Big ice cubes observed

C

Which of the following best describes the relationship between the number of sheets of newspaper used and the rate at which the ice cubes melted?

(1) The more sheets of newspaper used, the faster the ice cubes melted.
(2) The more sheets of newspaper used, the slower the ice cubes melted.
(3) The fewer sheets of newspaper used, the slower the ice cubes melted.
(4) The number of sheets of newspaper used did not affect the speed at which the ice cubes melted.

ANGLO-CHINESE SCHOOL
(JUNIOR)

SEMESTRAL ASSESSMENT 1 (2015)
PRIMARY 5

SCIENCE

BOOKLET B

8 MAY 1 hour 30 minutes

Name : _____ ( )

Class : P5 _____

INSTRUCTIONS TO PUPILS

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

Follow all instructions carefully.

There are 14 questions in this booklet.

Answer **ALL** questions.

INFORMATION FOR PUPILS

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

The total marks for this booklet is 40.

The total time for Booklets A and B is 1 hour 30 minutes.

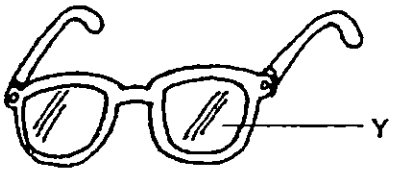
This question paper consists of 17 printed pages (inclusive of cover page).

BOOKLET A	**/ 50**
BOOKLET B	**/ 40**
TOTAL	**/ 90**
Parent's signature/ Date:	

For questions 26 to 39, write your answers in this booklet.
The number of marks available is shown in brackets [ ] at the end of each question or part question.

(40 marks)

26 The diagram below shows a pair of spectacles.



(a) State 2 possible materials that can be used to make part Y. [1]

(b) State 2 properties of the materials mentioned in (a) which are suitable for making part Y. [2]

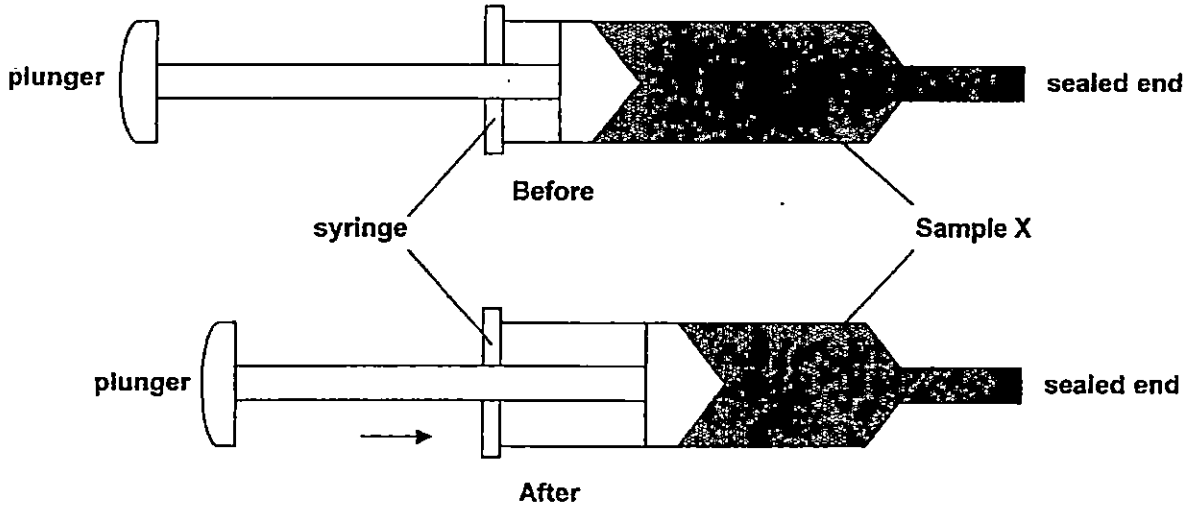
Property 1:

Property 2:

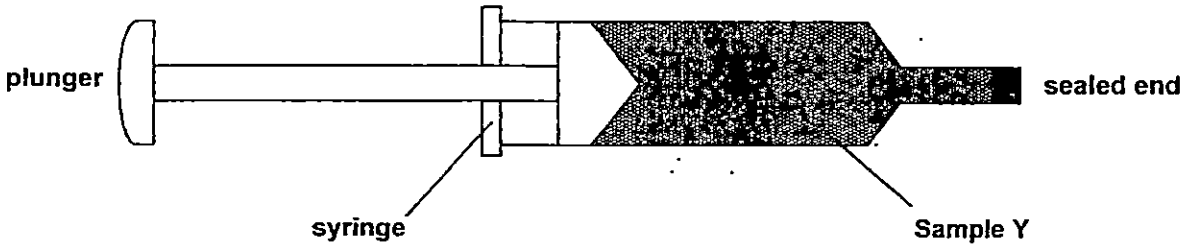
(Go on to the next page)

SCORE	
	3

27 Eddy carried out his first experiment as shown in the diagram below. He sealed the nozzle of the syringe and pushed the plunger inwards.



(a) What happened to the mass of Sample X in the syringe after the plunger is pushed in? Explain your answer. [1]

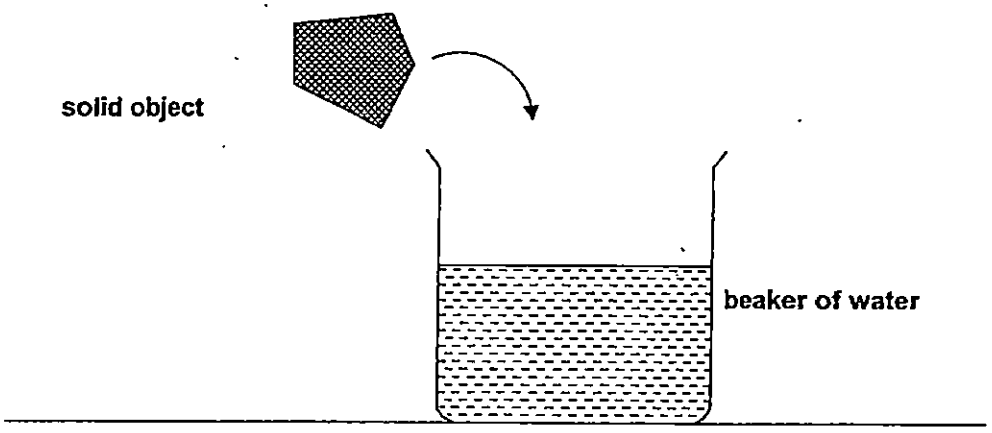


(b) Eddy replaced the Sample X in the syringe with Sample Y. He tried pushing the plunger but he was not able to do so. State a difference in the property between Sample X and Sample Y. [1]

(Go on to the next page)

SCORE / 2

27(c) Eddy then carried out his next experiment. He dropped a solid object into a beaker of water as shown in the diagram below. The solid object sinks in the water.



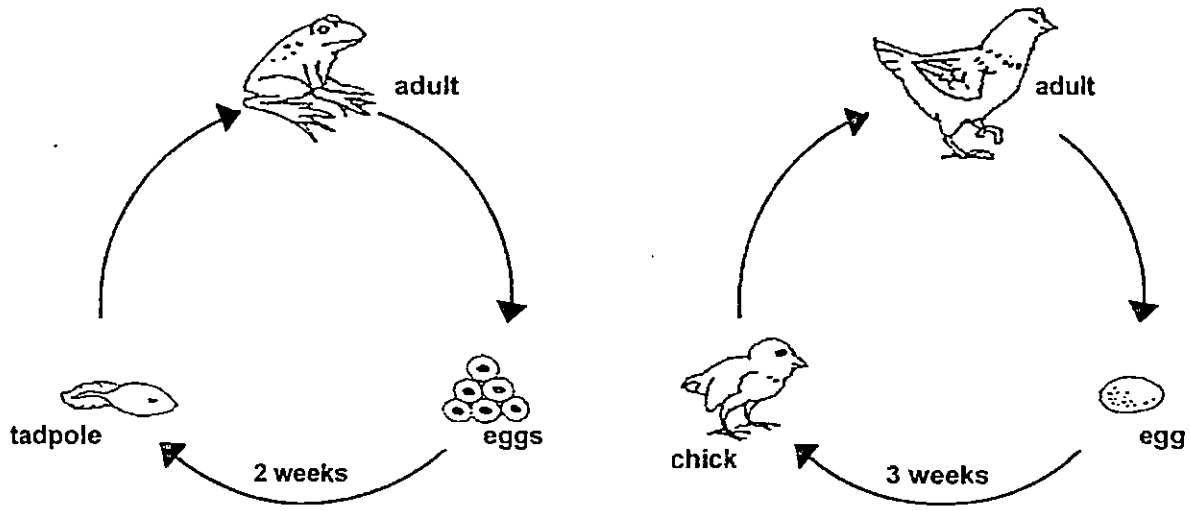
Which of the following statements correctly describe what will happen after the solid object is dropped into the container of water? Tick (✓) the correct answers in the boxes. [1]

The water level will rise	
The volume of water will increase	
The mass of the solid object will not change	
There will be a change in the mass of the water	

(Go on to the next page)

SCORE	/ 1

28 Compare the two life cycles below.



Life cycle of a frog

Life cycle of a chicken

(a) Based on the life cycles above, state 2 differences between them. [2]

(i) _____

_____

(ii) _____

_____

(b) Explain why it is necessary for living things to reproduce. [1]

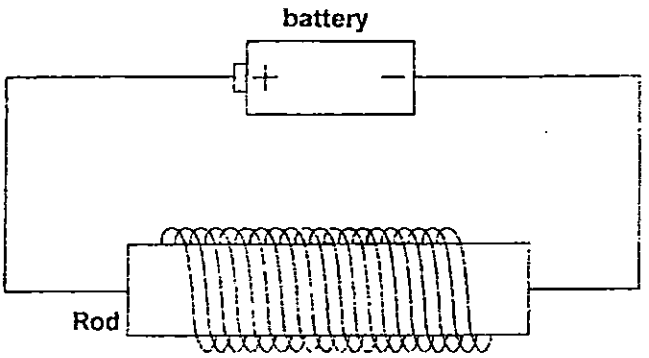
_____

_____

(Go on to the next page)

SCORE	
	3

29 Luke carried out an experiment to find out which material is suitable to make an electromagnet using the set-up shown below.



He made an electromagnet using Rod A and then recorded the number of paper clips it attracted. After that, he repeated this procedure with Rods B and C.

The result of his experiment is recorded in the table as shown below.

Rod	Number of paper clips attracted
A	0
B	17
C	0

(a) Name two variables which have to be kept constant to ensure that it is a fair test. [1]

_____

_____

(b) What can Luke conclude based on the results? [1]

_____

_____

(c) Rod A and Rod C are made of different materials. Name the materials that Rod A and C can be made of. [1]

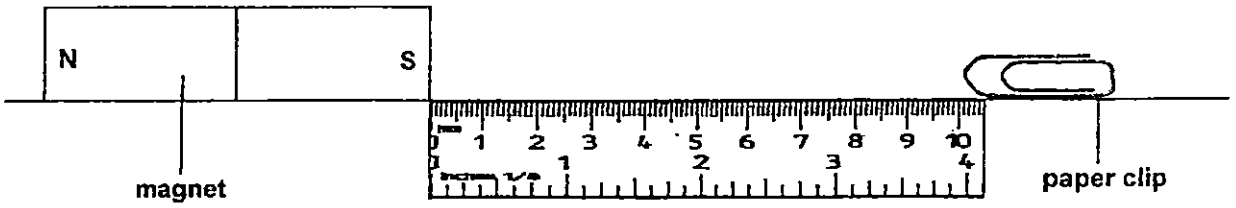
Rod A : _____

Rod C : _____

(Go on to the next page)

SCORE	/ 3

30 Ryan set up an experiment as shown below. He pushed the paper clip slowly along the ruler towards Magnet W. He recorded the distance at the point where the paper clip was attracted to the magnet. He repeated these steps using Magnets X, Y and Z.



Magnet	Distance from which the magnet attracted the paper clip
W	3 cm
X	6 cm
Y	8 cm
Z	5 cm

(a) What was Ryan trying to find out? [1]

_____

_____

(b) Based on the information in the table, arrange the magnets according to their strength from the strongest to the weakest. [1]

Magnet ____ , Magnet ____ , Magnet ____ , Magnet ____

strongest ⟶ **weakest**

(c) What must Ryan do to ensure that the experiment is a fair test? [1]

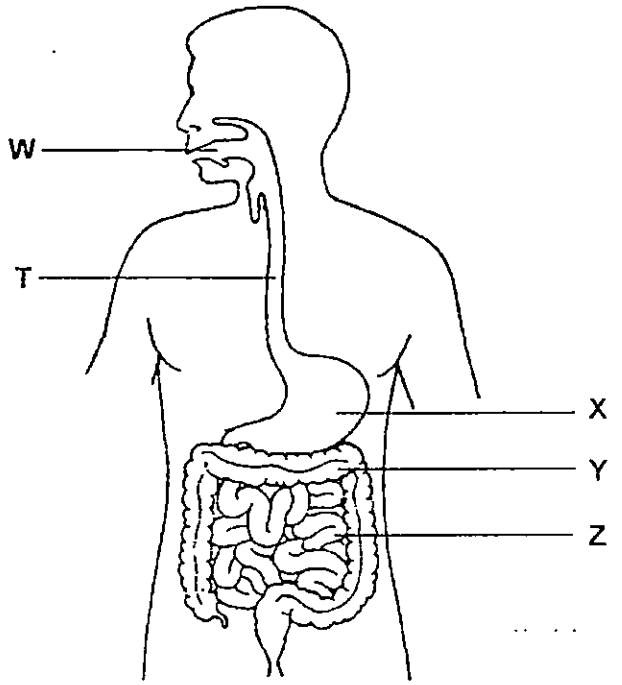
_____

_____

(Go on to the next page)

SCORE / 3

31 The diagram below shows the human digestive system.



(a) At which part(s) T, W, X, Y or Z is digestive juice produced? [1]

(b) At which part is digested food absorbed into the bloodstream? Explain clearly why it is important for digested food to be absorbed into the blood stream. [1]

(c) What is the function of part Y? [1]

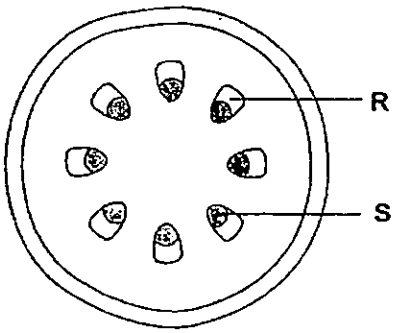
(Go on to the next page)

SCORE	
	3

32 Tom added a few drops of red food colouring into a beaker of water. He then put a plant into the beaker of red-coloured water.

The next day, Tom cut a cross-section of the stem as shown in the diagram below.

(a) Shade the parts of the cross-section that would have turned red. [1]

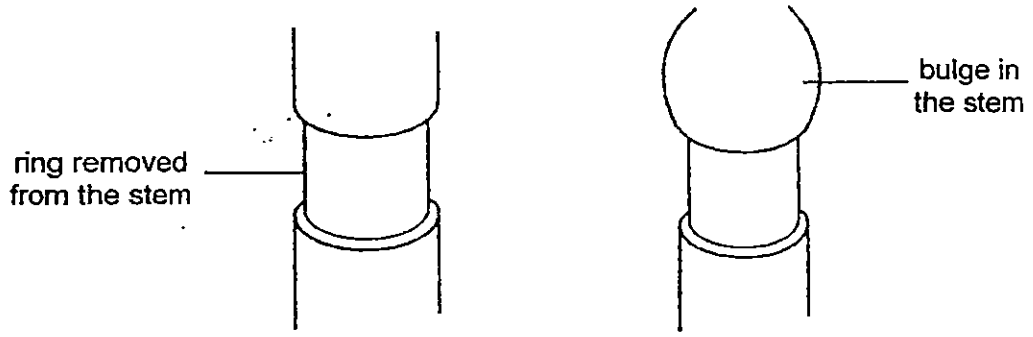


(b) Identify the structures R and S. [1]

R : _____

S : _____

Tom removed a ring from the stem of another plant in the garden. He watered the plant every day and it remained healthy. After a week, Tom noticed there was a bulge on the stem above the region where he had removed the ring.



(c) What could be the likely reason for the bulge? [1]

_____

_____

_____

(Go on to the next page)

SCORE	
	3

33 The table below shows the comparison of characteristics of inhaled air and exhaled air in the respiratory system of a human being.

(a) Fill in the words "More" or "Less" or "Same" in the blank spaces to complete the table. [1]

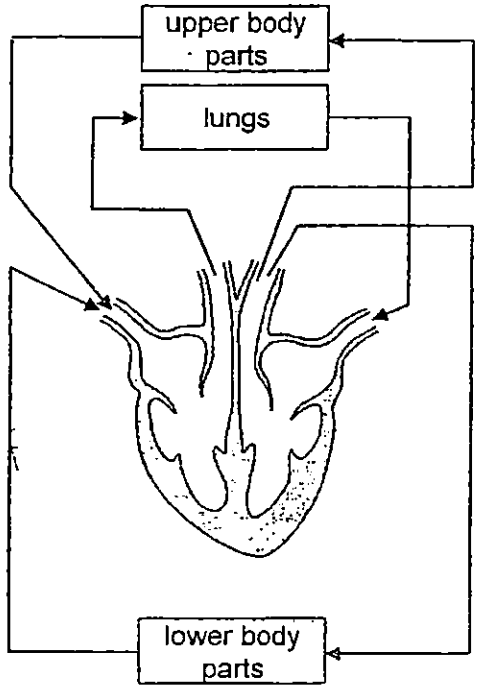
S/N	Characteristic	Inhaled Air	Exhaled Air
1	Amount of Oxygen		
2	Amount of Carbon Dioxide		
3	Amount of Water Vapour		
4	Amount of Dust		

(b) What does the human body use the oxygen for? Explain clearly. [1]

(Go on to the next page)

SCORE 2

34 The diagram below shows a cross-section of the human heart and the movement of blood in the human circulatory system.



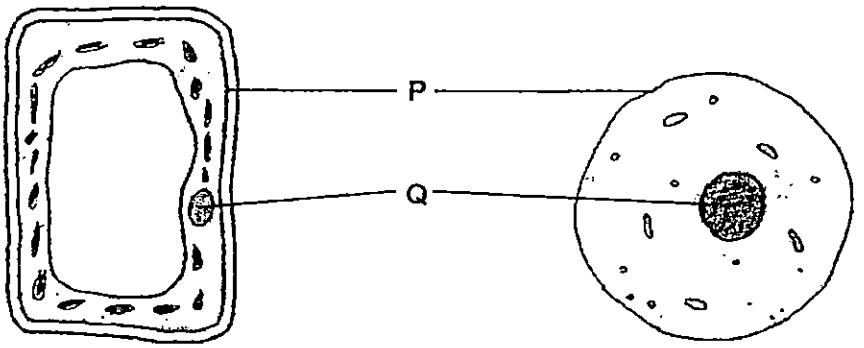
In the table below, state two differences between the blood flowing in the right side of the heart and the left side of the heart. [2]

Difference	Right Side Of The Heart	Left Side Of The Heart
(i)		
(ii)		

(Go on to the next page)

SCORE 2

35 The diagrams below show two cells of two different organisms.



Cell X Cell Y

(a) Based on what you can observe in the above diagrams, which cell is a plant cell? Give a reason to explain your choice. [1]

_____

_____

(b) Complete the table below by filling in the missing information. [2]

Label	Name of Cell Part	Function
P		
Q		

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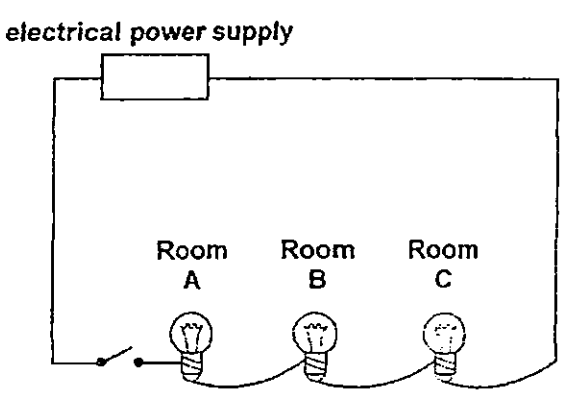
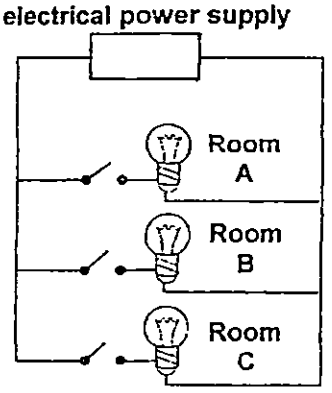
SCORE	3

36 The diagrams below show two possible ways in which electric bulbs in three different rooms can be connected to the electrical power supply.



Circuit T



Circuit V

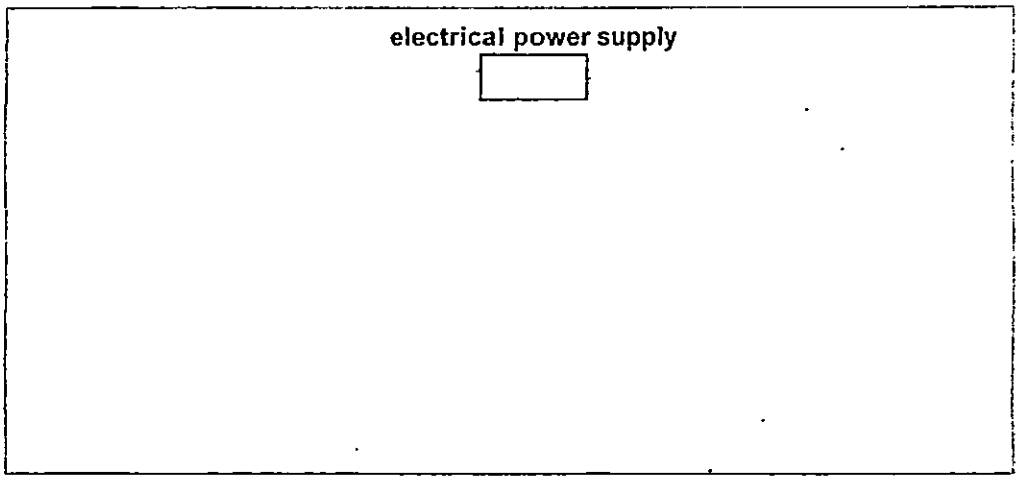
(a) Which circuit is a better choice? Give two reasons to explain your choice. [2]

Circuit ____ is a better choice because :

Reason 1 :

Reason 2 :

(b) Draw an electrical circuit diagram of Circuit V above. Add a fourth switch to the circuit so that this switch can control the bulbs in all the rooms, A, B and C, if they all were switched on at first. [1]



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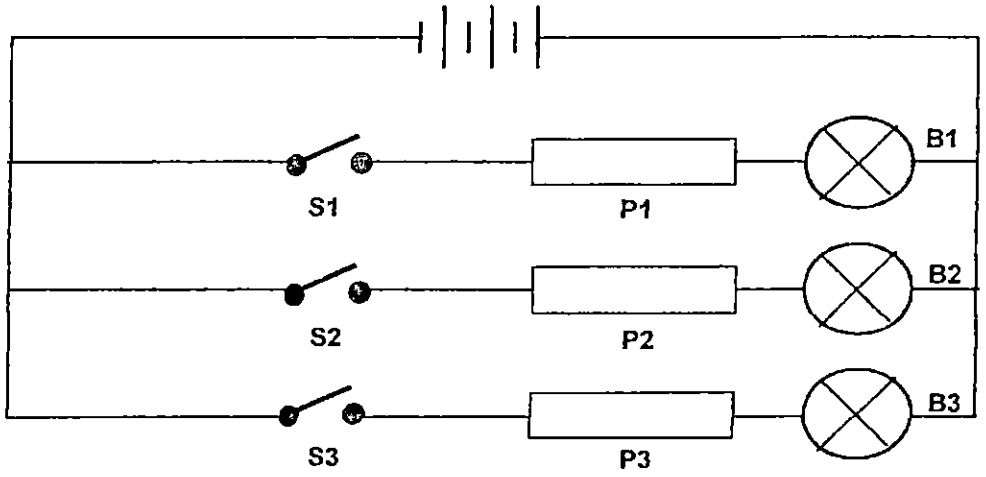
SCORE	/ 3

37 The diagram below shows a circuit where identical bars of 3 different unknown materials, X, Y and Z, are connected to 3 batteries and 3 identical light bulbs, B1, B2 and B3.



When switches S1, S2 and S3 are closed, the following results are obtained :

Position	Material	Light bulb that lighted up
P1	X	B1
P2	Y	None
P3	Z	None

When the position of materials X, Y and Z were changed and the switches S1, S2 and S3 were closed, the following results were obtained :

Position	Material	Light bulb that lighted up
P1	Y	None
P2	Z	B2
P3	X	None

(a) Based on the above experimental results, which material(s) is/are electrical conductor(s)? [1]

_____

(b) Give an example of Material Y. [1]

_____

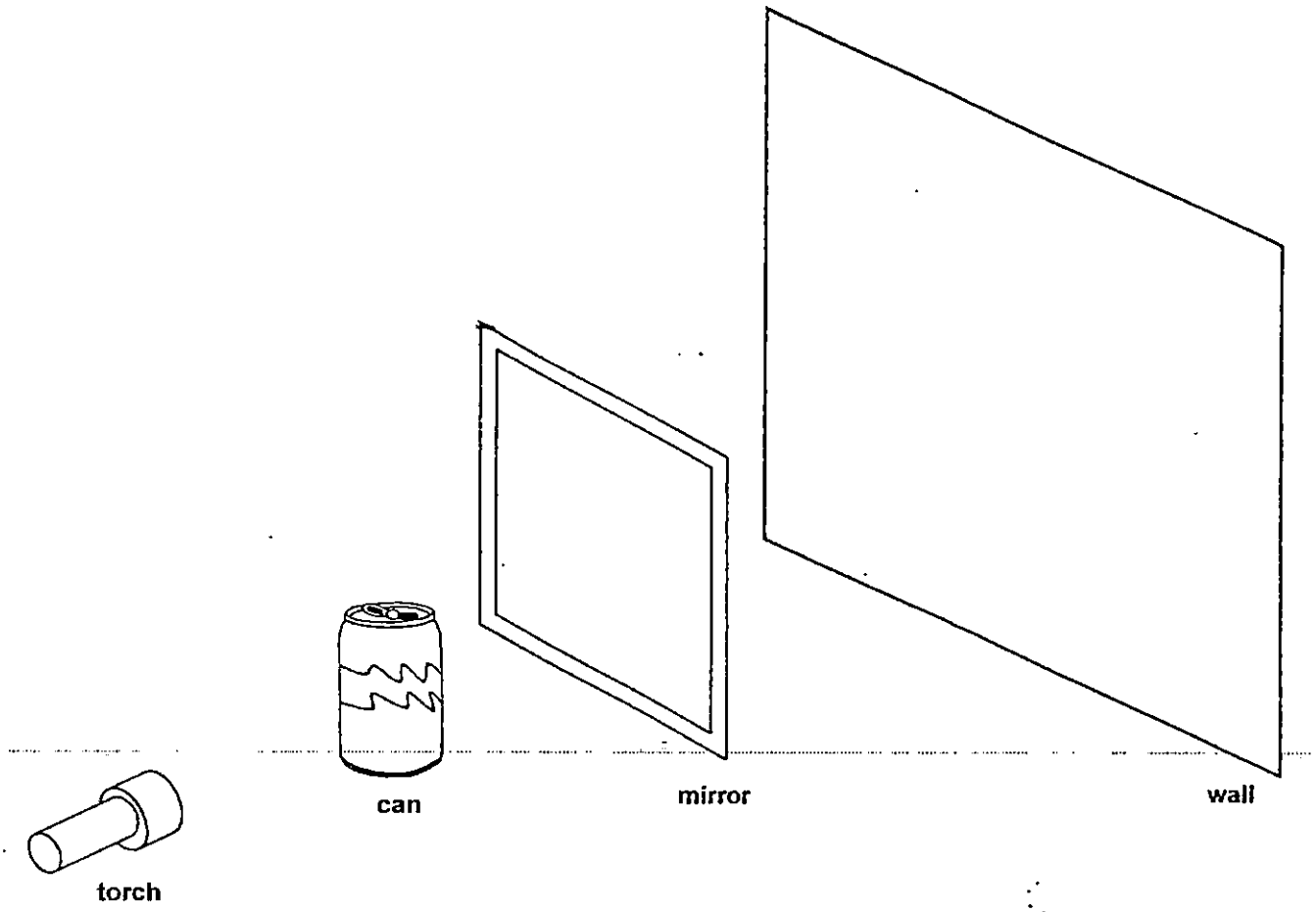
(c) Based on the above experimental results, what can you infer about bulb B3? [1]

_____

(Go on to the next page)

SCORE	
	3

38(a) Tristan placed a mirror between a can and a wall. He shone a torch on the can and a shadow is formed on a smooth wall.



Draw the shadow that is formed on the wall. [1]

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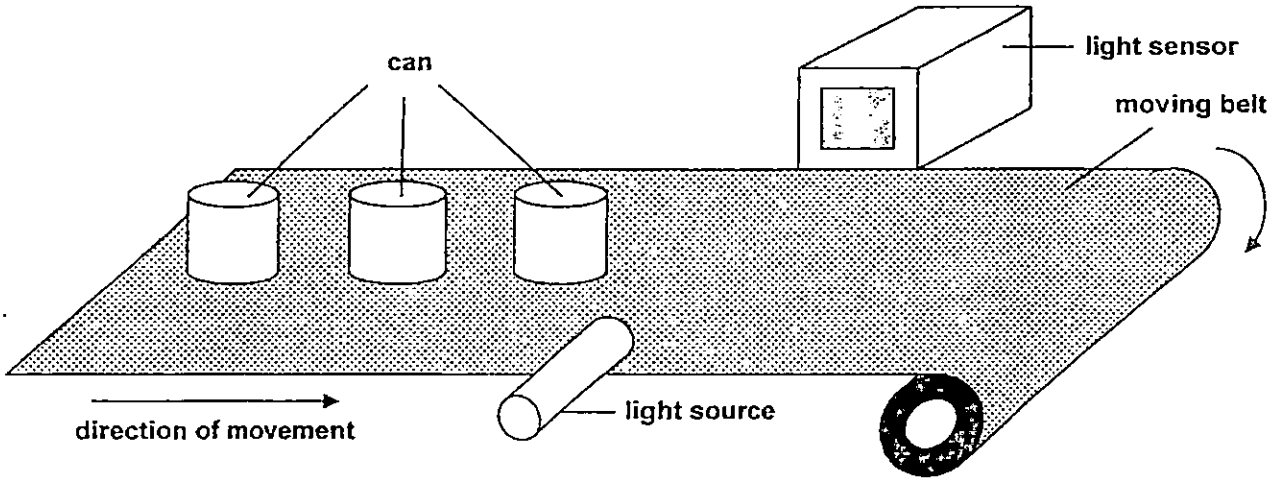
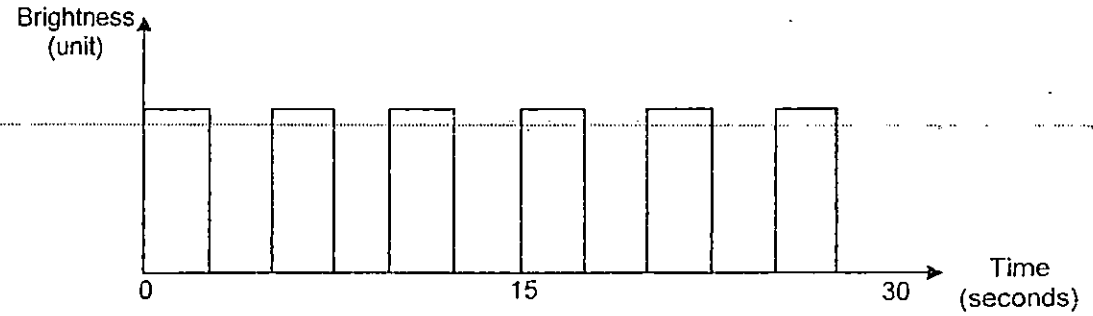
SCORE	
	1

38(b) Tristan then set up a light sensor to count the number of identical cans on a moving belt.



The belt moves at a constant speed. As the cans pass between the light source and the sensor, they block light from reaching the sensor. The sensor will count when there is no light. The data recorded is shown in the graph below.



(i) How many cans could be counted in 30 seconds? [1]

_____

(ii) Based on Tristan's experiment, state two properties of light. [1]

Property 1:

_____

_____

Property 2:

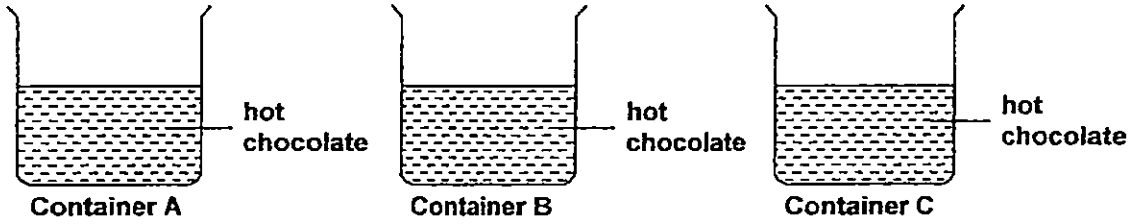
_____

_____

(Go on to the next page)

SCORE	/ 2

39 Oliver wants to conduct an experiment to find out which container can best keep hot chocolate warm. He sets up the experiment as shown below.



(a) Complete the table by ticking (✓) the variables that are to be kept the same. [1]

Variables	Keep the same
Size of container	
Volume of hot chocolate	
Material of container	
Temperature of hot chocolate at beginning	
Size of opening of container	

(b) What should he measure after 10 minutes to reach a conclusion? [1]

_____

_____

(c) How can he tell which container is most suitable for keeping the hot chocolate warm? [1]

_____

_____

End of Paper.

SCORE	/ 3

EXAM PAPER 2015
LEVEL : PRIMARY 5
SCHOOL : ANGLO CHINESE SCHOOL (JUNIOR)
SUBJECT : SCIENCE
TERM : SA1

Q 1	Q 2	Q 3	Q 4	Q 5	Q 6	Q 7	Q 8	Q9	Q 10
2	1	1	2	1	3	3	2	3	4
Q 11	Q 12	Q 13	Q 14	Q 15	Q 16	Q 17	Q 18	Q 19	Q 20
3	4	4	2	4	4	3	4	4	3
Q 21	Q 22	Q 23	Q 24	Q 25	Q 26	Q 27	Q 28		
2	3	3	3	2					

Q26a. Plastic and glass
Q26b.
Property 1 : Hard and transparent.
Property 2 : Light and transparent.

Q27a. The mass of sample X remains the same. It is because sample X was compressed so only the volume changed.
Q27b. Sample X can be compressed but Sample Y cannot be compressed.
Q27c.

The water level will rise	✔
The volume of water will increase	✔
The mass of the solid object will not change	✔
There will be a change in the mass of the water	

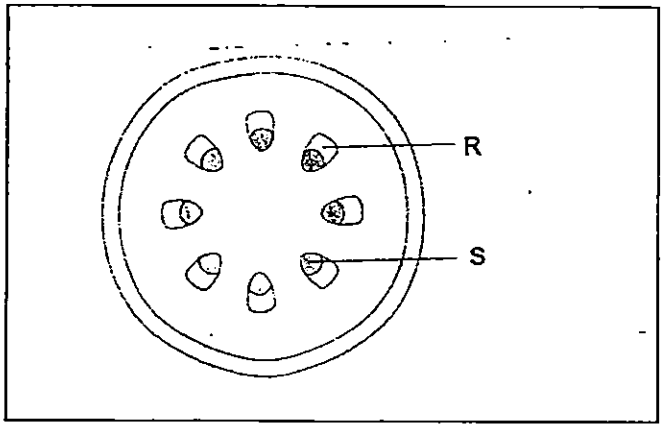
Q28a. (i) The life cycle of a frog takes 2 weeks to become a tadpole but the life cycle of a chicken takes 3 weeks to become a chick.
Q28a (ii) The frog lays many eggs at a time but the chicken lays only one egg at a time.
Q28b So that they will ensure that their species will continue to survive.

Q29a. The number of batteries and the length of the rods.
Q29b. Rod B is made of a magnetic material but A and C are not.
Q29c. Rod A : Copper
Rod C : Silver

Q30a. He was trying to find out the magnetic strength of the magnets.
Q30b. **Magnet Y , Magnet X , Magnet Z , Magnet W**
Q30c. Ryan must use the same types of paper clips.

Q31a. X , W, and Z
Q31b. Z, so that the digested food will be transported to other parts of the body to produce energy.
Q31c. Y absorbs water from the undigested food.

Q32a. SEE PICTURE



Q32b. R: **Phloem** S: **Xylem**

Q32c. It is because food made by the leaves will not be able to transport to the bottom part of the plant as the phloem had been removed so all the food was stored at that area and then it became swollen.

Q33a.

S/N	Characteristic	Inhaled Air	Exhaled Air
1	Amount of oxygen	More	Less
2	Amount of carbon dioxide	Less	More
3	Amount of water vapour	Less	More
4	Amount of Dust	More	Less

Q33b. The human body uses oxygen to produce energy by carrying it to other parts of the body with digested food.

Q34.

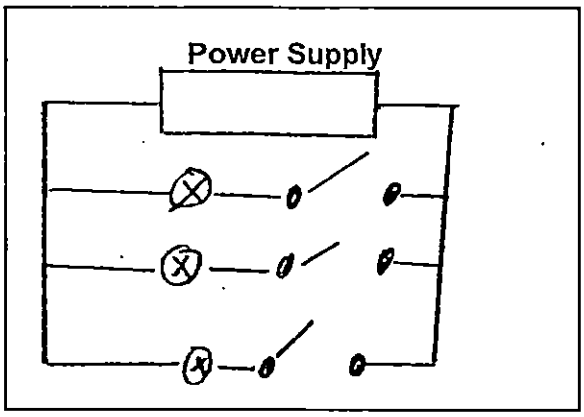
Difference	Right side of the Heart	Left side of the Heart
(i)	The blood is richer in carbon dioxide.	The blood is poorer in carbon dioxide.
(ii)	The blood is poorer in oxygen .	The blood is richer in oxygen .

Q35a. Cell X. It is because Cell X has a cell wall but animal cells do not have a cell wall.

Q35b.

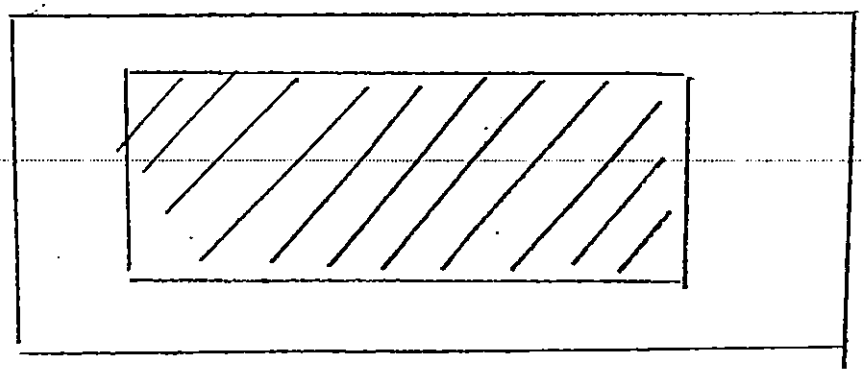
Label	Name of Cell part	Function
P	Cell membrane	Controls materials to enter and exit the cell.
Q	Nucleus	Controls all activities occurring inside the cell.

Q36a. Circuit **V** .
Reason 1 : It's bulb will glow brighter than Circuit T.
Reason 2 : It is because the bulbs could be switched off separately.
Q36b. SEE PICTURE



Q37a. X and Z
Q37b. Wood
Q37c. Bulb 3 has fused.

Q38a. SEE PICTURE



Q38b. i) 6 cans
Q38b ii) Property 1 : Light travels in straight lines.
Property 2 : Opaque objects block light..

Q39a.

Variables	Keep the same
Size of container	✔
Volume of hot chocolate	✔
Material of container	
Temperature of hot chocolate at beginning	✔
Size of opening of container	✔

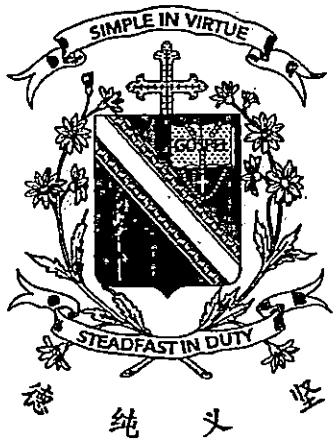
Q39b. He should measure the hot chocolate's temperature.
Q39c. By checking which container's chocolate is the hottest.

THE END

Name: _____ ( )

Class: Primary 5 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL



Primary 5
Semestral Assessment 1 – 2015
SCIENCE

BOOKLET A

14 May 2015

Total Time for Booklets A and B: 1 hour 45 minutes

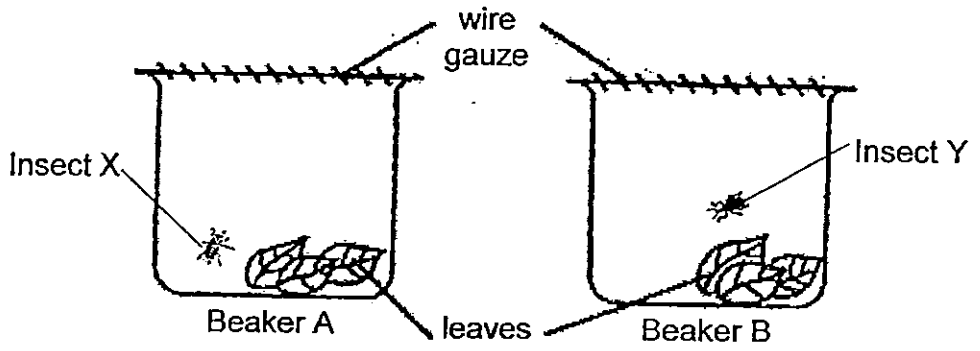
30 questions
60 marks

Do not open this booklet until you are told to do so.
Follow all instructions carefully.
Answer all questions.

This booklet consists of 22 printed pages.

Section A (30 x 2 marks = 60 marks)
For each question from 1 to 30, 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 provided.**

1. Two different insects, X and Y, were put into two separate beakers at the same location with the same number of leaves plucked from the same plant.



After one week, Insect X was dead but Insect Y was still alive.
Based on the above observation, which one of the following explanations is most likely correct?

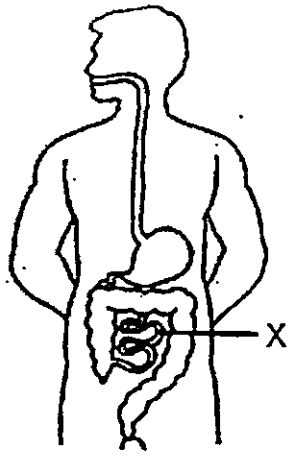
(1) Insect Y requires more food than insect X.
(2) There is less oxygen in beaker A than in beaker B.
(3) Insect X feeds on animals while insect Y feeds on plants.
(4) The leaves in beaker A dry up faster than the leaves in beaker B.

2. Which of the following statements are true about most mammals?

A They feed their young with milk.
B They give birth to their young alive.
C They have hair as their outer coverings.

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

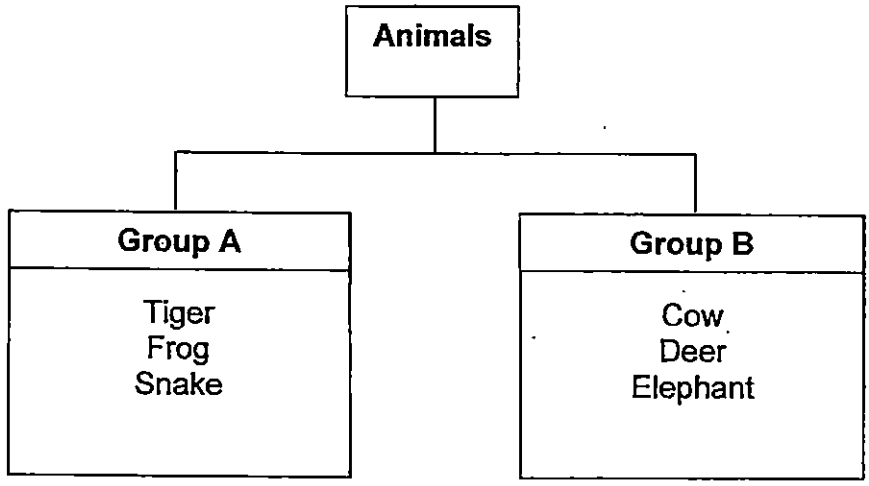
3. The diagram below shows some organs in the human body



Which of the following statements about organ X is **true**?

(1) No digestion is happening here
(2) All the water in the digested food is absorbed here.
(3) Digested food is absorbed into the bloodstream here.
(4) Solid wastes are stored here before passing out of the body.

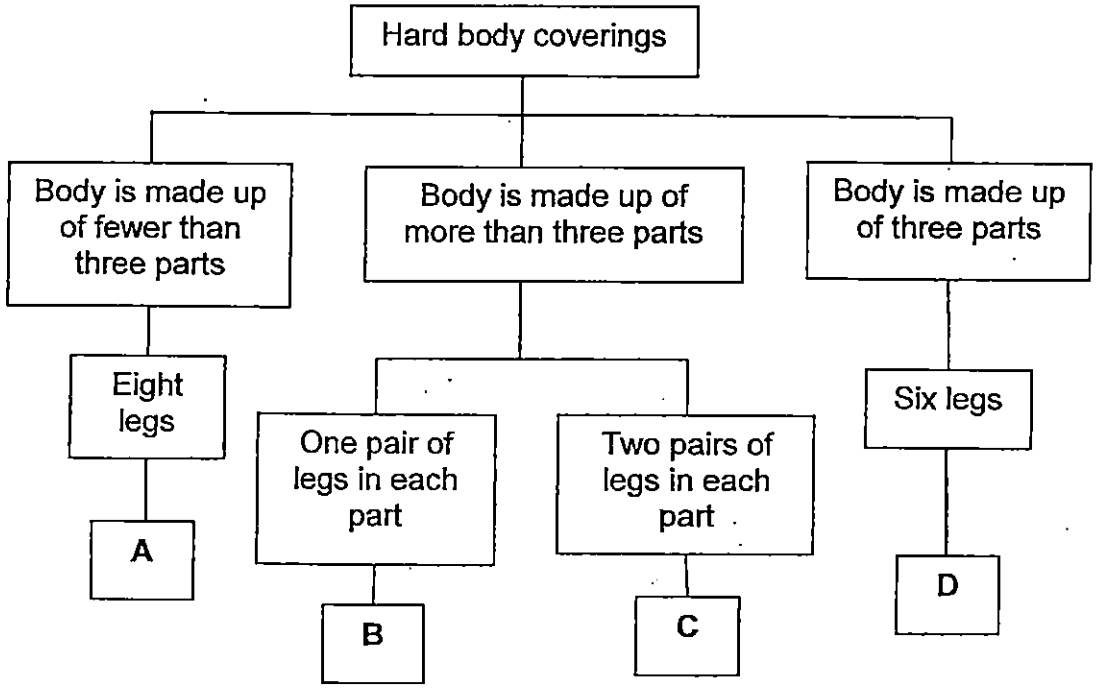
4. Study the classification chart below carefully.



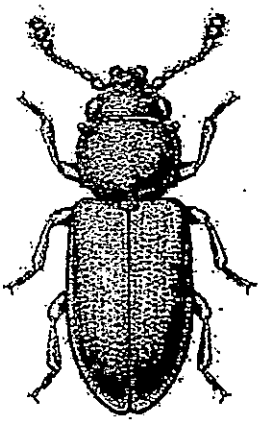
The animals in Groups A and B are classified according to _____.

(1) The way they move
(2) the food they eat
(3) their outer coverings
(4) the way they reproduce

5. Study the classification table below.



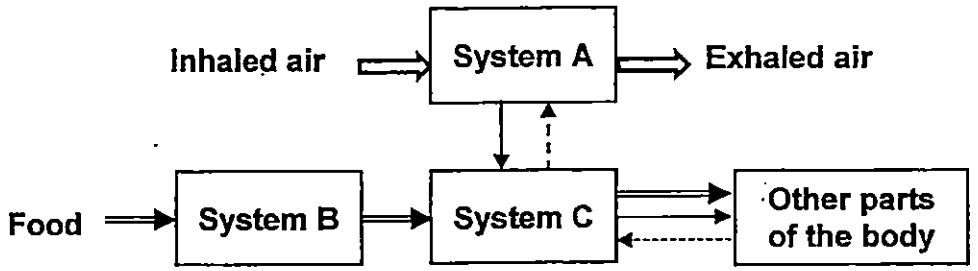
Daniel found an animal and noticed that it had a hard body covering.



Which group, A, B, C or D, does this animal belong to?

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

6. The diagram below shows how the three systems in a human body work together to keep the body functioning.

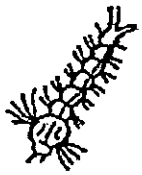


Legend:
- ⟹ Path taken by food
- → Path taken by oxygen gas
- ⇠ Path taken by carbon dioxide gas

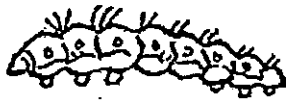
What do the systems A, B and C represent?

	System A	System B	System C
(1)	Respiratory	Circulatory	Digestive
(2)	Circulatory	Digestive	Respiratory
(3)	Respiratory	Digestive	Circulatory
(4)	Digestive	Respiratory	Circulatory

7. The pictures show a stage in the life cycle of a mosquito and a butterfly respectively.



wriggler

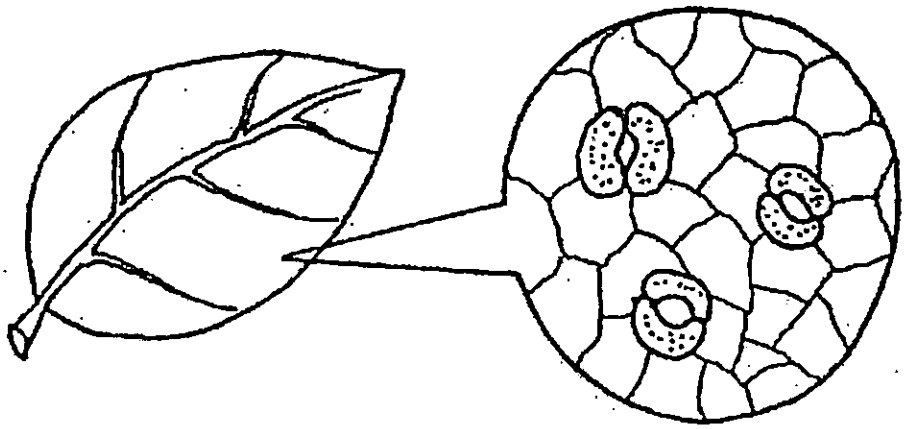


caterpillar

In what ways are the animals in the stage shown above similar?

(1) They feed on the same type of food.
(2) They live in water throughout this stage of their life cycle.
(3) They both do not feed a lot at this stage of their life cycle.
(4) They do not look like their parent at this stage of their life cycle.

8. The diagram below shows the stomata found on the underside of a leaf.



Which one of the following parts in the human body performs a function similar to that performed by the stomata?

(1) Heart

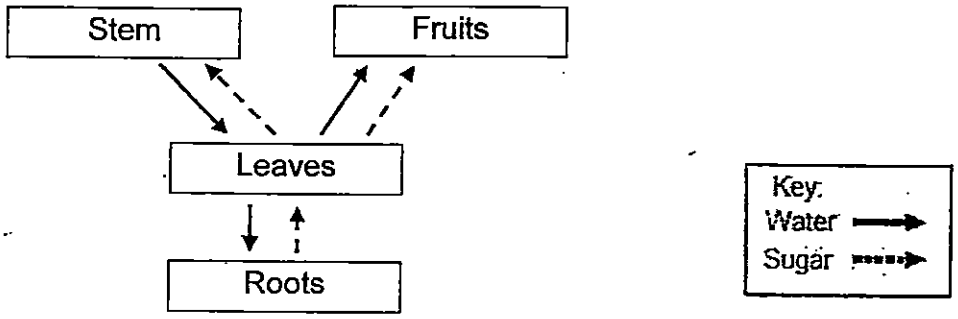
(2) Lungs

(3) Stomach

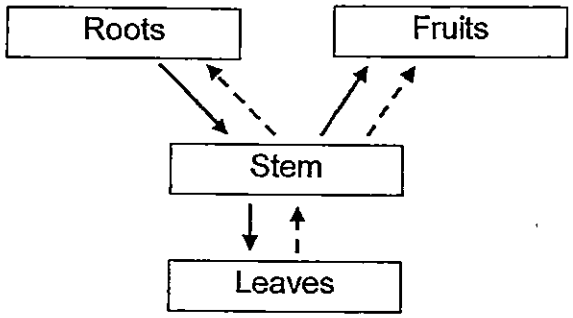
(4) Small Intestine

9. Which one of the diagrams below correctly shows the transport of water and sugar in a plant?

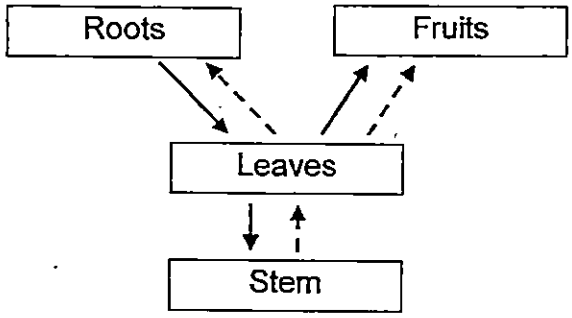
(1)



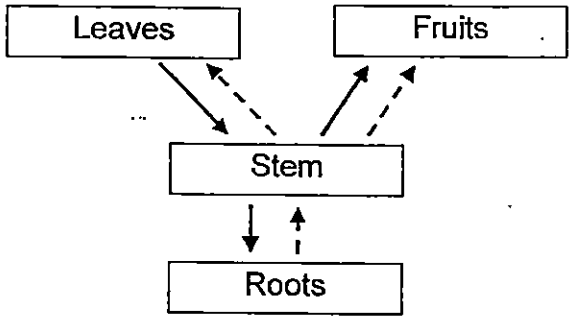
(2)



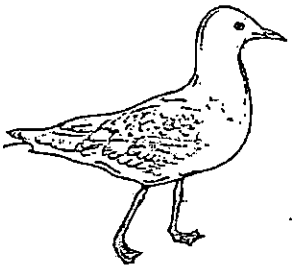
(3)



(4)



10. Study the two animals below carefully.



Seagull

Penguin

In what way(s) is/are the two animals similar?

A They both have a beak.

B Their female lays eggs.

C They have wings and are able to fly.

D They have feathers as their outer coverings.

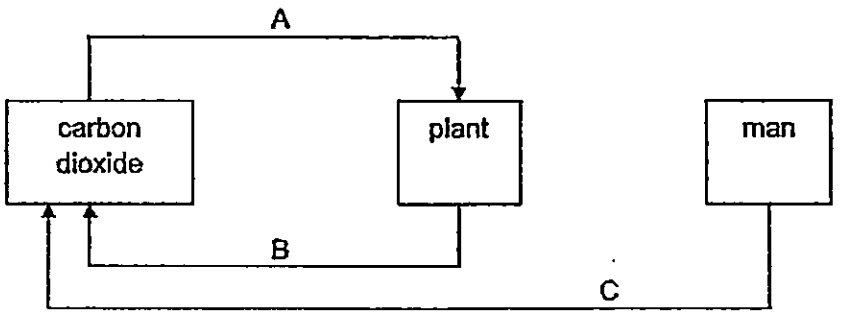
(1) A only

(2) A and C only

(3) B and C only

(4) A, B and D only

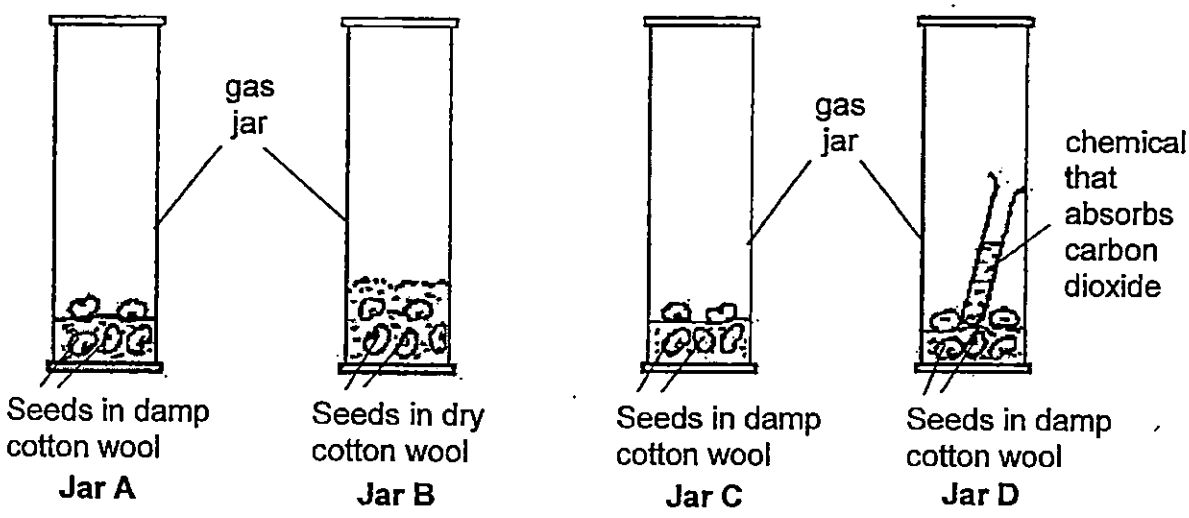
11. The diagram below shows three processes, A, B and C, taking place in living things. The arrows show the flow of carbon dioxide during the processes.



What processes do A, B and C represent?

	Process A	Process B	Process C
(1)	Photosynthesis	Respiration	Respiration
(2)	Respiration	Photosynthesis	Photosynthesis
(3)	Photosynthesis	Respiration	Photosynthesis
(4)	Respiration	Photosynthesis	Respiration

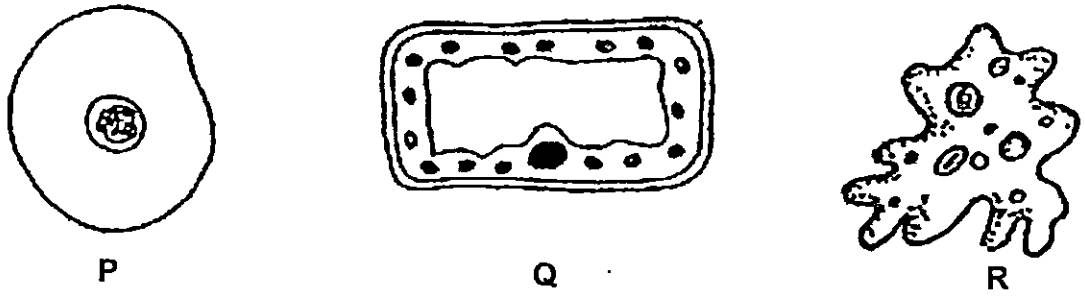
12. Each of the following jars contains five seeds. Jars B, C and D are placed near the window while Jar A is placed in the refrigerator.



In which jar(s) will the seeds be able to germinate?

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

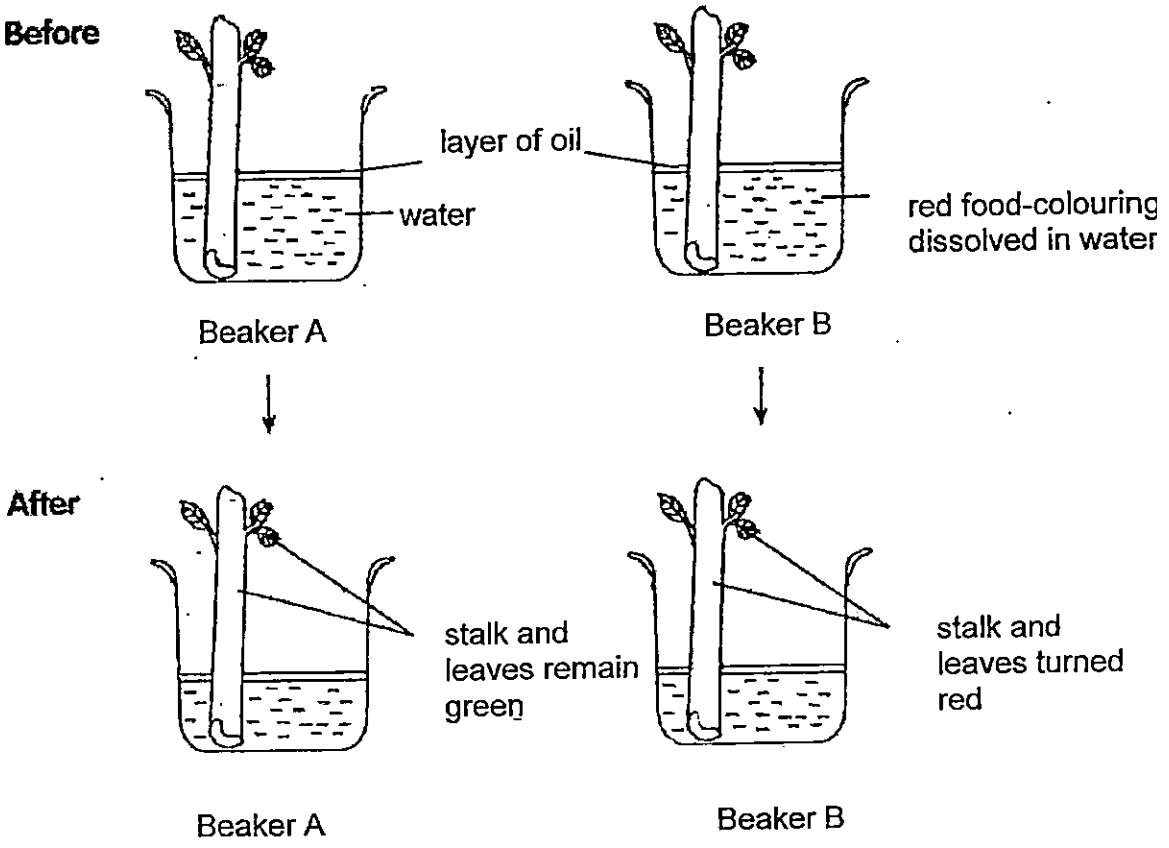
13. The diagrams below show 3 different cells, **P**, **Q** and **R**, each carrying out life processes



Which one of the following matches the type of cells to the process(es) that is / are carried out?

	Photosynthesis	Respiration
(1)	Q only	P and Q only
(2)	Q only	P, Q and R only
(3)	P and R only	P and Q only
(4)	Q and R only	P, Q and R only

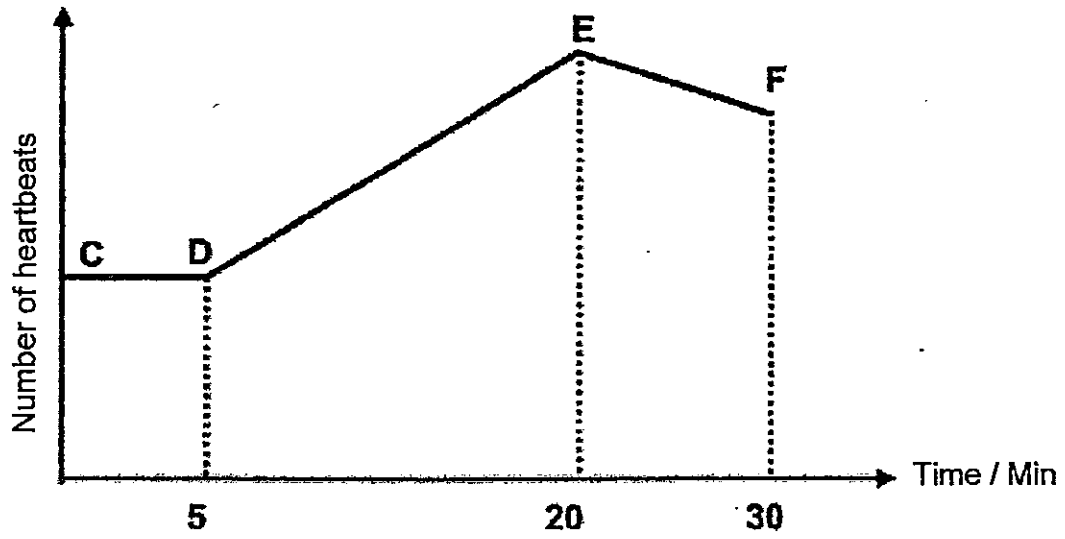
14. Melanie set up the experiment as shown below.



Which one of the following represents the correct observation and conclusion made by Melanie about the experiment?

	Observation	Conclusion
(1)	No change in the water level in both beakers after experiment	Without roots, the celery stalks cannot take in water.
(2)	Only water level in Beaker A dropped.	Celery stalks only transport water that is not coloured
(3)	Water level in both beakers dropped.	Celery leaves absorb water and dissolved substances.
(4)	Only celery stalks and leaves in Beaker B were coloured red.	Tubes in celery stalks transport water and dissolved substances.

15. Riley jogged for 30 minutes. The graph below shows his heartbeats over the duration.

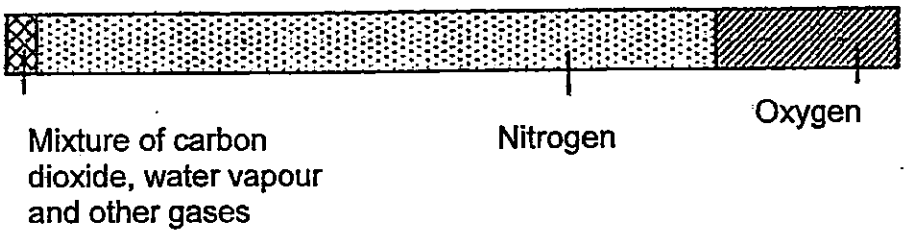


Which of the following statements correctly describe what was happening during the period indicated by the line DE on the graph?

A Riley's breathing rate is increasing.
B Riley's body is using more energy.
C Riley's body is producing less carbon dioxide.
D Riley's heart is pumping blood at a faster rate.

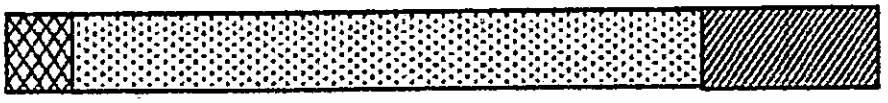
(1) A and B only.
(2) B and C only.
(3) A, B and D only.
(4) A, C and D only.

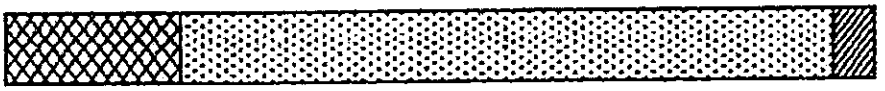
16. The normal proportion of gases present in the atmosphere is as shown below.



Some people were trapped in the lift. After about an hour, the people complained that they were feeling faint and breathless. Which one of the following best shows the composition of air in the lift?

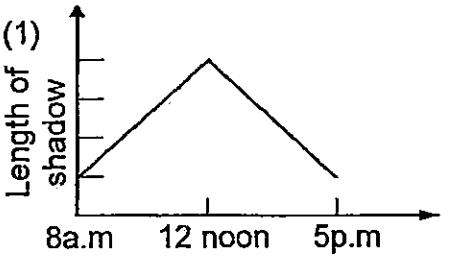
(1)

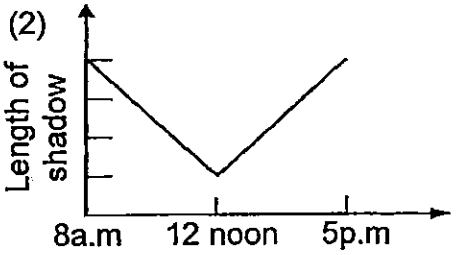

(2)


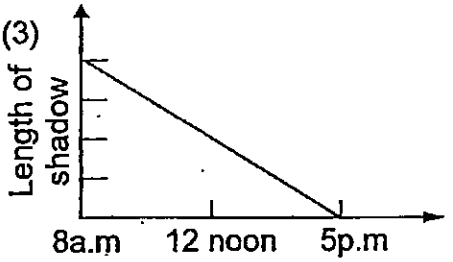
(3)


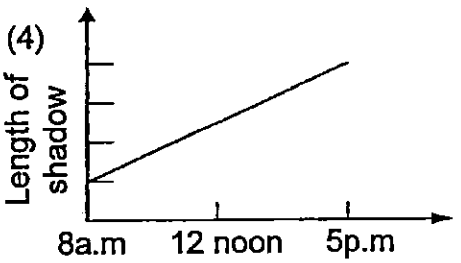
(4)


17. Which one of the following graphs correctly shows the changes in the length of a shadow cast by a tree during the day?

(1)


(2)


(3)


(4)


18. Study the diagram below carefully.

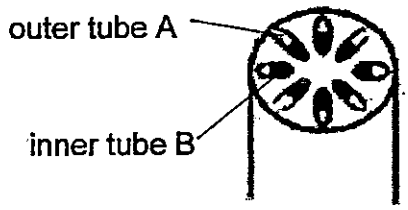


Diagram A

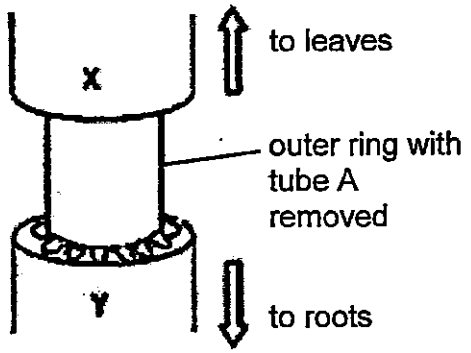
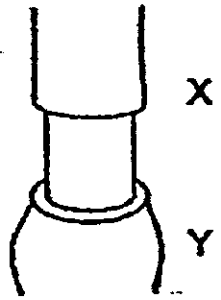


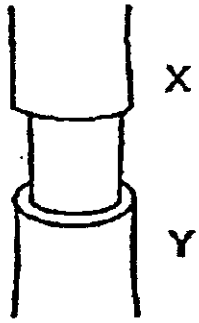
Diagram B

Diagram A shows the cross section of the stem with two different sets of tubes, A and B. If the outer ring of the stem is cut in such a way that only the outer tube A are removed as shown in Diagram B above. Which one of the following diagrams would show the appearance of the section after some time?

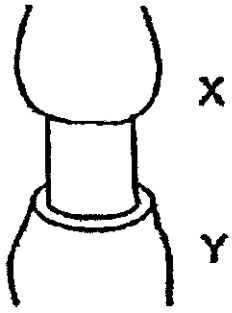
(1)



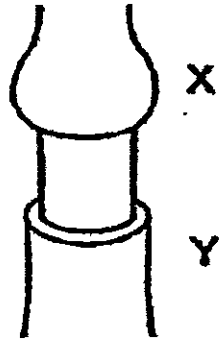
(2)



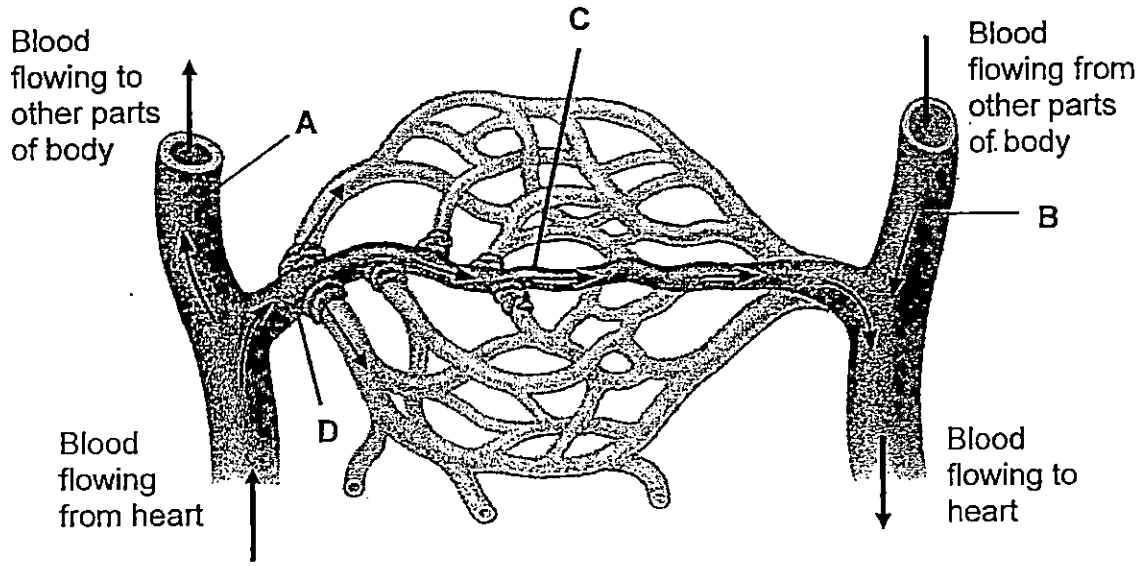
(3)



(4)

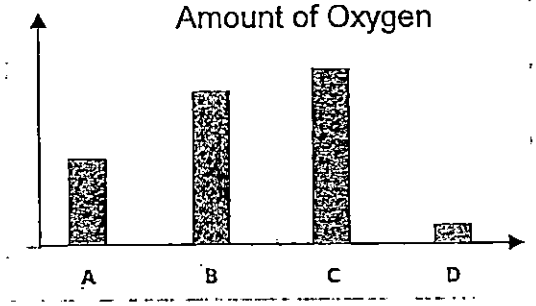


19. The diagram below shows the blood vessels in a human circulatory system.

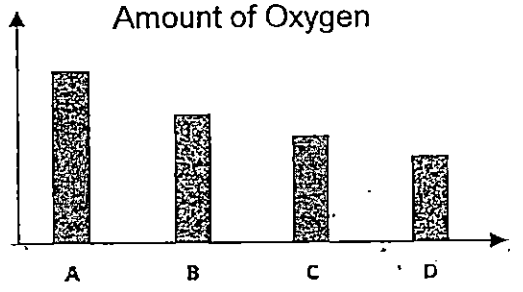


Blood samples, A, B, C and D, were taken from four parts of the blood vessels as shown in the diagram. Which one of the following bar graphs shows the amount of oxygen in the blood samples?

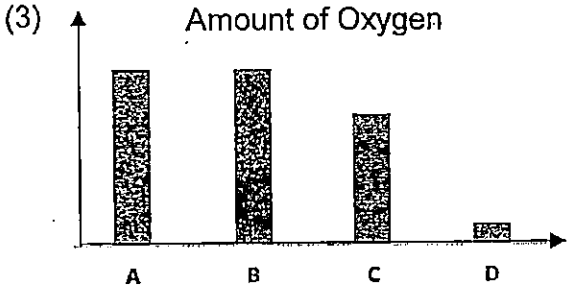
(1)



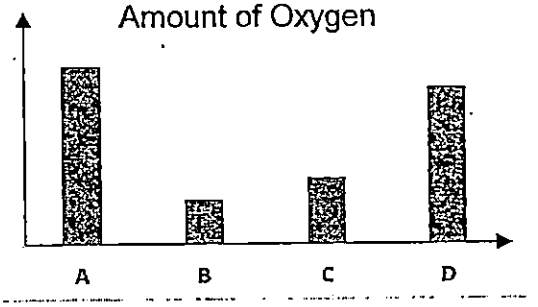
(2)



(3)



(4)



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

	Melting point(°C)	Boiling point (°C)
P	35	97
Q	4	36
R	56	190
S	10	65

Which of the above substances will be at liquid state at 33 °C?

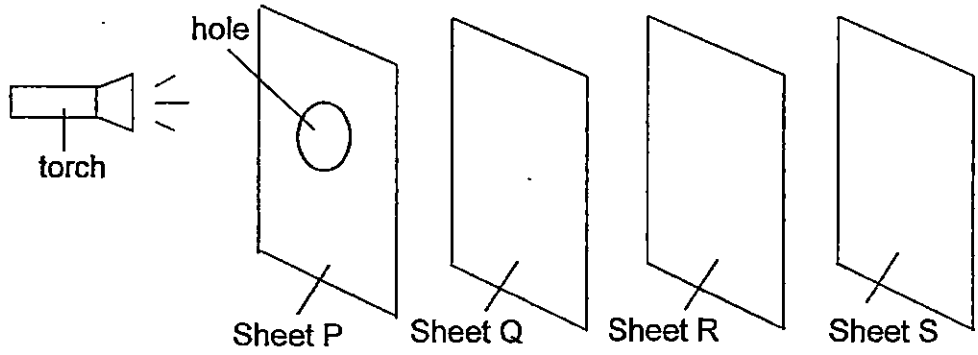
(1) P only

(2) P and R only

(3) Q and S only

(4) Q, R and S only

21. The experiment shown below was carried out in a dark room.

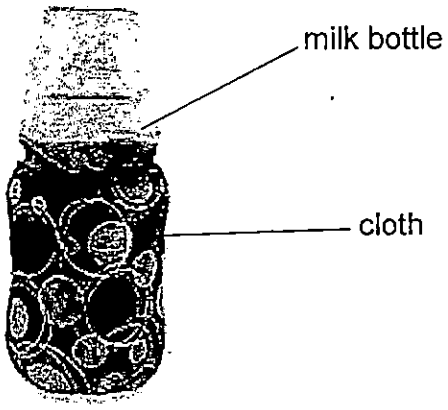


Sheets P, Q, R, and S, were placed in a straight line. When the torch was switched on, a bright circular patch of light was observed on **Sheet R** only.

Which one of the following correctly describes the properties of the materials that sheets, P, Q, R and S, are made of?

	Allows light to pass through	**Does not allow light to pass through**	**Not possible to tell**
(1)	P and Q	R and S	none
(2)	Q	R	P and Q
(3)	P	Q	R and S
(4)	Q	P and R	S

22. Jane poured some warm milk in a baby milk bottle. She then wrapped the bottle with a layer of cloth as shown below. Half an hour later, the cloth was removed and the milk was still warm.



Which of the following are possible reasons why the milk was still warm after half an hour?

A The cloth is a poor conductor of heat.

B The milk gained heat slowly from the surrounding.

C Heat from the milk cannot pass through the plastic milk bottle.

D The cloth trapped a layer of air which reduced the heat loss from the milk to the surrounding.

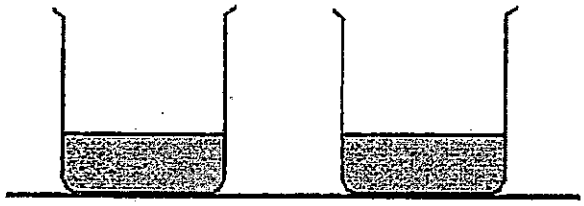
(1) A and D only

(2) A and B only

(3) B, C, and D only

(4) A, B, C and D

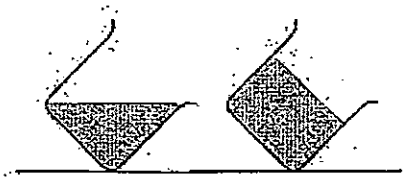
23. Ron filled two beakers, A and B, with 250cm^3 of water each. He left Beaker A at room temperature and placed Beaker B in a freezer. After 6 hours, both beakers were tilted sideways.



Beaker A (At room temperature) Beaker B (In a freezer)

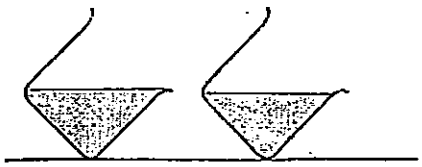
Which one of the following shows what Ron would observe when the beakers were tilted?

(1)



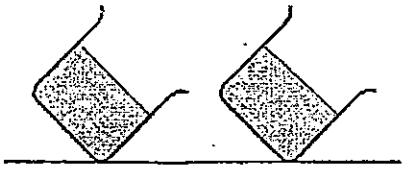
Beaker A Beaker B

(2)



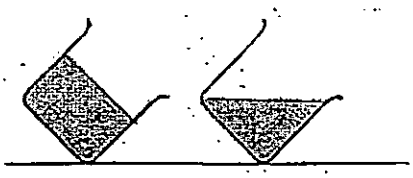
Beaker A Beaker B

(3)



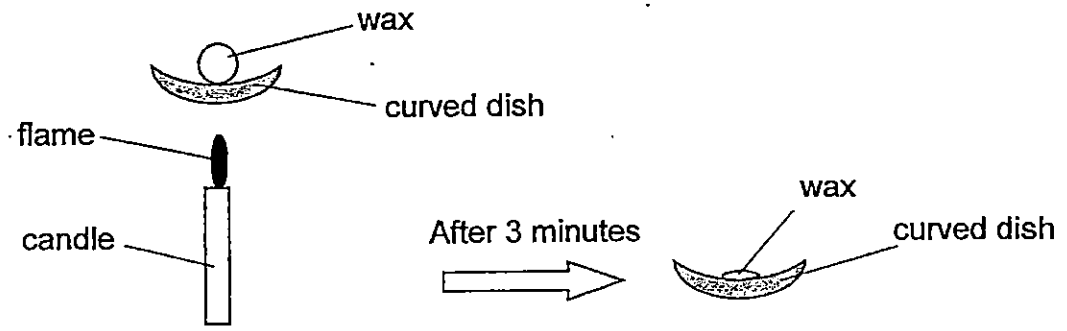
Beaker A Beaker B

(4)

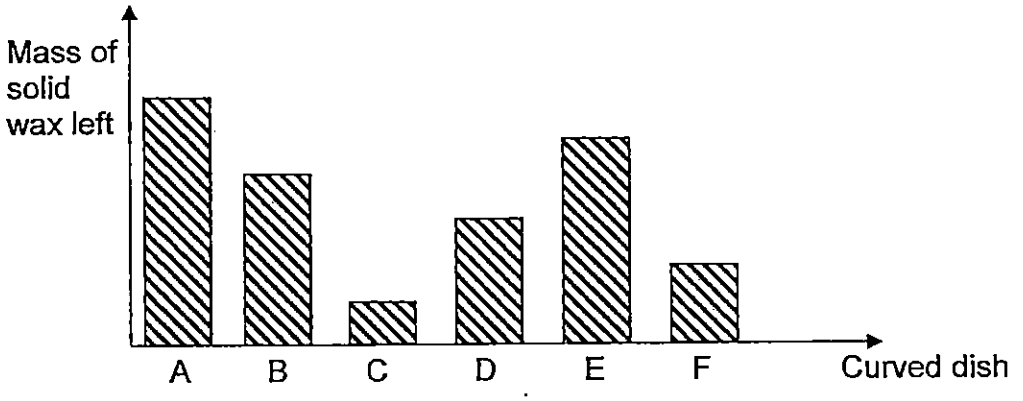


Beaker A Beaker B

24. Banu took six pieces of wax of the same mass and heated each of them in curved dishes, A, B, C, D, E and F. These six dishes are made of different materials.



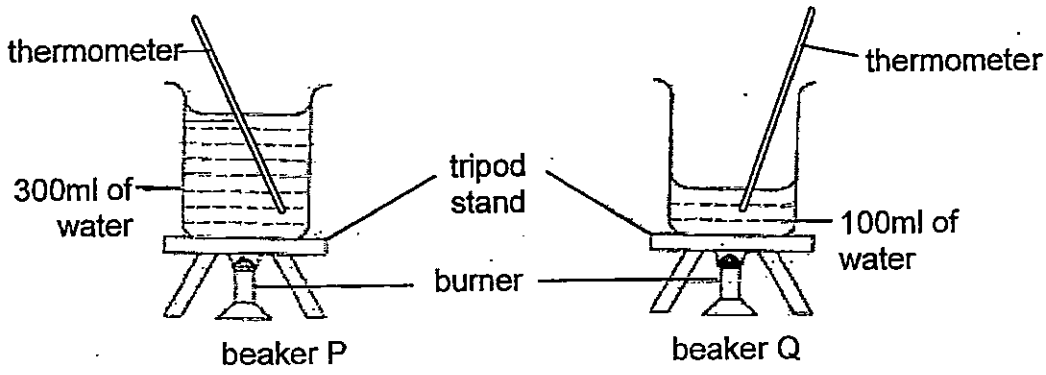
Banu heated each piece of wax for 3 minutes. Then she quickly separated the solid wax from the liquid wax and measured the mass of solid wax left. The results were plotted in a graph as shown below.



Based on the graph above, which one of the following statements is true?

(1) Materials C and F are most likely metals.
(2) Material D is a better conductor of heat than material E.
(3) Material F is a poorer conductor of heat than material B.
(4) Material C is the poorest conductor of heat among all the materials.

25. Jane filled 2 beakers, P and Q, with 300 ml and 100 ml of water respectively. She recorded the time taken for the water in the beakers to boil and continued heating the water even after they had boiled.



Which of the following statement(s) best describe(s) what she would observe?

A The water in beaker Q took a shorter time to boil.

B The temperature of the water kept on rising throughout the experiment.

C The water in beaker Q is hotter than the water in beaker P at the end of the experiment.

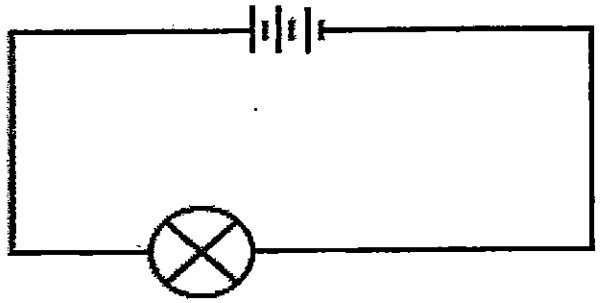
(1) A only

(2) B and C only

(3) A and B only

(4) A, B and C

26. Phyllis set up an electric circuit shown below. The bulb remained unlit.



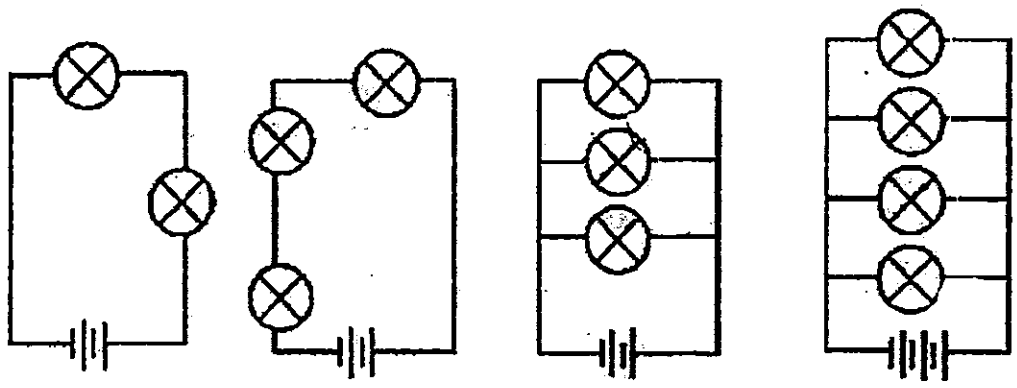
Phyllis's friends tried to explain why the bulb remain unlit.

Alief : Bulb is fused.
Brian : Batteries are flat.
Colette : Wire is made of copper.
Deanne : Batteries are connected wrongly.

Which of Phyllis's friends gave the possible explanations?

(1) Alief and Brian only
(2) Alief and Deanne only
(3) Brian, Colette and Deanne only
(4) Alief, Brian and Colette only

27. Study the circuits below. The circuits have similar bulbs, wires and batteries.



Circuit A **Circuit B** **Circuit C** **Circuit D**

Arrange the circuits from the one with the brightest bulbs to the least brightest bulbs.

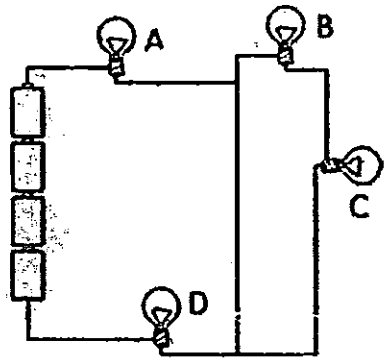
(1) C, A, B, D

(2) A, C, D, B

(3) D, C, A, B

(4) B, C, A, D

28. The electric circuit below is set up using similar bulbs, wires and batteries.



If Bulb B fuses,which bulbs will remain lit?

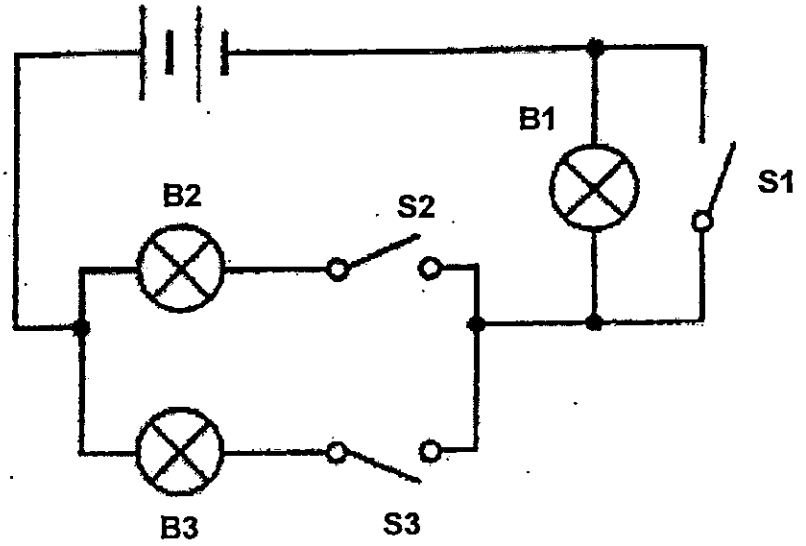
(1) A and C only

(2) A and D only

(3) A, C and D only

(4) None of the bulbs

29. Study the circuit diagram shown below carefully.



Which one of the following statements about the circuit is correct?

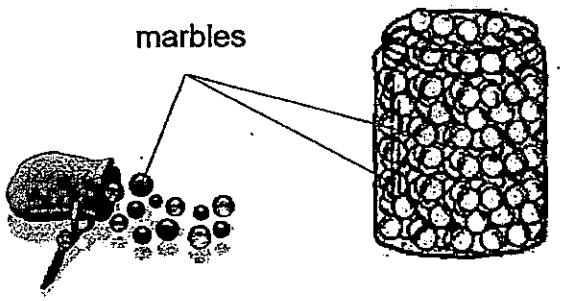
(1) B2 and B3 will light up when only S2 is closed.

(2) Only 1 bulb will light up if any 1 switch is closed.

(3) B1, B2 and B3 will light up when only S1 is closed.

(4) Only 2 bulbs will light up when either S2 or S3 is closed.

30. Susan tried to put more marbles into a jar filled with marbles. No matter how hard she shook the jar, she simply could not fit in any more marbles into the jar.



Which of the properties of matter below explain why she was not able to add more marbles into the jar?

(1) The marbles have mass.

(2) The jar cannot be compressed.

(3) The marbles are of different size.

(4) The marbles take up space and cannot be compressed.

END OF BOOKLET A