RED SWASTIKA SCHOOL

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2014 CONTINUAL ASSESSMENT 2
SCIENCE
PRIMARY 5

Name : _____ ( )

Class : Primary 5/ _____

Date : 25 August 2014

BOOKLET A

Total time for Booklets A & B: 1h 45 min

Booklet A: 30 questions (60 marks)

Note:

1. Do not open the booklet until you are told to do so.
2. Read carefully the instructions given at the beginning of each part of the booklet.
3. Do not waste time. If the question is too difficult for you, go on to the next question.
4. Check your answers thoroughly and make sure you attempt every question.
5. In this booklet, you should have the following:
   a. Page 1 to Page 24
   b. Questions 1 to 30

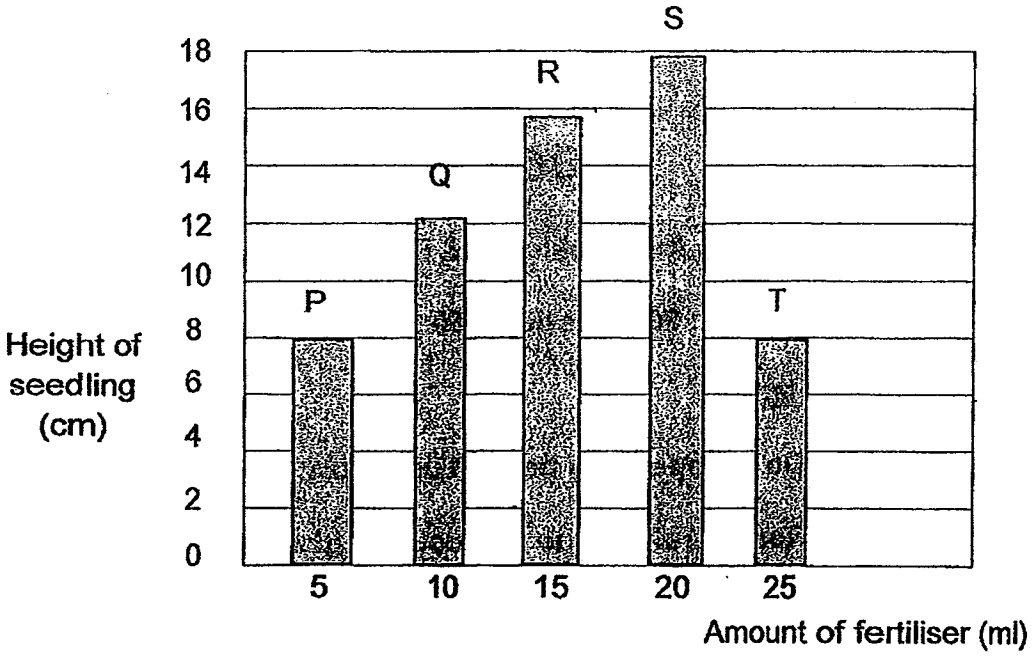
Section A

For Questions 1 to 30, choose the most suitable answer and shade its number in the OAS provided.

1 Some animals, such as insects, moult several times in their life cycle. Which one of the following statements best explains why insects moult?

(1) The body covering cannot be stretched and prevent the insect from growing.
(2) The body covering is not flexible and prevent the insect from moving properly.
(3) The body covering is heavy and prevent the insect from moving about easily.
(4) The body covering is soft and cannot provide the insect with protection.

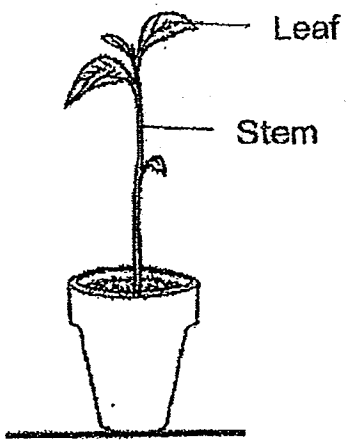
2 Su Ann added different amounts of liquid fertiliser to five seeds, P, Q, R, S and T. The seeds belong to the same type of plant. She observed their growth over a period of two weeks. She then recorded the height of the five seedlings and drew the graph as shown.



Which one of the following statements about the growth of the seedlings is correct?

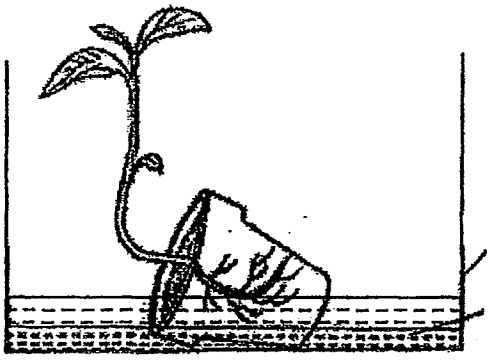
(1) The fertiliser helped the seedlings to grow equally well during the two weeks.
(2) The seedlings are unable to grow well when too much fertiliser is given.
(3) The most suitable amount of fertiliser that a seedling should receive is 15 ml.
(4) The more the fertiliser given to the seedlings, the faster the seedlings grow.

3 Andy placed a potted plant out in the open as shown below.

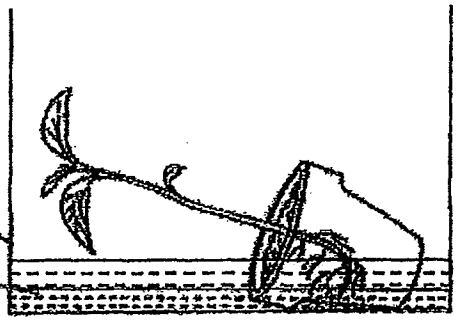


A strong gust of wind knocked the potted plant over and it fell into an open drain. Which one of the following shows how the plant would grow if it was left in the drain for several weeks?

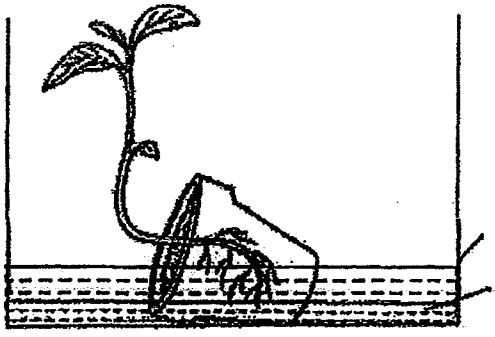
(1)



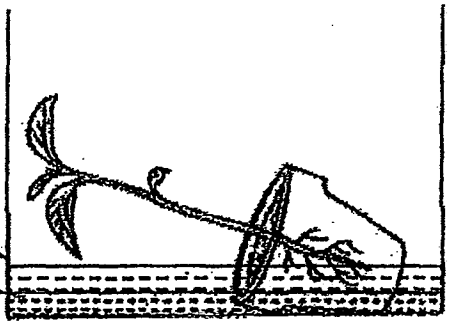
(2)



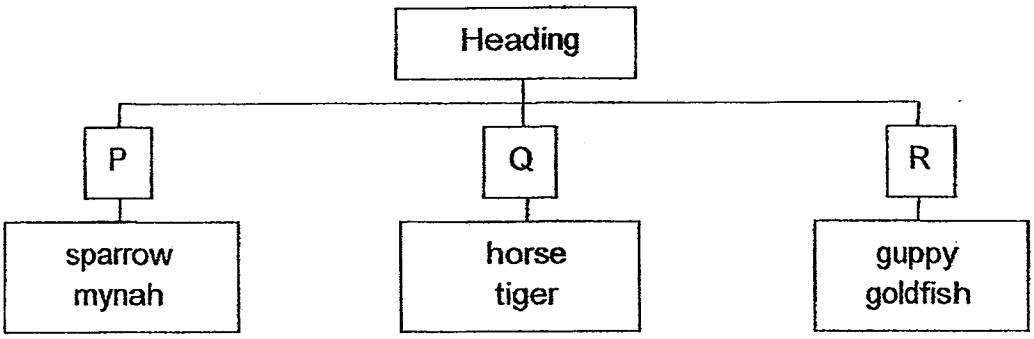
(3)



(4)



4 Study the classification table below.

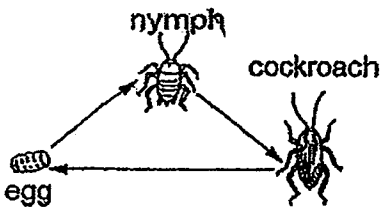


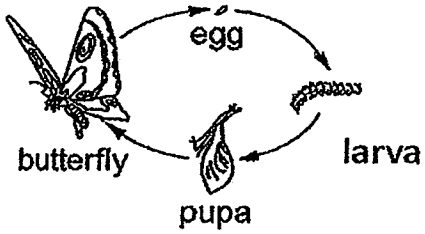
Which of the following is/are a possible heading used to classify the living things?

A: Number of legs
B: Type of food eaten
C: Type of body covering
D: Method of reproduction

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

5 The diagrams below show the life cycles of the cockroach and butterfly.

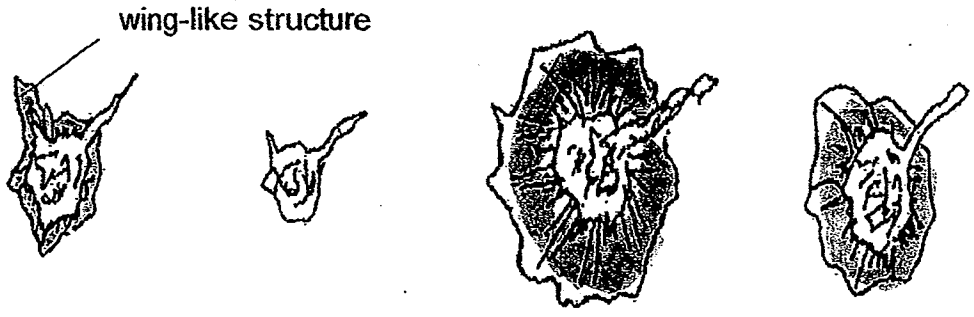




Based on the life cycles, which one of the following statements is true?

(1) Both organisms feed at the pupa and nymph stage.
(2) Both organisms look like their parent at the larva and nymph stage.
(3) Both organisms have a 4-stage life cycle.
(4) The young of both organisms do not have wings.

6 Aminah dropped four similar angsana fruits with wing-like structures of different size from the same height in the Science room. The pictures below show the four fruits.

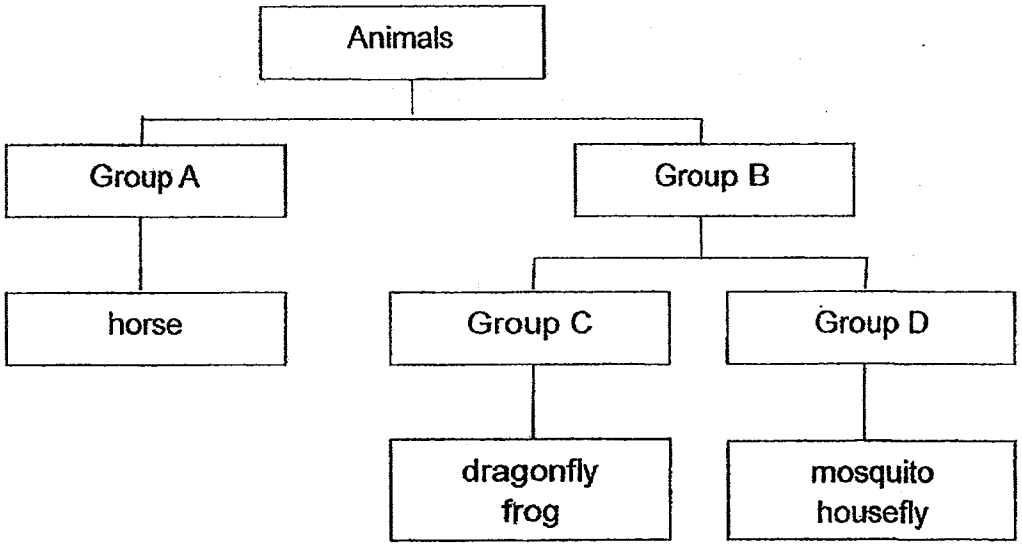


A B C D

Which of the following is most likely the average time (in seconds) taken by each fruit to reach the ground?

	A	B	C	D
(1)	2 s	4 s	7 s	9 s
(2)	7 s	9 s	4 s	2 s
(3)	4 s	2 s	9 s	7 s
(4)	9 s	7 s	2 s	4 s

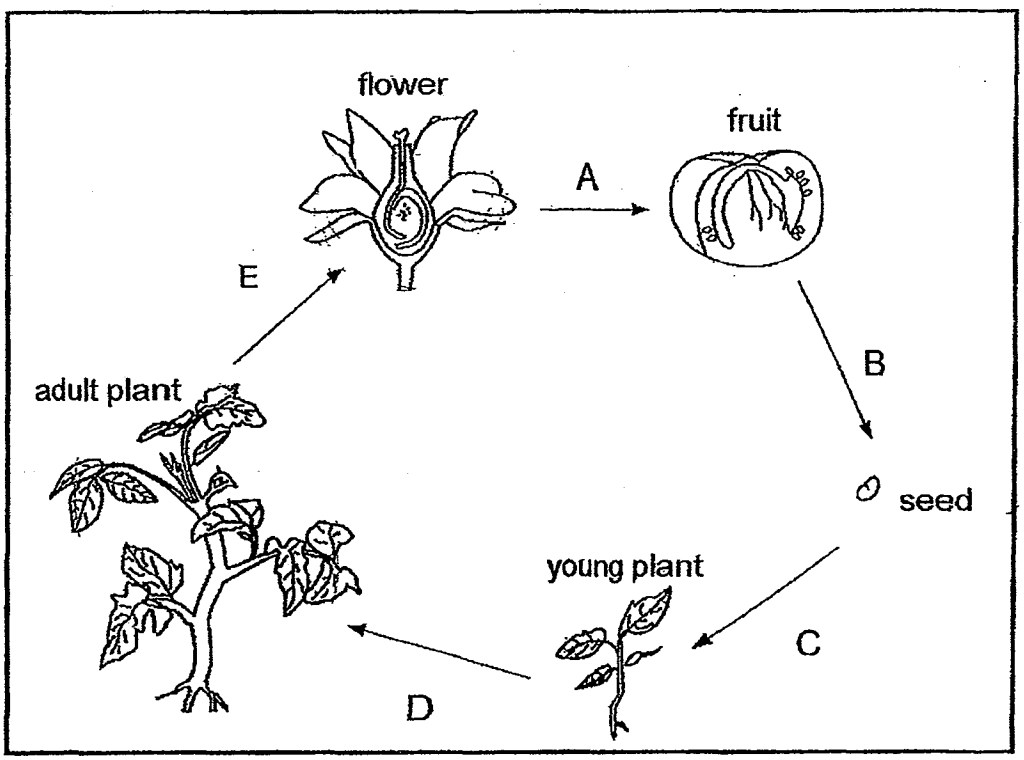
7 Study the classification chart below carefully.



How are the animals classified?

	Group A	Group B	Group C	Group D
(1)	The young does not resemble the adult.	The young resembles the adult.	Lay eggs in water	Lay eggs on land
(2)	The young resembles the adult.	The young does not resemble the adult	3-stage life cycle	4-stage life cycle
(3)	3-stage life cycle	4-stage life cycle	Lay eggs in water	Lay eggs on land
(4)	3-stage life cycle	4-stage life cycle	The young resembles the adult.	The young does not resemble the adult.

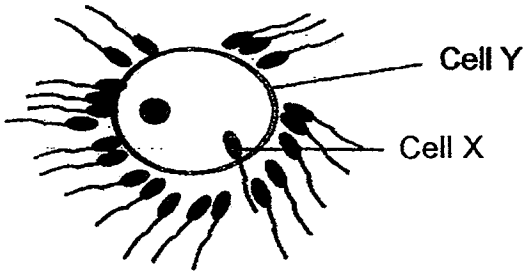
8 Study the diagram below carefully.

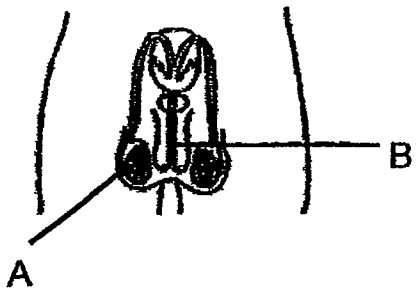


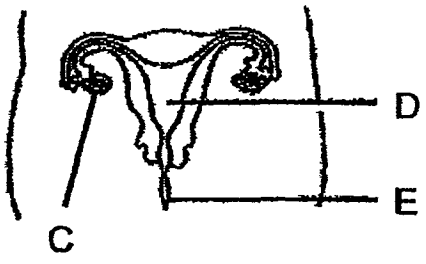
Where do pollination, fertilisation and germination take place?

	Pollination	Fertilisation	Germination
(1)	E	A	C
(2)	A	B	C
(3)	E	D	B
(4)	A	E	B

9 The diagram below shows the human reproductive cells and parts of the human reproductive systems.



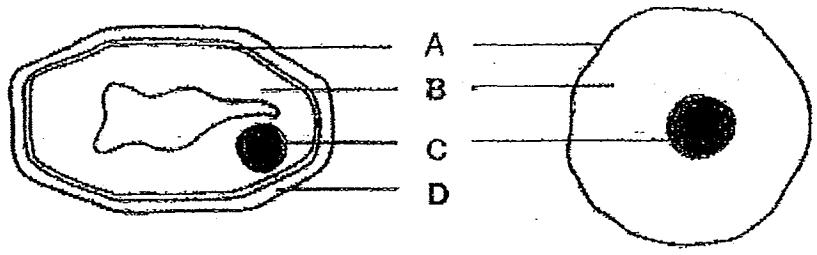




Which of the following correctly matches the reproductive cells to the reproductive parts where the cells are found?

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

10 The diagram below shows a plant cell and an animal cell.

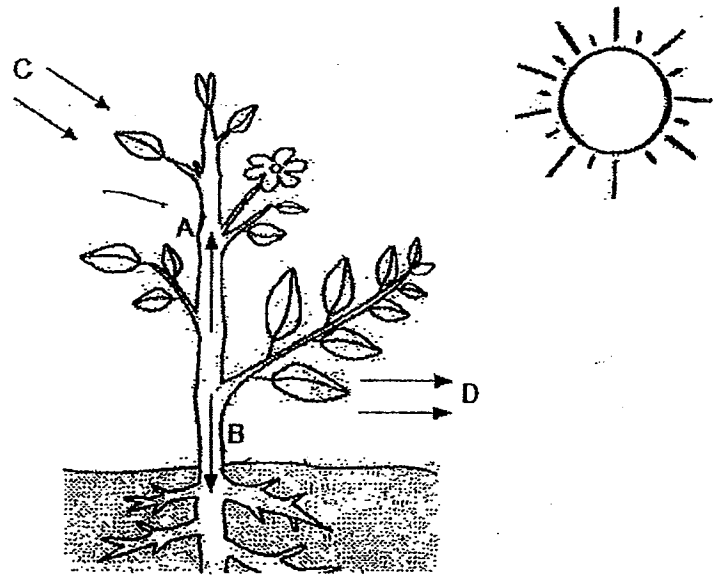


Which of the following functions are correctly matched with the cell parts?

Part	Function
A	Gives the cell a definite shape.
B	Allows substances to move within the cell.
C	Contains hereditary information.
D	Supports and protects the cell.

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

11 The diagram shows a plant. Arrows A and B indicate movement of substances inside the tubes of the plant. Arrows C and D indicate the movement of substances taken in and given out by the leaves of the plant respectively.

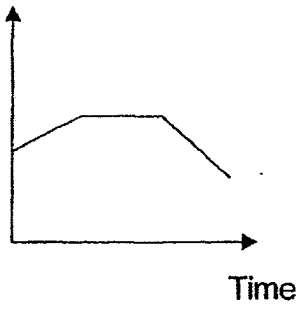


Which of the following substances do A, B, C and D represent correctly during photosynthesis?

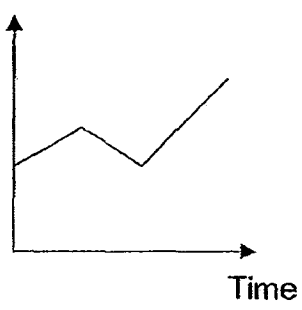
	A	B	C	D
(1)	water	food	oxygen	carbon dioxide
(2)	water	food	carbon dioxide	oxygen
(3)	food	water	oxygen	carbon dioxide
(4)	food	water	carbon dioxide	oxygen

12 A primary 5 student carried out three activities in the following sequence. First, he did a few star jumps .Then, he rested on a bench for some time. Lastly, he played basketball with his teammates. Which one of the following graphs most likely shows the student's heart rate during the three activities?

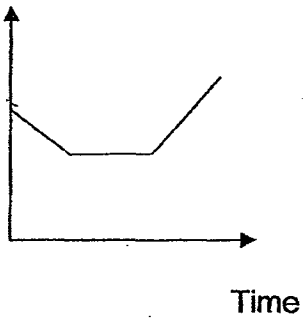
(1)



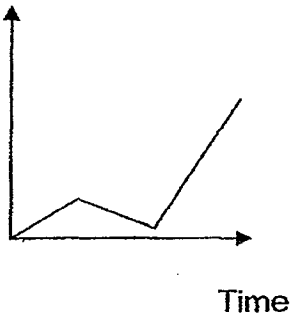
(2)



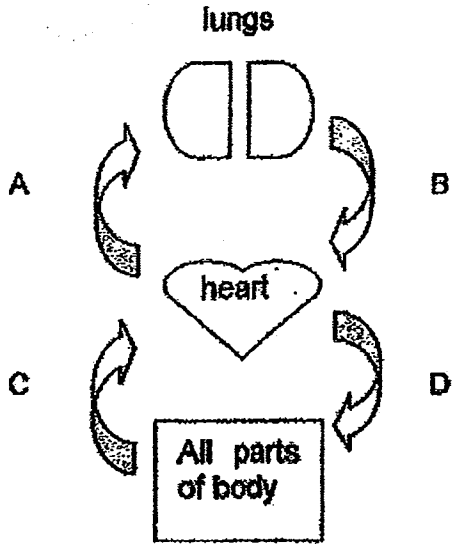
(3)



(4)



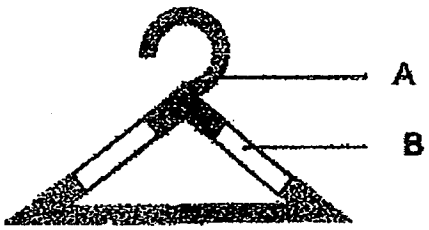
13 The diagram below shows the circulation of blood in the human body. Arrows A, B, C and D show the major blood vessels carrying blood rich in either oxygen or carbon dioxide in the human body.



Which one of the following correctly shows the blood content in these blood vessels?

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

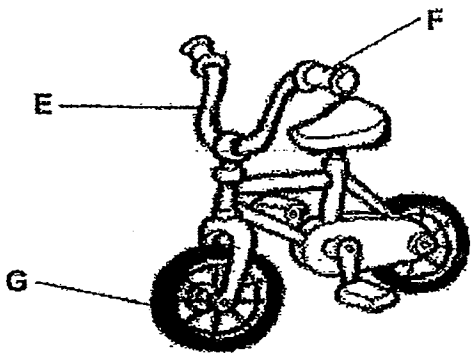
14 Taylor wants her clothes hanger to be light and yet able to hang a piece of heavy clothing without the clothing slipping. Her clothes hanger is made of two materials A and B. Material A is light and material B is rough.



Which of the following are most suitable materials for A and B?

	A	B
(1)	iron	sandpaper
(2)	plastic	sandpaper
(3)	iron	glass
(4)	rubber	glass

15 The diagram below shows a bicycle with different parts labelled E, F and G.



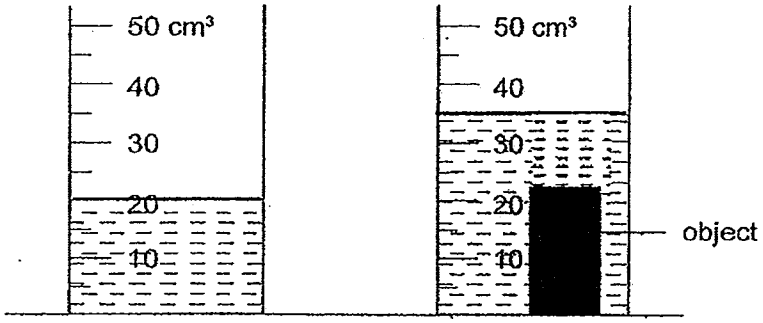
The table below shows three different materials, U, V and W, and their properties.

Material	Properties
U	strong and rust-proof
V	flexible and elastic
W	rough and lightweight

Which one of the following shows the best material to be used for each part of the bicycle?

	Part E	Part F	Part G
(1)	V	U	W
(2)	W	V	U
(3)	V	W	U
(4)	U	W	V

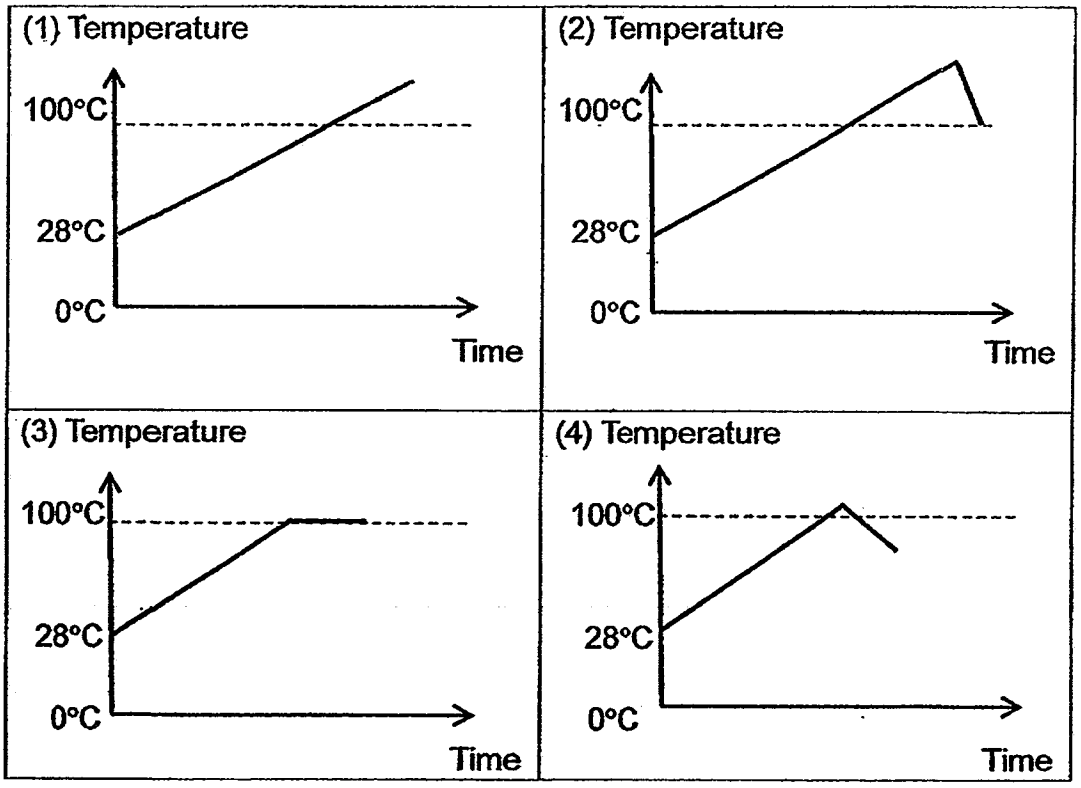
16 Crystal filled a cylinder with 20 cm^3 of water. Then, she placed an object into the cylinder as shown below.



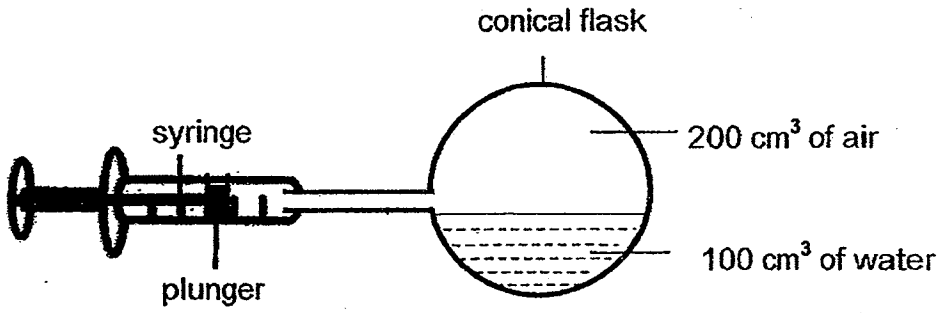
What is the volume of the object?

(1) 15 cm^3
(2) 20 cm^3
(3) 25 cm^3
(4) 35 cm^3

17 Which one of the following graphs shows the change in temperature of water when water at room temperature is heated to boiling point and allowed to boil for some time?

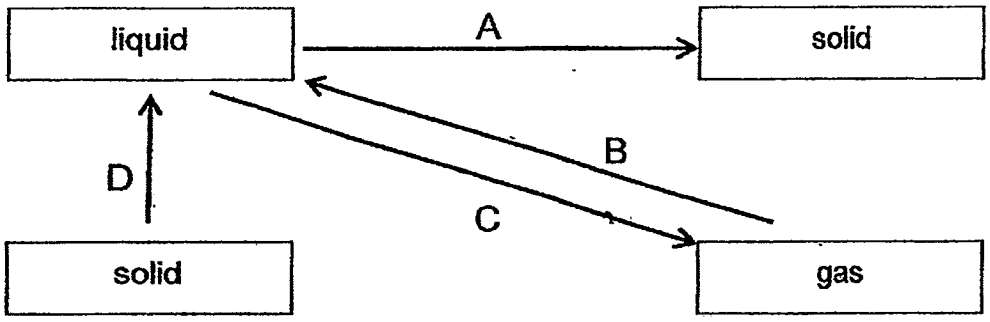


18 The diagram below shows a conical flask containing 200 cm^3 of air and 100 cm^3 of water. It was fitted to a syringe. When the plunger is pushed in, 50 cm^3 of air is pumped into the conical flask. What will be the volume of air in the conical flask now?



(1) 200 cm^3
(2) 250 cm^3
(3) 300 cm^3
(4) 350 cm^3

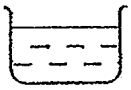
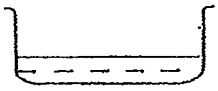
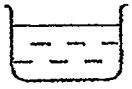
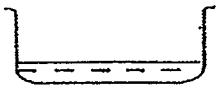
19 Study the diagram below. The arrows represent the different processes that water goes through when water changes in state.



Which of the following shows the correct processes of A, B, C and D that water goes through?

	A	B	C	D
(1)	freezing	condensation	evaporation	melting
(2)	melting	evaporation	freezing	condensation
(3)	freezing	evaporation	condensation	melting
(4)	condensation	melting	evaporation	freezing

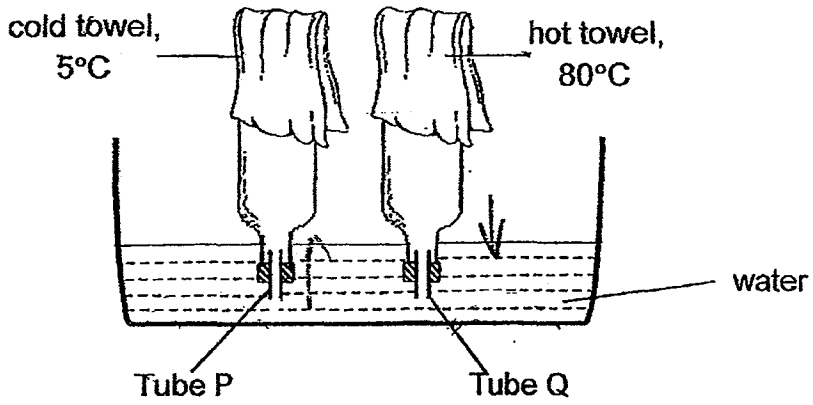
20 Four beakers were filled with the same amount of water and they were left at different locations for the same period of time.

Beaker A  Temperature of water: 30°C No wind	Beaker B  Temperature of water: 30°C Presence of wind
Beaker C  Temperature of water: 30°C Presence of wind	Beaker D  Temperature of water: 40°C Presence of wind

Arrange the beakers according to the amount of water left in them at the end of the experiment.

	Most amount of water left ⟶ **Least amount of water left**			
(1)	A	C	B	D
(2)	D	B	C	A
(3)	A	D	C	B
(4)	D	A	B	C

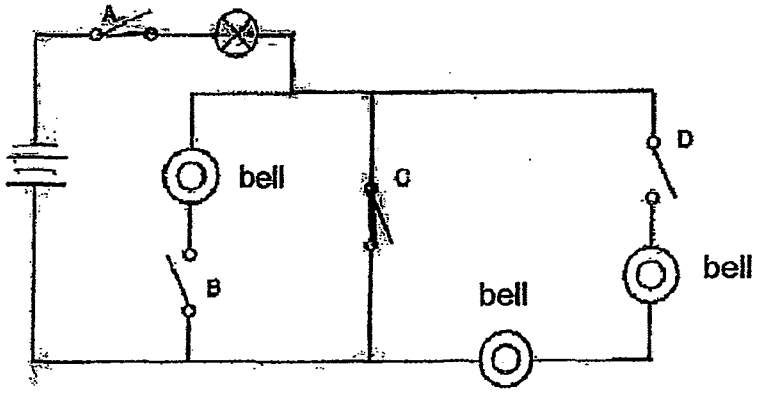
21 Mabel used two glass bottles to set up the experiment as shown below. She wrapped two empty glass bottles with identical towels of different temperature.



What would Mabel observe one minute after she had placed the cold and hot towels on the bottles?

	Tube P	Tube Q
(1)	water enters tube P	water enters tube Q
(2)	bubbles escape from tube P	water enters tube Q
(3)	bubbles escape from tube P	bubbles escape from tube Q
(4)	water enters tube P	bubbles escape from tube Q

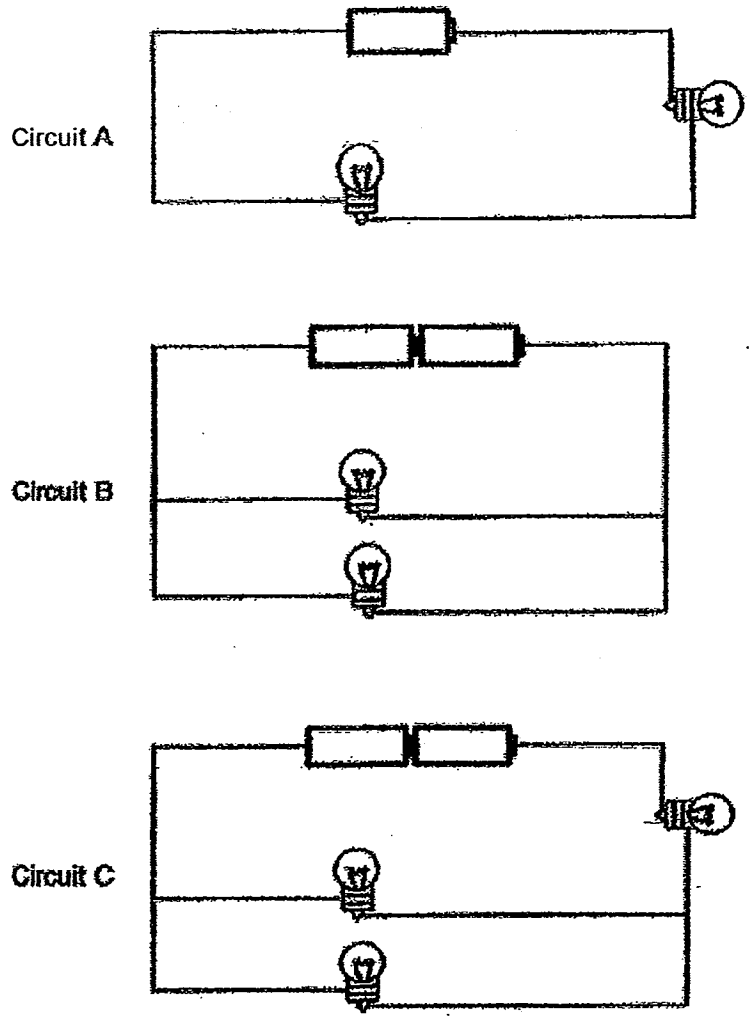
22 Study the circuit diagram below.



Which of the following switches, A, B, C or D, must be closed in order to light up only the bulb without causing any bell to ring?

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

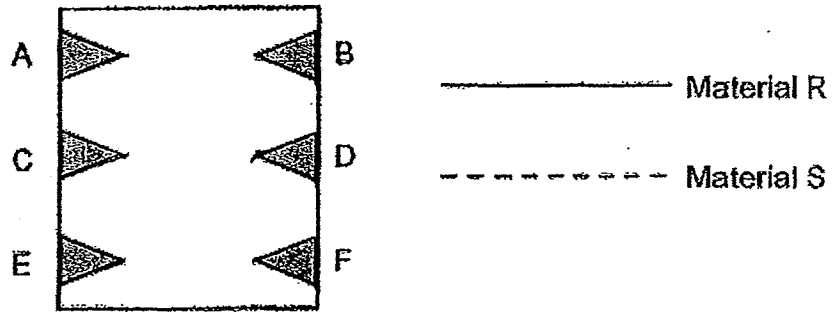
23 The diagram below shows three electrical circuits, A, B and C.



Which of the following shows the correct order of the electric circuits when the brightness of the bulbs is arranged from the dimmest to the brightest?

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

24 The diagram below shows a circuit card with 6 paper clips, A to F. The paper clips were connected with either Material R or Material S. Material R is an electrical conductor while Material S is an electrical insulator.

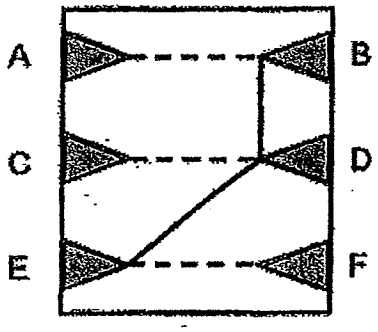


A circuit tester was used to connect the paper clips on the circuit card and the following observations were made.

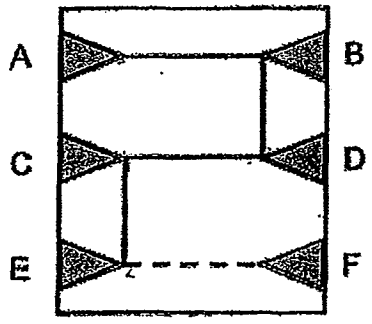
Paper clips connected	Does the bulb light up?
A and B	Yes
B and C	Yes
C and D	Yes
D and E	No
E and F	Yes

Which one of the following shows correctly how the paper clips on the circuit card were connected?

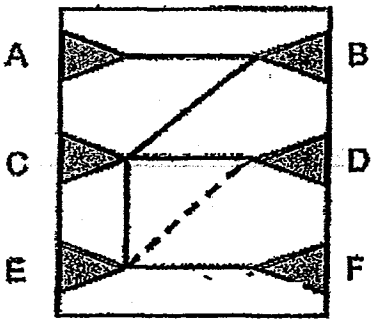
(1)



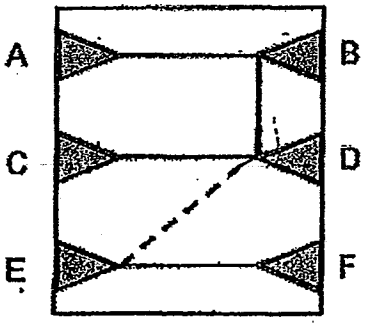
(2)



(3)

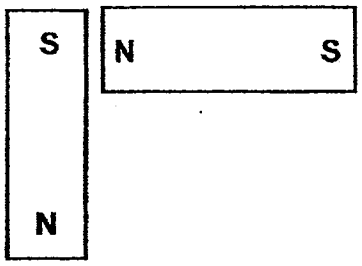


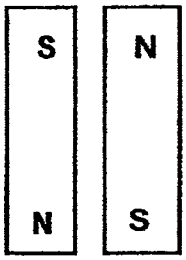
(4)

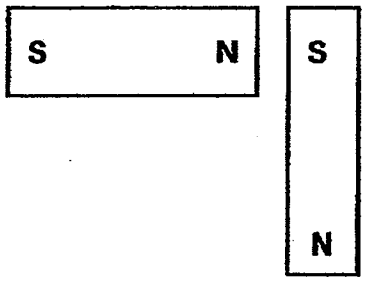


25 In which of the following will the two magnets push each other away?

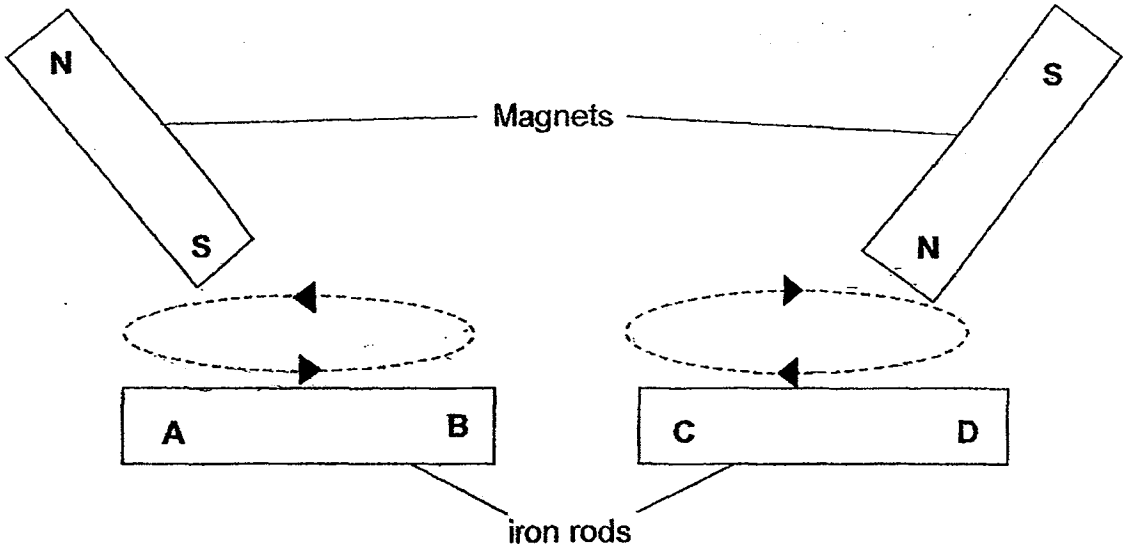
(1) 

(2) 

(3) 

(4) 

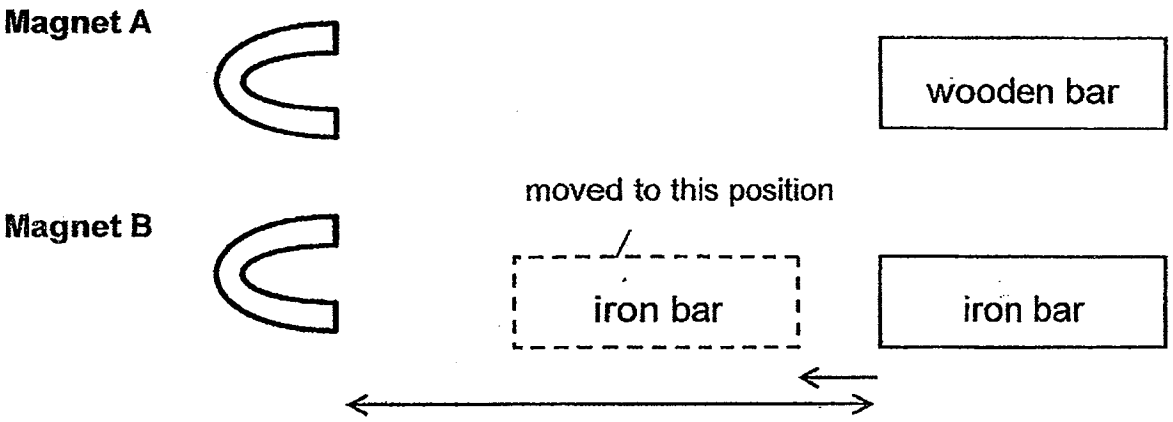
26 The diagram below shows how two iron rods are made into magnets using the stroke method.



Which of the following shows the poles of A, B, C and D correctly?

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

27 Jason placed two identical magnets, A and B, an equal distance away from a wooden bar and an iron bar as shown below. He observed that the iron bar moved towards the magnet while the wooden bar remained at its original position.

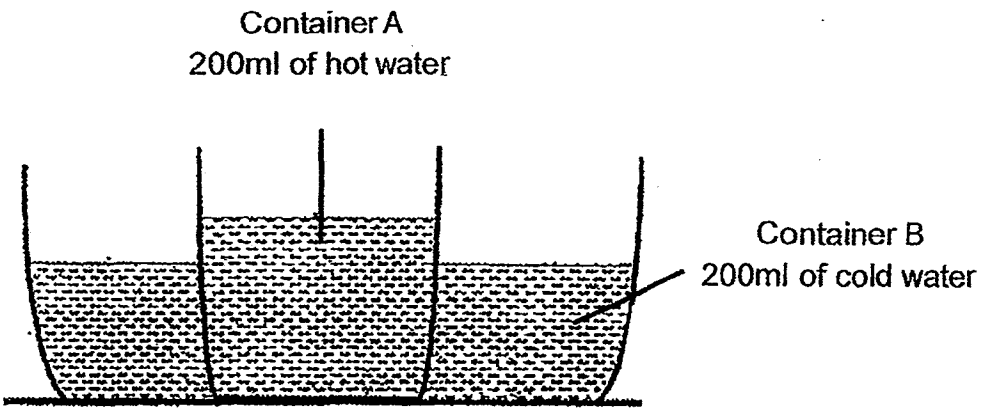


What can Jason conclude from the experiment?

A: Magnet A has stronger magnetism than magnet B.
B: Magnetic force can pass through non-magnetic materials.
C: Magnetic force can act at a distance.
D: Magnetic force can only attract magnetic materials.

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

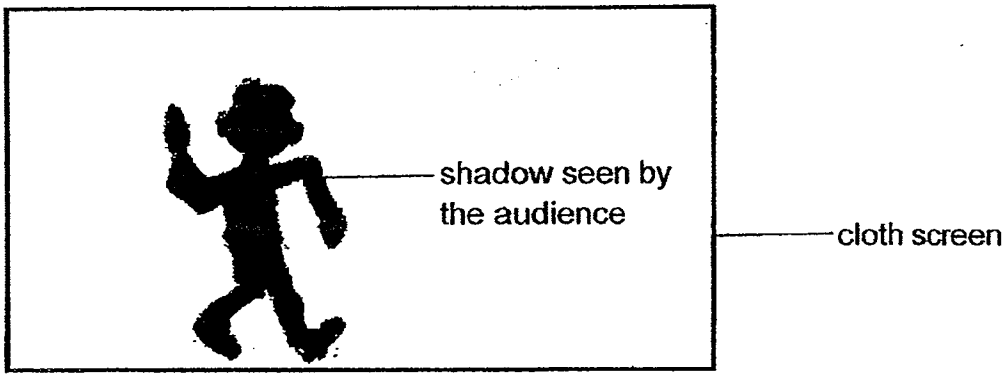
28 Peiming filled Container A with 200 ml of hot water at 95°C and then placed it into a larger Container B. Container B contained 200 ml of cold water at 10°C. He left the set-up on a table in the Science room for 10 minutes.



What will happen to the amount of heat in the water in Container A and B after 10 minutes?

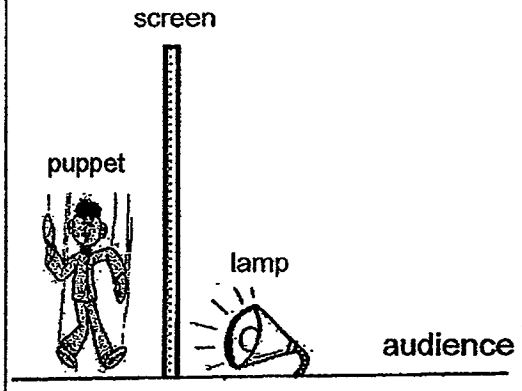
	Container A	**Container B**
(1)	heat gain	heat loss
(2)	heat loss	heat gain
(3)	remained the same	heat loss
(4)	heat gain	remained the same

29 The audience watched a shadow puppet performance where dark shadows were cast on a cloth screen as shown below.

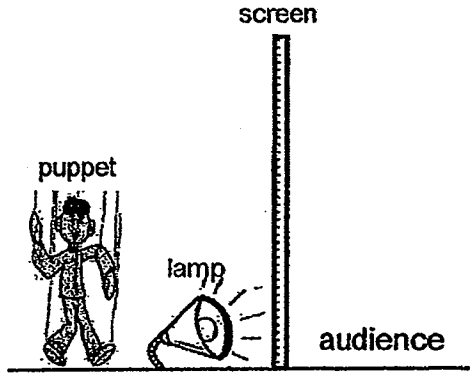


Which of the following shows the correct arrangement of the puppet, screen and light source to create the shadow puppet show?

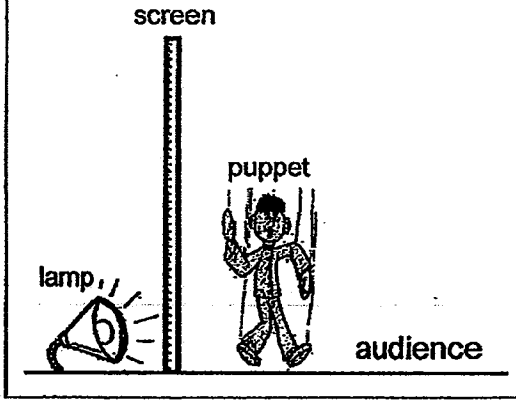
(1)



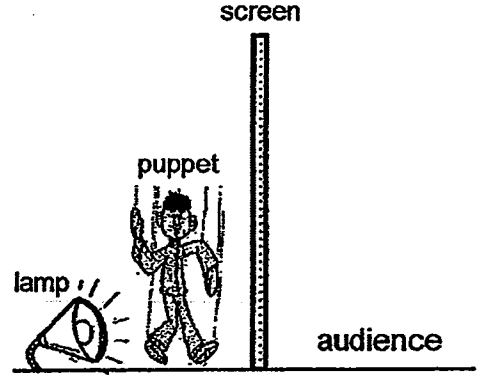
(2)



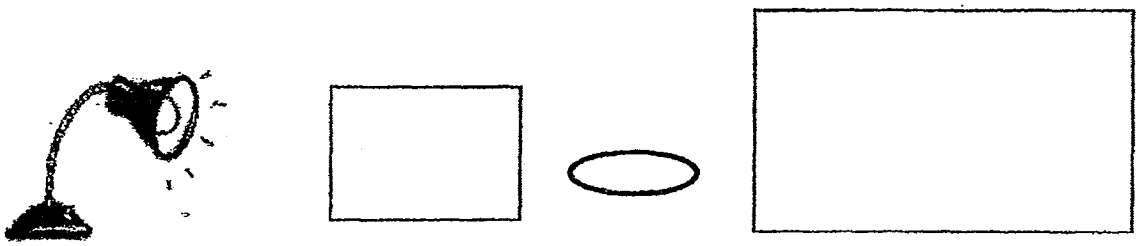
(3)



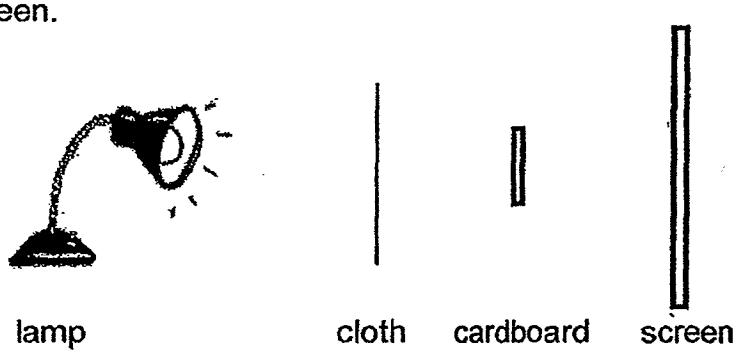
(4)



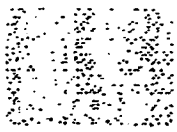
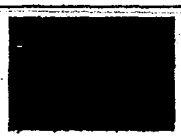
30 Mrs Lim needs a set of curtains for her bedroom window that prevents all sunlight from entering the room. She selected 4 types of cloth and compared the amount of light passing through it. The diagram shows the materials she used for her experiment.



She arranged the materials in the following order as shown. The diagram shows the side view of the materials. She then observed the shadows that formed on the screen.



Based on the shadow observed, which cloth should Mrs Lim choose to make her curtains?

	Cloth	Shadow observed on the screen
(1)	A	
(2)	B	
(3)	C	
(4)	D	

END OF SECTION A

RED SWASTIKA SCHOOL

2014 CONTINUAL ASSESSMENT 2
SCIENCE
PRIMARY 5

Name : _____ ( )

Class : Primary 5/ _____

Date : 25 August 2014

BOOKLET B

14 Questions
40 Marks

In this booklet, you should have the following:
a. Page 25 to Page 39
b. Questions 31 to 44

MARKS

	OBTAINED	POSSIBLE
BOOKLET A		60
BOOKLET B		40
TOTAL		100

Parent's Signature : _____

SECTION B
Answer all the questions in the spaces provided.

31 Evan fed four similar animals, E, F, G and H, with different amount of food each day. He kept the other conditions of the experiment the same. The mass of each of the animals were taken every week and the results were recorded in the table below.

Animal	Amount of food eaten each day (g)	Mass of animal (g)			
		1st week	2nd week	3rd week	4th week
E	30	100	100	110	died
F	70	100	110	130	160
G	130	100	130	150	died
H	180	100	140	died	-

a) What is the most suitable amount of food Evan should feed the animals each day? (1m)

_____

b) Give 2 reasons to explain the answer for part (a). (1m)

Reason 1:_____

Reason 2:_____

1/2

32 Jolene placed 15 similar seeds in each of four jars, R, S, T and U, and immersed them with similar amount of tap water or cooled boiled water.

She placed the jars under the following conditions and observed them after six days. She recorded the conditions and her results in the table below.

Jar	Type of water in the jar	Location of the jar	Number of seeds germinated
R	tap water (contains dissolved oxygen)	classroom	14
S	tap water (contains dissolved oxygen)	in a black box placed in the classroom	12
T	tap water (contains dissolved oxygen)	in a refrigerator	0
U	cooled boiled water (does not contain dissolved oxygen)	classroom	0

a) Jolene wanted to investigate whether the presence of dissolved oxygen in the water affects the germination of seeds. Which of the two jars should she compare? (1m)

Jar _____ and Jar _____.

b) If Jolene compared Jar R and S to find out if light is needed for germination of the seeds, has she conducted a fair test? Why? (1m)

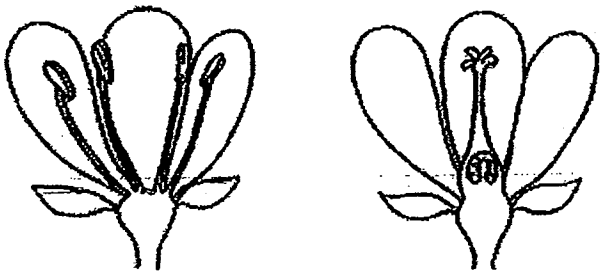
_____

_____

_____

2/2

33 The diagrams below show the cross-section of two flowers, E and F, from the same parent plant.



Flower E Flower F

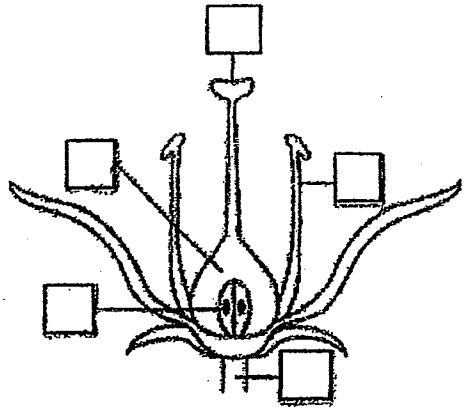
a) If pollen grains were dusted on top of each flower, which flower could develop into a fruit? Why? (2m)

_____

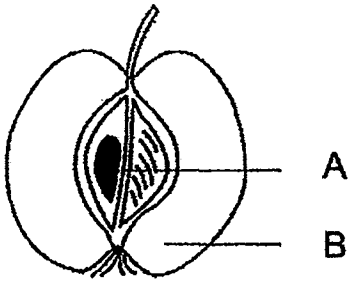
_____

_____

b) The diagrams below show flower X and the fruit it had developed into.



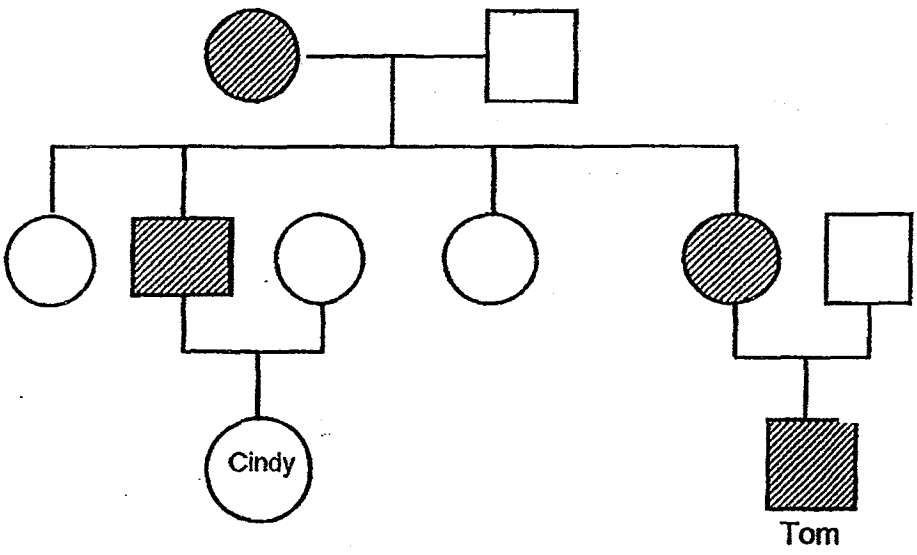
Flower X

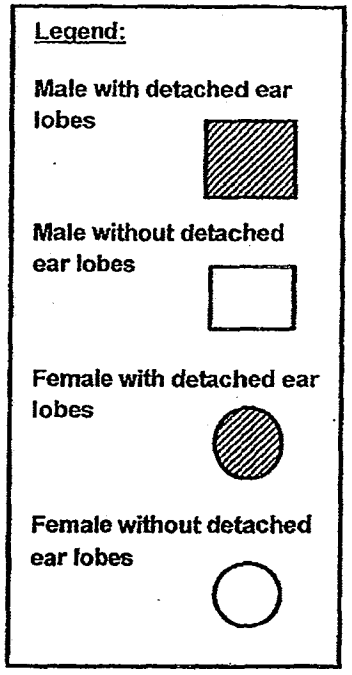


Match the corresponding parts (A and B) labelled in the fruit to the flower by writing 'A' and 'B' in the correct boxes. (1m)

3

34 The diagram below shows a family tree.





a) Cross out the shape representing Cindy's grandmother. (1m)

b) Tom has detached ear lobes. If he has children in future, will it be possible that his children have detached ear lobes too? Why? (1m)

_____

_____

35 Pete did a study on two animals, X and Y. His observations are shown in the table below.

Observations	Animal X	Animal Y
There are 4 stages in the life cycle.	√	x
Its eggs are laid on land.	x	√
It has 3 body parts.	√	x

Choose the animal(s) from the box that fit the description of animals X and Y. (1m)

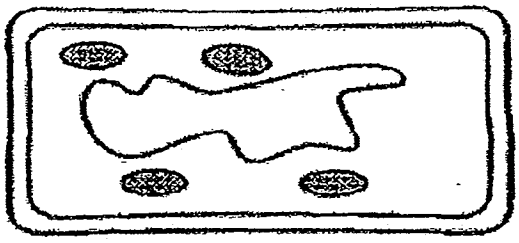
cockroach	frog	mosquito
chicken	butterfly	

Animal X: _____

Animal Y: _____

3

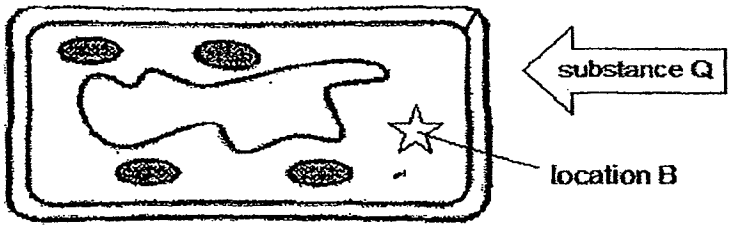
36 The diagram below shows a plant cell.



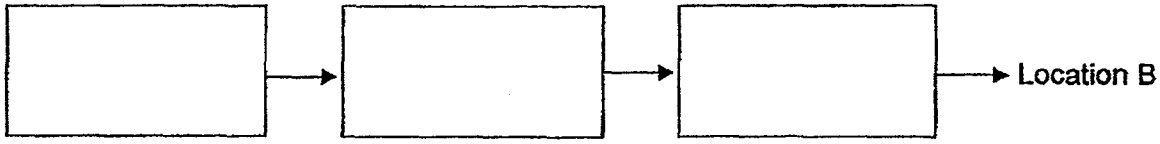
a) One part is missing in the cell. This missing part helps to control activites that take place in the cell. Name the missing part. (1m)

_____

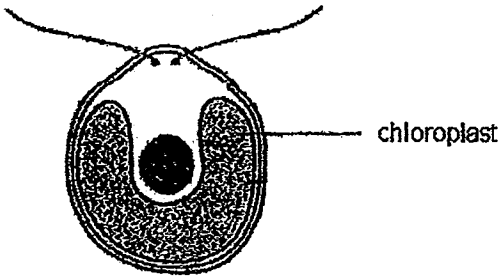
b) A substance, Q, has to pass through various parts of the plant cell before it reaches location B of the cell as shown.



Identify the correct order of cell parts that substance Q has to pass through, in the direction of the arrow shown, to reach location B in the cell. (1m)



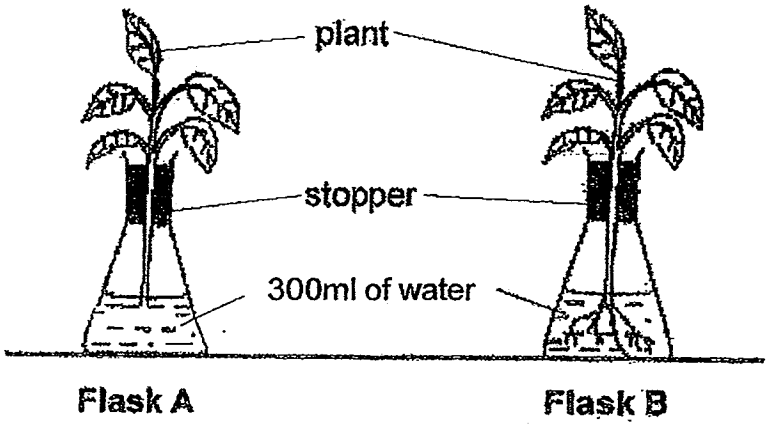
c) Sharon found a one-celled organism taken from the school pond. The organism is a plant cell.



Sharon observed that the organism needs to swim towards light for survival. Why? (1m)

_____

37 Ray wanted to find out how the presence of roots of a plant affects the amount of water taken in by the plants. He set up an experiment as shown below.



Flasks A and B were left in the same location for 5 days. The volume of water in the flasks was measured at the end of each day. The table below shows the volume of water in Flasks A and B for 5 days.

Day	Volume of water in Flask A (ml)	Volume of water in Flask B (ml)
Monday	300	300
Tuesday	295	285
Wednesday	280	260
Thursday	275	245
Friday	270	230

a) What conclusion could Ray draw from the experiment? (1m)

_____

_____

b) When Ray removed three leaves from the plant in flask B, he observed that the plant absorbed less water. Why was this so? (1m)

_____

_____

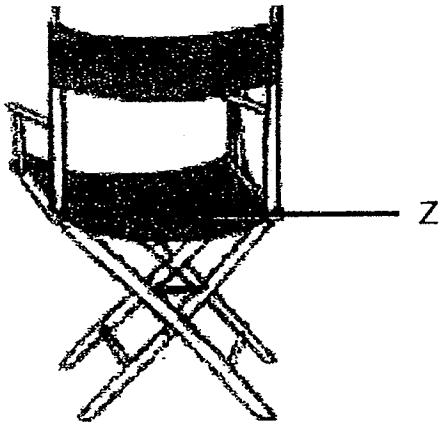
c) What was the volume of water taken in by the plant in Flask A on Friday? (1m)

_____

3

38 Mr Pillay conducted an experiment to find out which material, P, Q, R or S, to use for making part Z of the chair shown. The chair is usually used by adults only.

He dropped four weights of different mass onto four different materials until the material tore. In the table shown, he placed a tick (√) when the material did not tear and a cross (X) when a tear is formed.



	Mass of the weight			
Material	**20 kg**	**40 kg**	**60 kg**	**80 kg**
P	√	√	√	√
Q	√	X	X	X
R	X	X	X	X
S	√	√	√	X

a) Rearrange the materials, P, Q, R and S, according to its strength from the weakest to the strongest. (1m)

_____

b) Compare material P and material Q. Which material is more suitable for making part Z of the chair? Explain your answer. (2m)

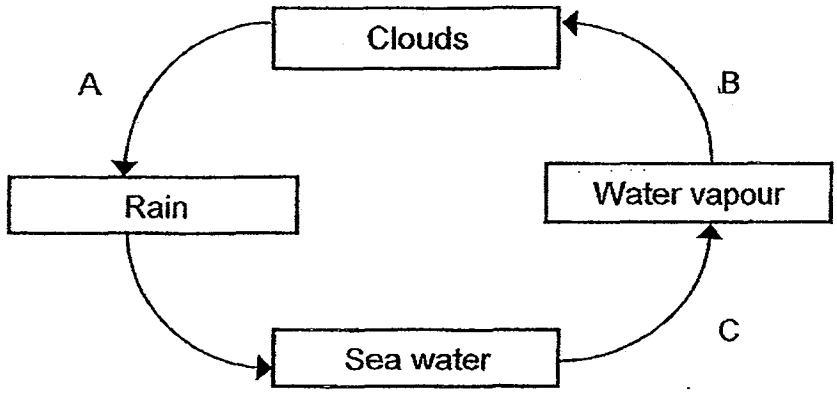
_____

_____

_____

3

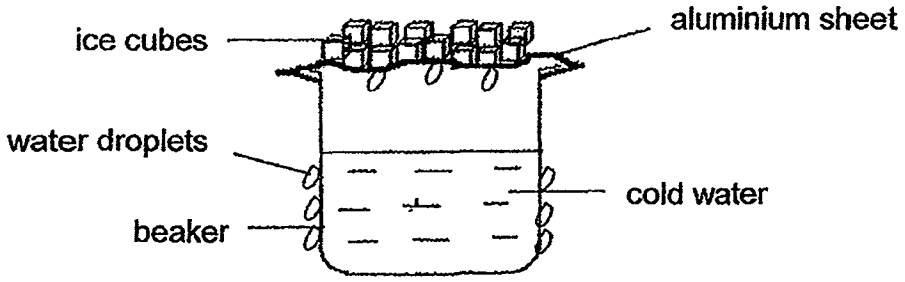
39 Study the diagram of the water cycle below.



a) What does the process at arrow B represent? (1m)

Process at arrow B: _____

The diagram below shows a model of a water cycle set up by Lisa to demonstrate the formation of rain. She noticed that there are only a few water droplets formed on the underside of the aluminium sheet.



b) Suggest one change Lisa could do to the set-up so that more water droplets could be formed on the underside of the aluminium sheet? (1m)

_____

c) Lisa noticed water droplets forming on the outer surface of the beaker. Explain how these water droplets were formed. (2m)

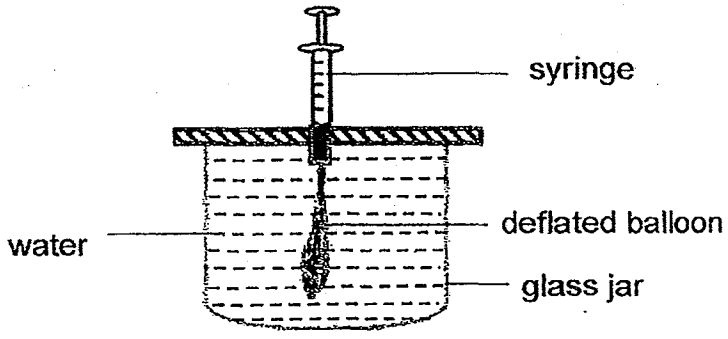
_____

_____

_____

4

40 The glass jar shown was filled to the brim with 500 cm^3 of water and sealed with a lid. A syringe was attached to the lid. Using the syringe, Ahmad tried to pump air into the deflated balloon.



a) Ahmad found that he could not pump air into the deflated balloon in the glass jar. Explain why he was unable to do so. (2m)

_____

_____

_____

b) Xavier did an experiment as shown in the diagram below. He weighed a ball and recorded its mass. Then, he pumped in more air into the ball and measured its new mass.

He repeated the steps and recorded the results in the table shown.

Number of pumps	0	1st	2nd	3rd	4th	5th
Mass of the ball (g)	380	420	460	500	540	580

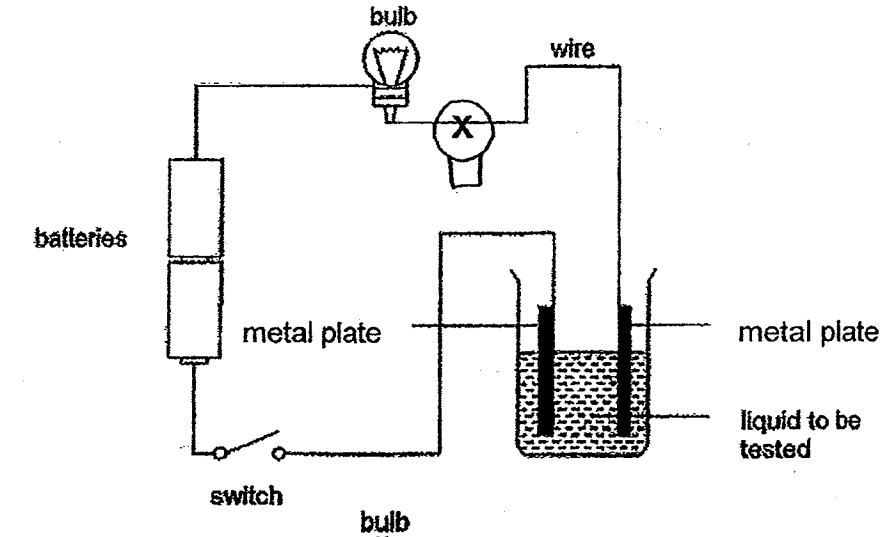
Based on his results, what was the relationship between the number of pumps and the mass of the ball? (1m)

_____

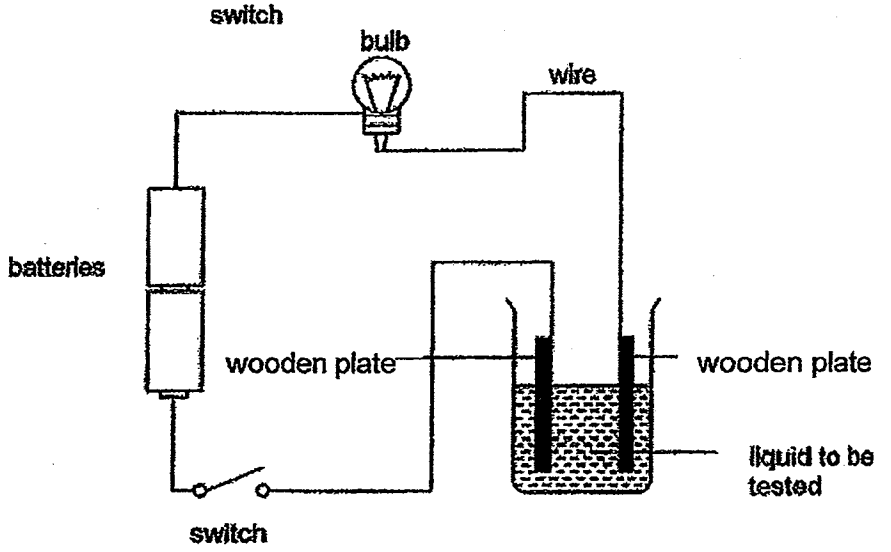
_____

3

41 Siu Ling set up the experiments shown below. She carried out the experiments with a type of liquid and observed the brightness of the bulbs.



Set up 1



Set up 2

a) For set-up 1, Siu Ling observed that the bulb lighted up when the switch was closed. What should Siu Ling do to increase the brightness of the bulb? why? (1m)

_____

_____

b) For set-up 1, when Siu Ling connected another bulb to the circuit at position 'X', the brightness of the original bulb became dimmer? Why? (1m)

_____

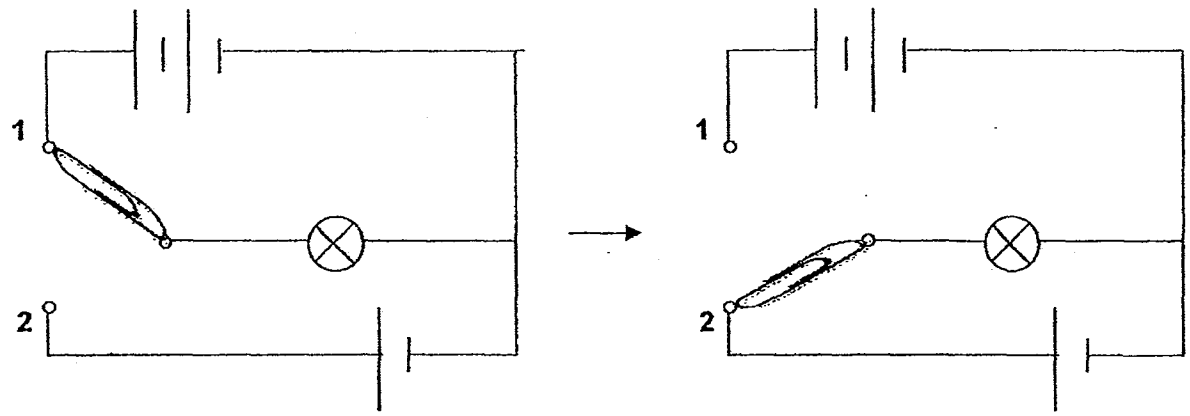
_____

c) For set-up 2, Siu Ling observed that the bulb did not light up. Why? (1m)

_____

_____

42 Kyren set up a circuit as shown below using a metal paper clip.



He connected the metal paper clip to position 1 and the bulb lit up. Explain what will happen to the brightness of the bulb when the metal paper clip is connected to position 2. (2m)

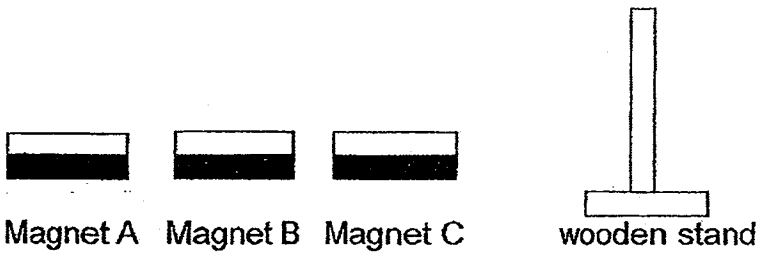
_____

_____

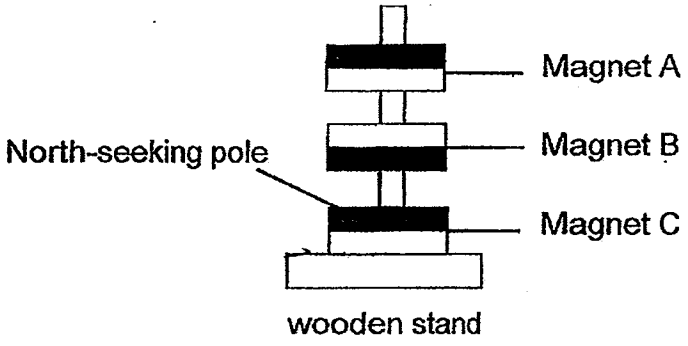
_____

2

43 May used three ring magnets, A, B and C, and a wooden stand shown for her experiment.



She arranged the three magnets as shown below.

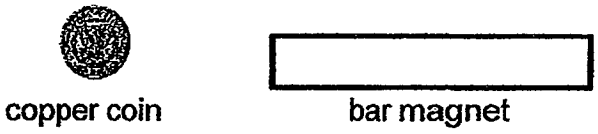


a) May observed that Magnet B 'floated' above Magnet C. Explain why (1m)

_____

_____

May placed a copper coin near a bar magnet.



Her classmates made the following predictions:
Pupil A: The copper coin will be attracted to the bar magnet.
Pupil B: The copper coin will not be attracted to the bar magnet.

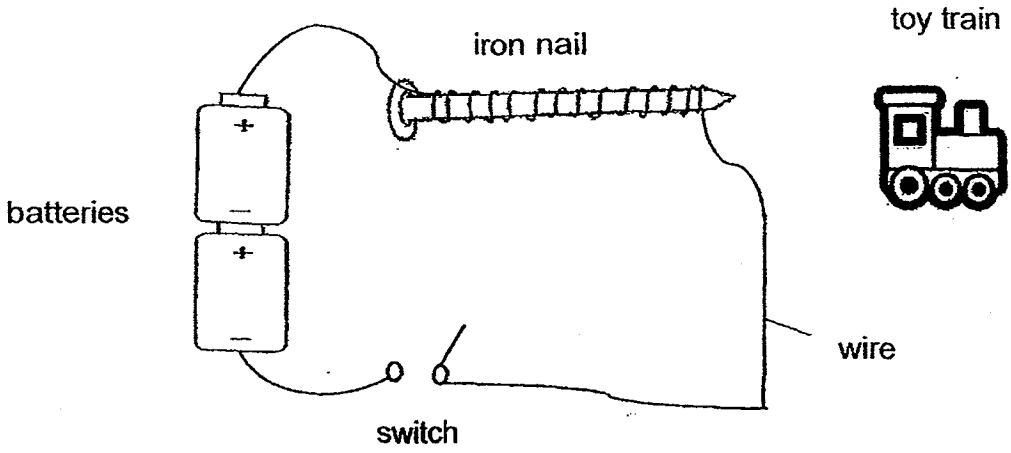
b) Which pupil, A or B, made the correct prediction? Explain why. (1m)

_____

_____

2

43c) Siti set up the experiment as shown.



She placed a toy train made of iron near the circuit. When the switch was closed, she observed that the toy train moved towards the iron nail. Explain why the toy train moved towards the iron nail. (2m)

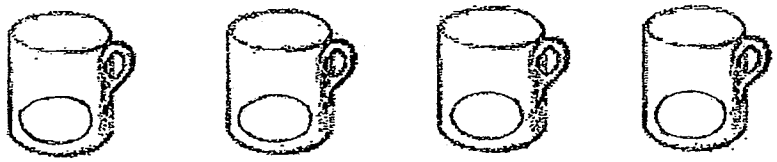
_____

_____

_____

2

44 In an experiment, Li Ming placed one similar egg each into four similar cups labelled A, B, C and D as shown.



A B C D

He poured water of varying temperatures into the four cups. Then, he waited for 15 minutes and recorded the results in the table below.

	Cup A	**Cup B**	**Cup C**	**Cup D**
Temperature of water in the cup at the start of the experiment (°C)	100 °C	15 °C	100 °C	80 °C
Volume of water added (ml)	250 ml	100 ml	400 ml	250 ml
Portion of egg cooked (%)	60%	?	75%	45%

a) For cup B, what would be the portion of the egg cooked? (1m)

_____ %

b) Explain why the egg in cup C was more cooked than the egg in cup A after 15 minutes even though they both contained hot water at 100°C at the start of the experiment. (1m)

_____

_____

c) Li Ming did another experiment with cup E. Cup E was similar to the other cups used. He poured 400 ml of water at 100°C into cup E and covered cup E with a lid.

Would the egg in cup E cook faster or slower than the egg in cup C when a lid is used? Why? (1m)

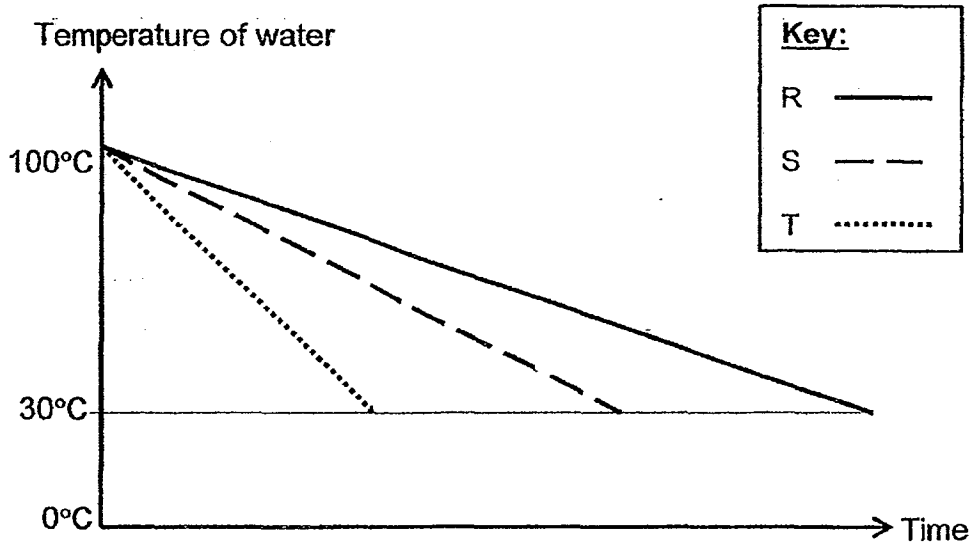
_____

_____

3

44d) Mr Lee conducted an experiment to find out the amount of time taken for boiling water to reach room temperature.

He used three containers of similar size, thickness and shape. The containers were made of different materials, R, S and T respectively. He presented his findings in the graph below.



Which material, R, S or T, should Mr Lee use to make a thermal flask? Give a reason for your choice. (2m)

_____

_____

_____

2

END OF SECTION B
PLEASE CHECK YOUR ANSWERS.

EXAM PAPER 2014
SCHOOL : RED SWASTIKA
PRIMARY : P5
SUBJECT : SCIENCE
TERM : CA2

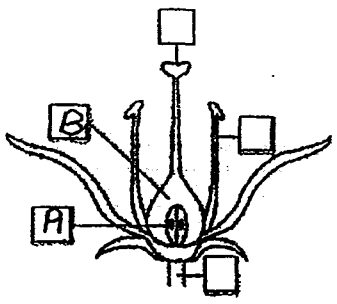
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17
1	2	3	2	4	3	2	1	2	4	2	2	4	2	4	1	3

Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30
1	1	1	4	3	1	4	1	2	2	2	4	4

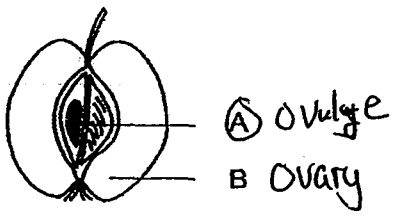
31)a)70g.
b)1)The animal gained the most mass.
2)The animal lived/survived the longest.

32)a)Jar R and Jar U.
b)Yes. The location of the jar is the only variable changed and the other variable remain constant. Hence, any change in the number of seeds germinated.

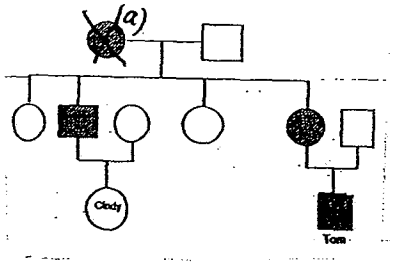
33)a)Flower F. Flower F has stigma for pollination and ovules which can be fertilised for the flower to develop into a fruit.
b)



Flower X



34)a)



b)Yes. Tom can pass on the genes for detached ear lobes to his children.

35)X: Animal Y: Chicken

36)a)Nucleus.
b)Cell wall→Cell membrane→Cytoplasm
c)The organism swims towards light so that the chlorophyll in the chloroplast can absorb/trap light for the organism to make food/photosynthesis.

37)a)Plants with roots take in more water than plants without roots.
b)As the plant has less leaves, the plant loses less water through the stoma of the leaves and so absorbed less water.
c)5ml.

38)a)R, Q, S, P
b)Material P. P did not tear when 80kg of weight was dropped on it but Q tore when 40kg/60kg/80kg of weight was dropped on it. This shows that material R is stronger than material Q.

39)a)condensation
b)Replace the cold water with warm/hot water.
c)Water vapour in the surrounding air touched the cooler outer surface of the beaker, lost heat and condenses to from (tiny)water droplets.

40)a)Water has a definite volume and cannot be compressed. Since the water has taken up the space in the glass jar, leaving no more space in the glass jar, air cannot enter it anymore as air also take up space.
b)As the number of pumps increase, the mass of the ball also increases.

41)a)Increase the number of batteries in the circuit so that more electric current flows to the bulb to make it brighter.
b)The bulbs are arranged in series and there is less electric current flowing through each bulb.
c)Wood is not a conductor of electricity is an insulator of electricity. The circuit is open there is no electric current flowing in the circuit, hence the bulb did not light up.

42)The bulb will be dimmer. When the metal paper clip is connected to position 2, there is one less battery in the circuit and hence less electric current flowing to the bulb to form closed circuit.

43)a)The north-seeking poles of magnets B and C are facing each other, so like poles repel.

b)Pupils B. Copper is a non-magnetic material and will not be attracted to the magnet.

c)When the switch is closed, a close circuit is formed. The iron nail becomes magnetised an electromagnet as electric current flows to it. The iron nail attracts the toy train which is made of iron, a magnetic material and so the toy train moved towards the iron nail.

44)a)0%.

b)There was more hot water in cup C and hence more heat in cup C to cook the egg faster.

c)The egg in cup E would cook faster. The lid traps heat in the cup and there will be more heat in cup E to cook the egg.

d)Material R. R took the longest time to reach the room temperature and is the poorest conductor of heat. R will conductor heat away from the hot water to the surrounding the most slowly.