



RAFFLES GIRLS' PRIMARY SCHOOL
SEMESTRAL ASSESSMENT 1
2013

Section A	60
Section B	40
Your score out of 100 marks	
Parent's signature	

Name : _____ Index No: _____ Class: P5 _____

7 May 2013

SCIENCE

Att: 1 h 45 min

SECTION A (30 x 2 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 (OAS) provided.

1. Meng Meng placed 20 guppies into a fish tank. She counted and recorded the number of guppies which were alive in the tank weekly for one month.

Week	Number of guppies
1	20
2	18
3	15
4	14

Based on the information above, which one of the following statements is true about the guppies?

- (1) They can die
(2) They can grow
(3) They can reproduce
(4) They are able to move by themselves
2. Four children observed the following characteristics of an animal.

Ariel : It crawls.
Bohan : It has 6 legs.
Cindy : It has 3 body parts.
Daming : It has a pair of wings.

Which of the following children's observations would help to determine that the animal is an insect?

- (1) Ariel and Bohan only
(2) Bohan and Cindy only
(3) Bohan and Daming only
(4) Cindy and Daming only

3. The table below shows the characteristics of animals P, Q, R and S.

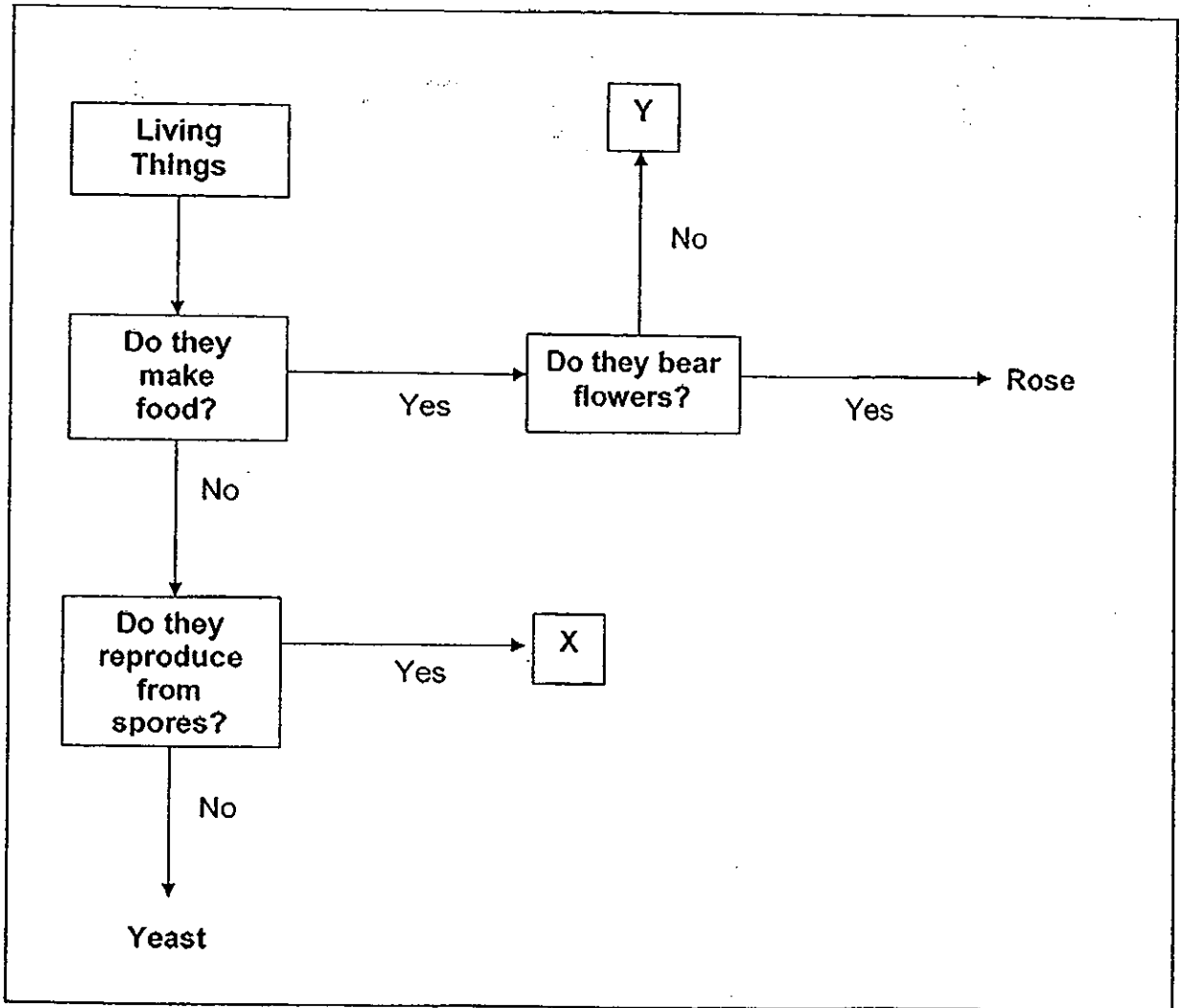
Animal	Has 2 legs	Has wings	Has body covering of hair
P	✓	✓	
Q	✓	✓	✓
R	✓		✓
S			✓

Based on the table above, which of the following statement(s) is/are true?

- A Animal Q is an insect.
- B Only animal S is a mammal.
- C Both animals P and Q are birds.
- D Animals Q, R and S are mammals.

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

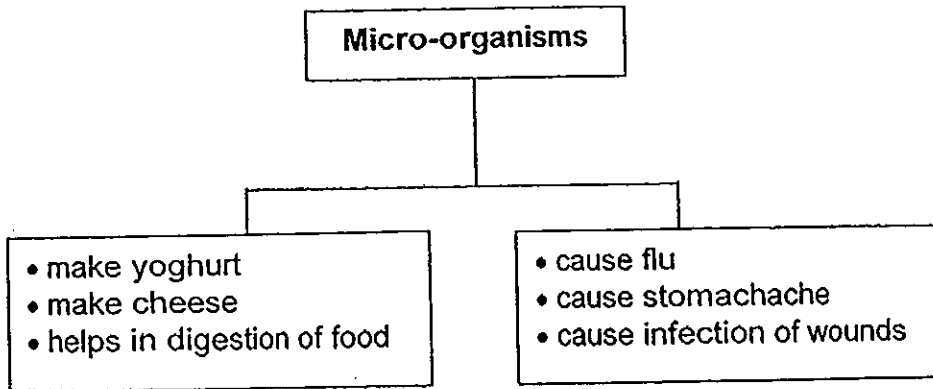
4. Study the flow chart below carefully.



Which of the following best represent X and Y respectively?

	X	Y
(1)	bacteria	moss
(2)	puffball	ladder fern
(3)	water lily	bracket fungus
(4)	bird's nest fern	hibiscus

5. The flow chart below shows how we can group micro-organisms.

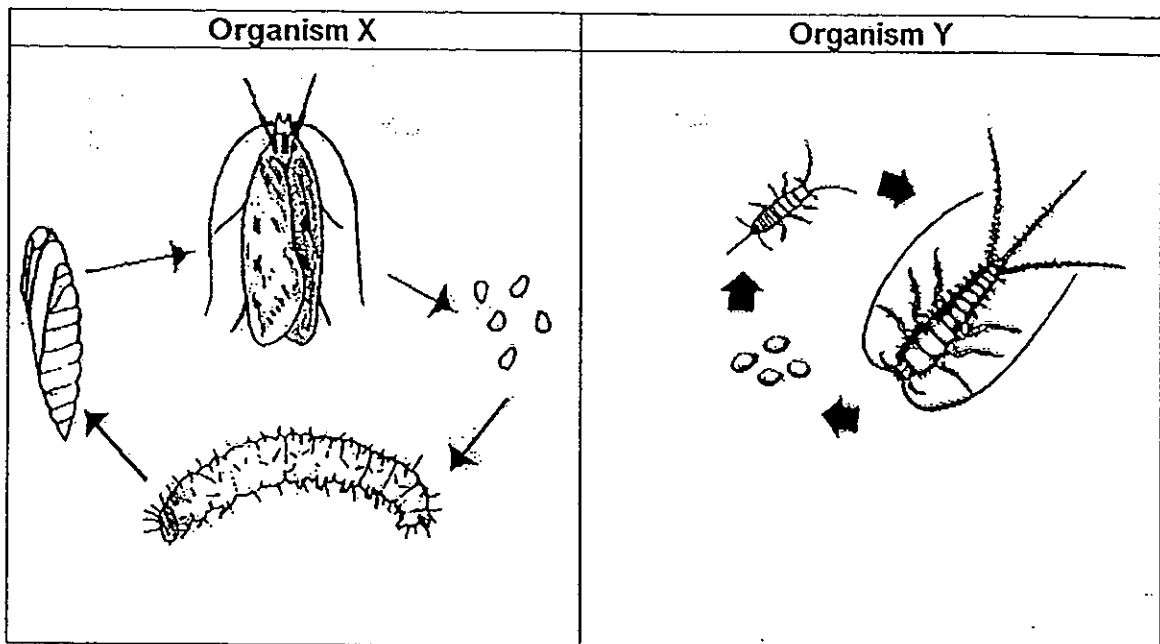


Based on the information above, how are the micro-organisms grouped?

- A whether they are useful to man
- B whether they reproduce from spores
- C according to number of cells (single-celled or multi-celled)

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

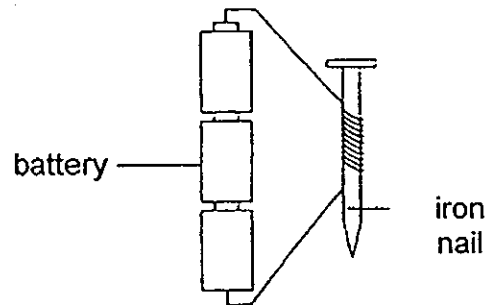
6. The diagrams below show the life cycle of organisms X and Y.



Based on the diagrams above, which of the following statement(s) is/are true?

- A Both the adults of organisms X and Y are able to fly.
 - B The young of organism X does not look like its adult while the young of organism Y looks like its adult.
 - C Organism X has a 4-stage life cycle while organism Y has a 3-stage life cycle.
- (1) C only
(2) A and B only
(3) B and C only
(4) A, B and C

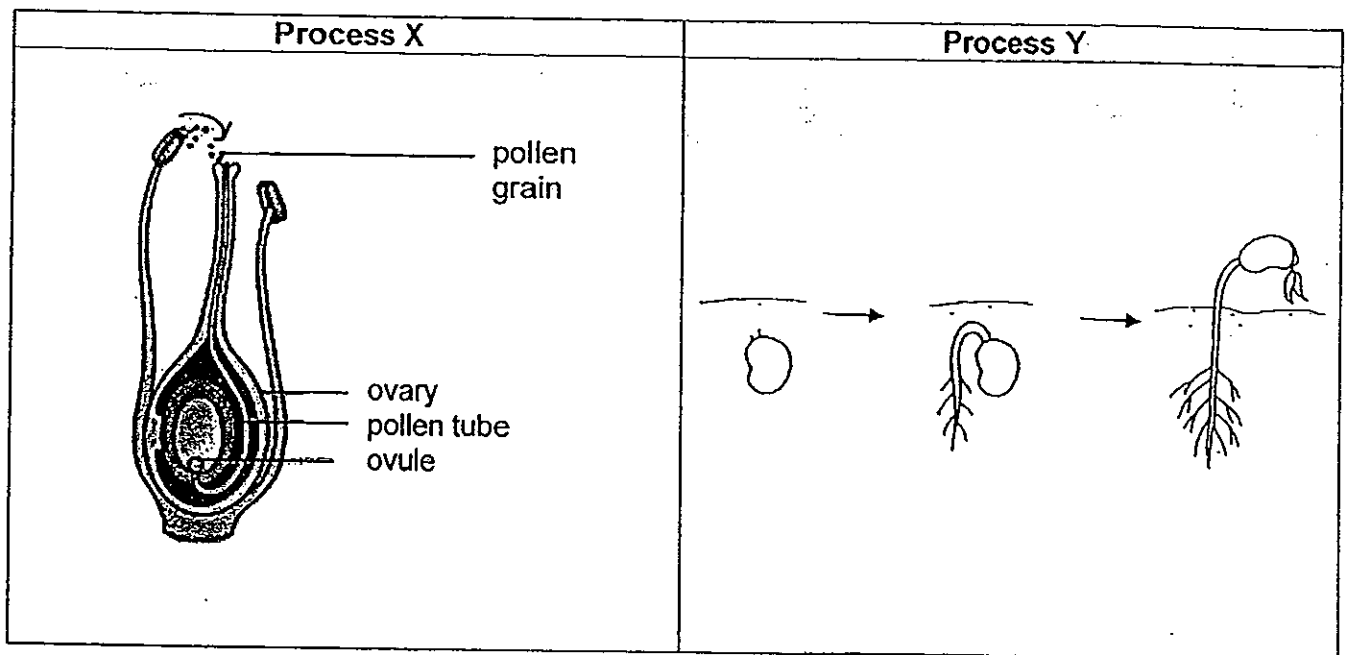
7. Katrina made an electromagnet by coiling wire around an iron nail and then connecting the wires to batteries as shown in the diagram below.



Which of the following statements suggest a way to increase the strength of the magnetised iron nail in the set-up above?

- A Increase the number of batteries.
 - B Increase the number of coils of wire around the iron nail.
 - C Replace the iron nail with an aluminium nail.
- (1) A and B only
(2) A and C only
(3) B and C only
(4) A, B and C

8. The diagram below shows two processes, X and Y.

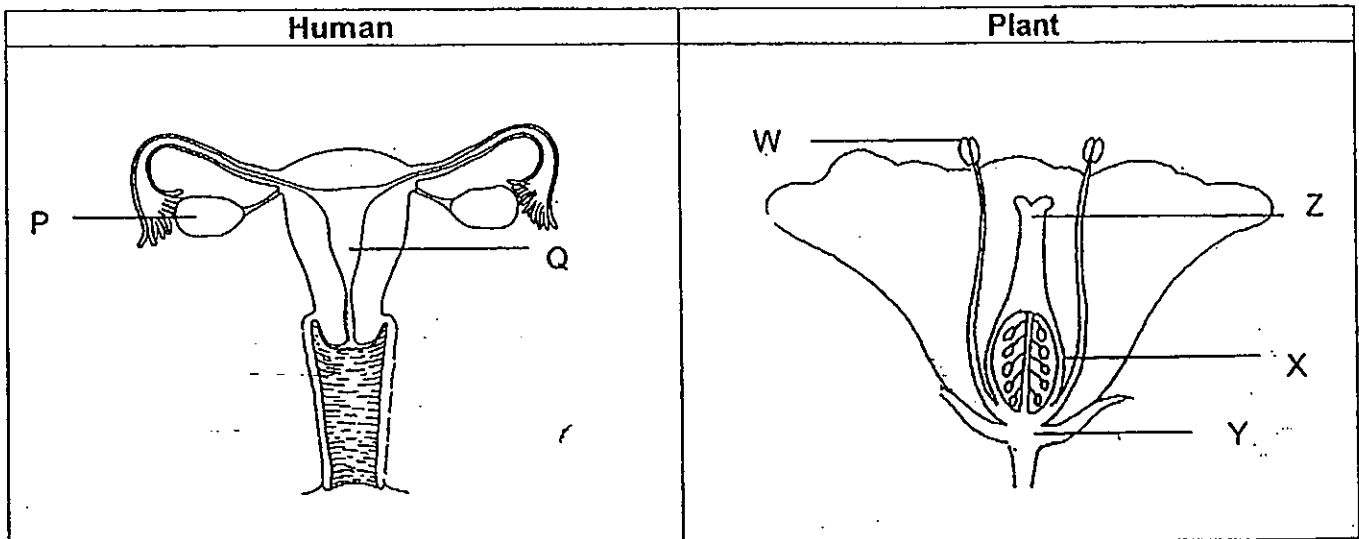


Which of the following represent the processes, X and Y, as shown in the diagrams above?

	X	Y
(1)	dispersal	fertilisation
(2)	pollination	germination
(3)	germination	pollination
(4)	fertilisation	dispersal

9. Which of the following statement(s) is/are true about the sexual reproduction in flowering plants and humans?
- A Fertilisation in humans occurs when the sperm fuses with an egg.
 - B The male reproductive parts in plants are stigma, anther and ovules.
 - C Fertilisation in flowers occurs when a male sex cell fuses with a female sex cell.
- (1) B only
 (2) A and B only
 (3) A and C only
 (4) A, B and C

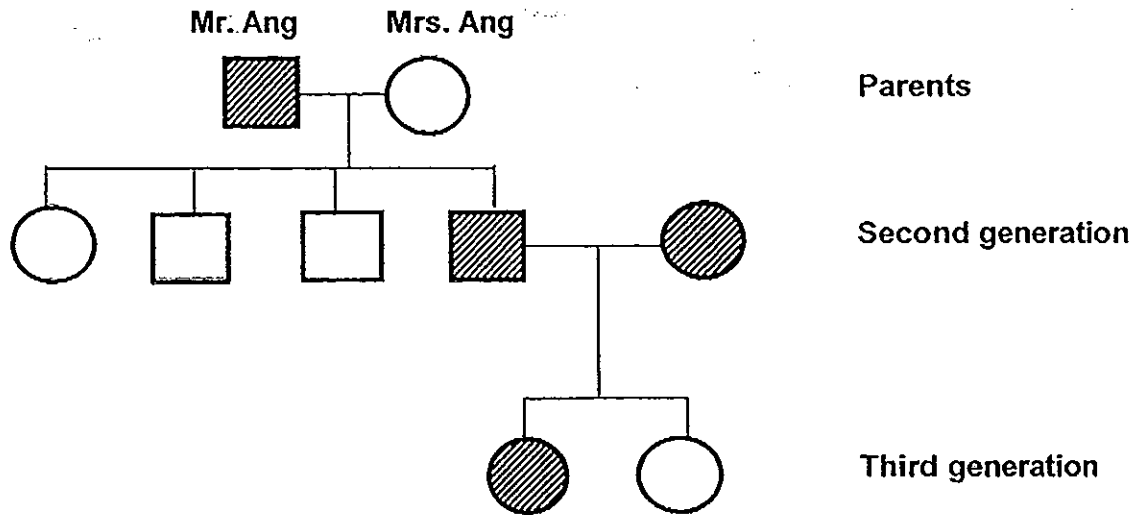
10. The diagrams below show the human and plant reproductive systems.



Identify the parts where the female sex cells are produced in both the human and plant reproductive systems as shown in the diagrams above.

	Human	Plant
(1)	P	X
(2)	P	Z
(3)	Q	W
(4)	Q	Y

11. The diagram below shows Mr. Ang's children and grandchildren who were born with natural curls.



Key:



male with natural curls



female with natural curls



male with straight hair



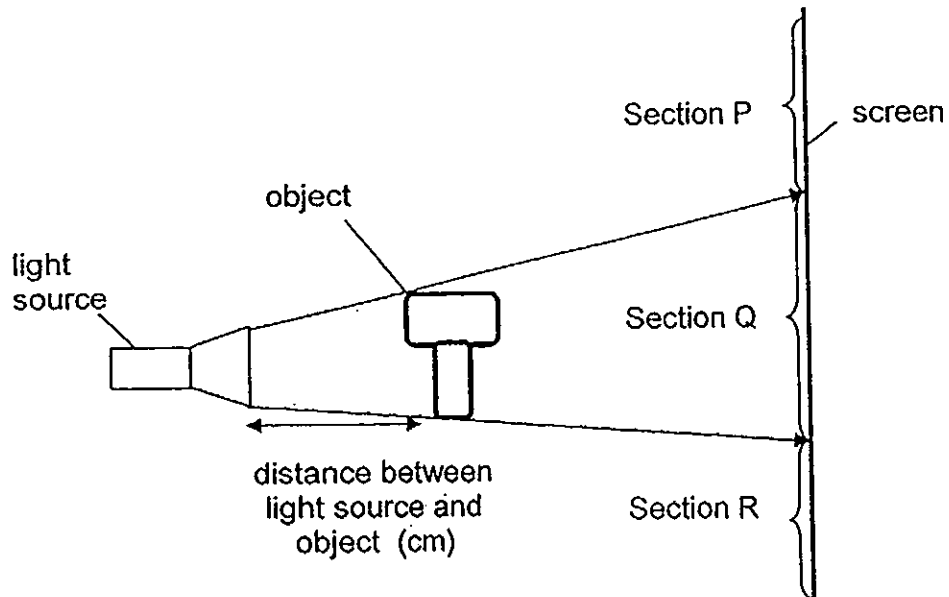
female with straight hair

Based on the information above, which of the following statement(s) is/are correct?

- A Mr. Ang has two daughters with straight hair.
- B Mr. Ang has a son and a granddaughter with natural curls.
- C Mr. Ang's daughter-in-law inherited her natural curls from him.

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

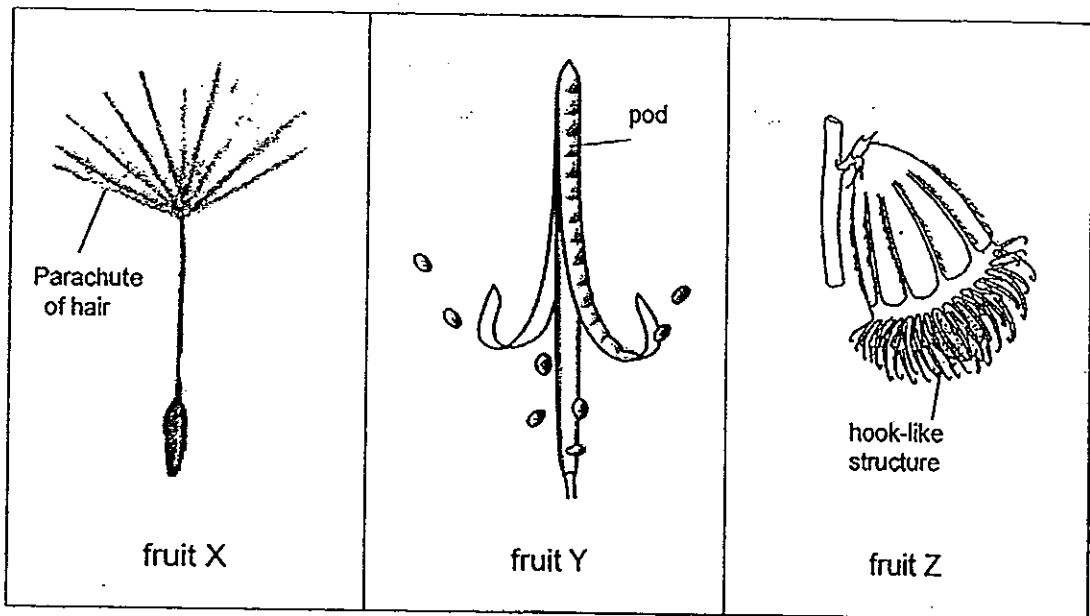
12. Karen made an object out of a wooden block and a tin can. She then placed it between a light source and a screen as shown below.



Based on the diagram above, which one of the following is correct?

- (1) The shadow cast on the screen is on sections P and R only.
- (2) The shadow will be bigger if the screen is nearer to the object.
- (3) The shadow will be bigger if the distance between light source and object decreases.
- (4) The shadow will be bigger if the distance between light source and object increases.

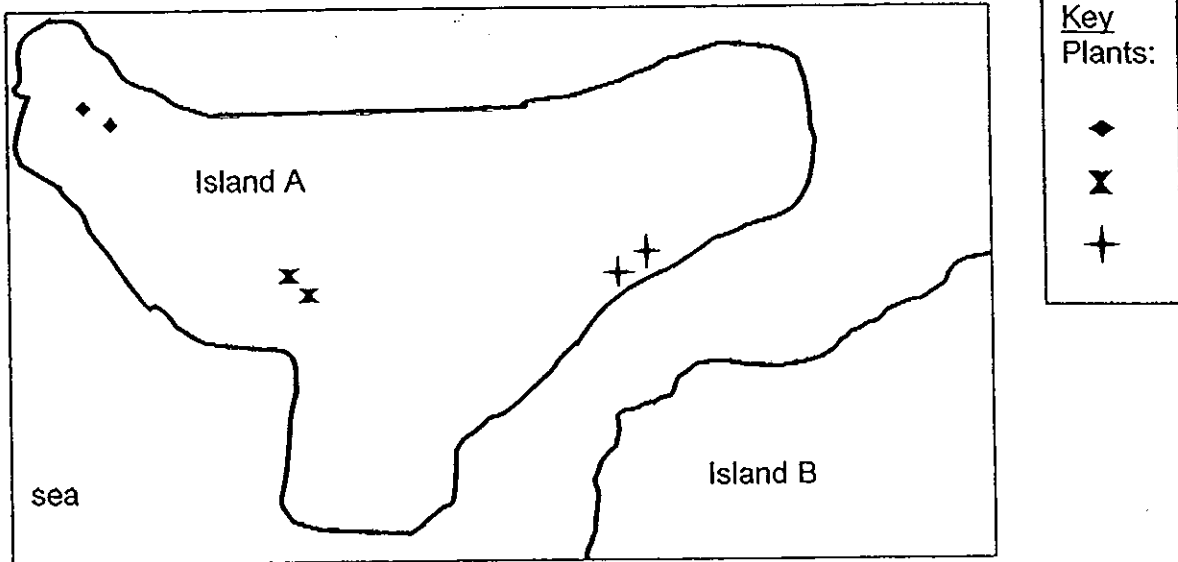
13. The diagrams below show some fruits (not drawn to scale).



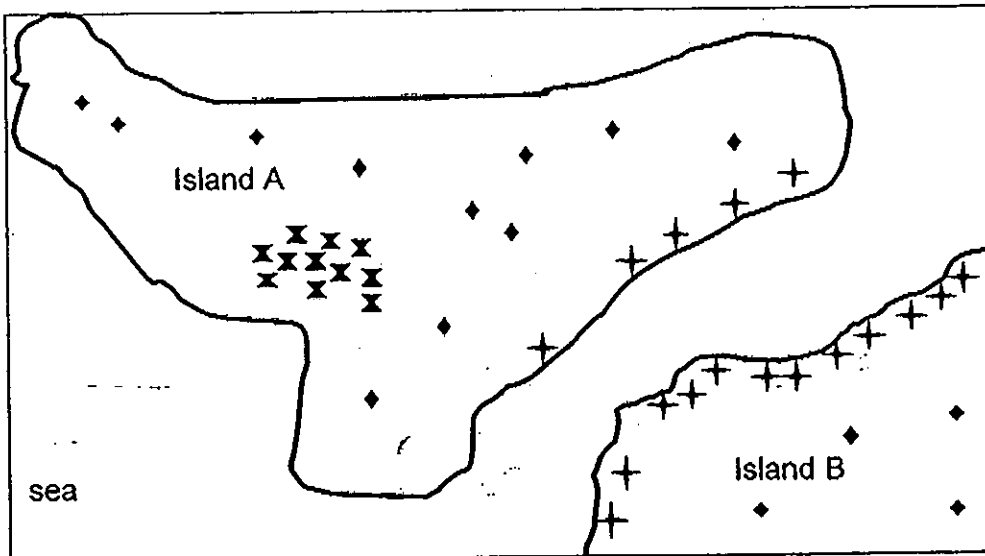
Which one of the following shows correctly how fruits X, Y and Z are being dispersed?

	Fruit X	Fruit Y	Fruit Z
(1)	by animal	by wind	by water
(2)	by splitting	by water	by wind
(3)	by water	by animal	by splitting
(4)	by wind	by splitting	by animal

14. The diagram below shows an Island A where some plants are growing.



After a few months, some plants were found on Island B.



Which of the following best represents the method of dispersal of the plants?

	◆	+	✕
(1)	animal	wind	splitting
(2)	animal	water	splitting
(3)	water	wind	animal
(4)	splitting	water	wind

15. Sarah went on a field trip and recorded the following characteristics of four different animal pollinators.

Pollinator	Characteristics
Organism A	<ul style="list-style-type: none"> • Attracted to large, strong scented flowers • Active in the day
Organism B	<ul style="list-style-type: none"> • Attracted to small, brightly coloured flowers • Likes scented flowers • Active in the day
Organism C	<ul style="list-style-type: none"> • Attracted to brightly coloured flowers • Has a poor sense of smell • Active in the day
Organism D	<ul style="list-style-type: none"> • Attracted to white coloured flowers • Has a good sense of smell • Active at night

Sarah found two types of flowers and made the following observations.

Flower	Observations
X	<ul style="list-style-type: none"> • White petals • Blooms in the evening • Produces a strong scent after the sun sets
Y	<ul style="list-style-type: none"> • Red petals • Blooms in the day • Does not produce a scent

Based on the information above, which are the most likely organisms that pollinate flowers X and Y?

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

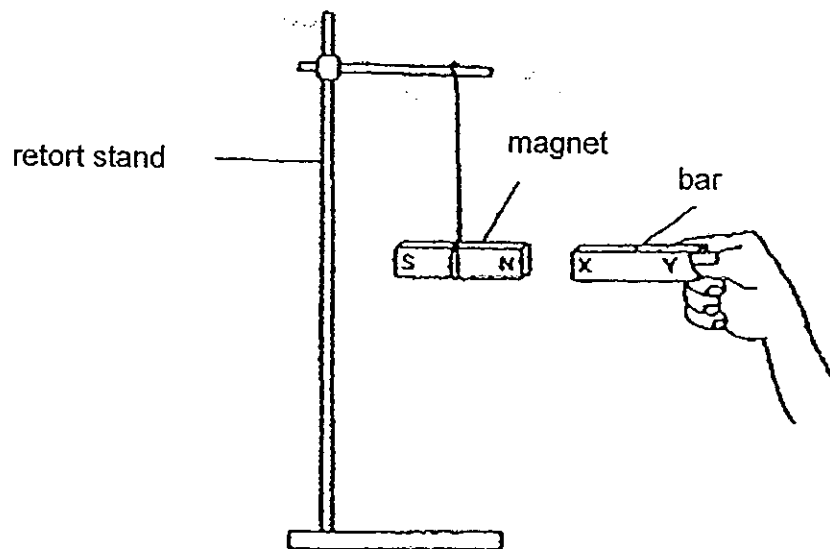
16. David conducted an experiment with some seeds. He placed 10 seeds in 8 identical pots, A to H, which contained identical amounts of soil. He watered each pot of seeds with 20 ml of water daily. He then exposed the pots to different temperatures as shown in the table below. He measured and recorded the number of seeds which germinated after 3 days.

Pot	Temperature of soil (°C)	No. of seeds per pot	No. of seeds germinated
A	5	10	0
B	10	10	0
C	15	10	4
D	20	10	8
E	25	10	9
F	30	10	8
G	35	10	1
H	40	10	0

Based on the information given above, which one of the following statements is correct?

- (1) The most number of seeds germinated between 20°C and 30°C.
- (2) Water is the most important condition for the seeds to germinate.
- (3) The lower the temperature of the soil, the fewer the number of seeds germinated.
- (4) The higher the temperature of the soil, the greater the number of seeds germinated.

17. Three bars, P, Q and R, were brought very near to the N-pole of a magnet as shown in the diagram below.



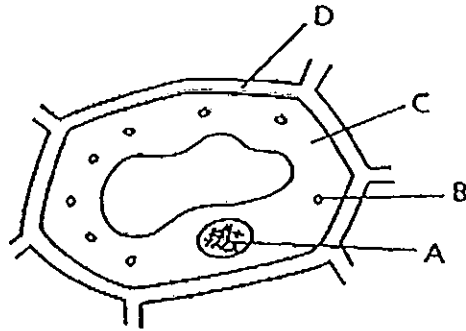
The table below shows the results of the experiment.

Bar	Pole of the bar that is facing the magnet	Magnet swings towards the pole	Magnet swings away from the pole	No reaction to the magnet
P	X		✓	
	Y	✓		
Q	X	✓		
	Y	✓		
R	X			✓
	Y			✓

What materials were the bars, P, Q and R, most likely made of?

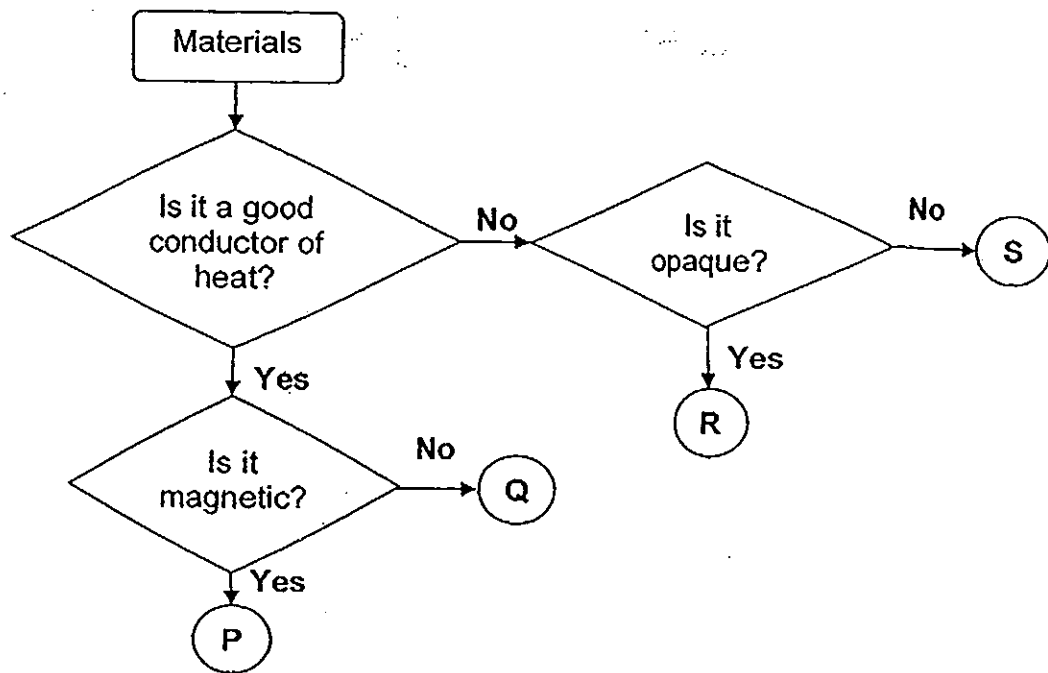
	P	Q	R
(1)	wood	glass	steel
(2)	nickel	aluminium	plastic
(3)	copper	wood	wood
(4)	iron	steel	copper

18. A scientist would like to make a kind of plant grow faster and bigger. Which one of the following parts of the plant cell should he work on?



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

19. Study the flow chart below.



Which of the following materials best represent P, Q, R and S respectively?

	P	Q	R	S
(1)	Aluminium	Nickel	Frosted glass	Clear plastic
(2)	Copper	Iron	Porcelain	Wood
(3)	Steel	Copper	Cardboard	Clay
(4)	Nickel	Silver	Leather	Frosted glass

20. Sarah had three rods made of different materials. She wanted to find out which material was the hardest.

She used Rod P to scratch on Rod Q. She found that there were no scratches on Q. She applied the same amount of force to scratch the other rods using Rod Q.

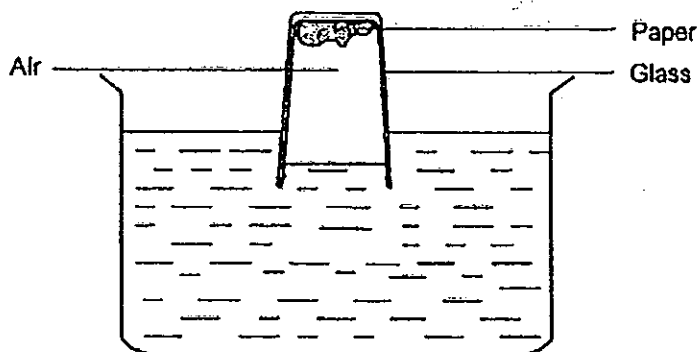
She repeated the scratch test using other rods and recorded her results in the table as shown below.

Rod	Did P scratch the rod?	Did Q scratch the rod?	Did R scratch the rod?
P		Deep scratches	Moderate scratches
Q	No scratches		No scratches
R	No scratches	Fine scratches	

Which one of the following shows the correct order of hardness of the material from the least hard to the hardest?

- (1) R, P, Q
- (2) P, Q, R
- (3) P, R, Q
- (4) Q, R, P

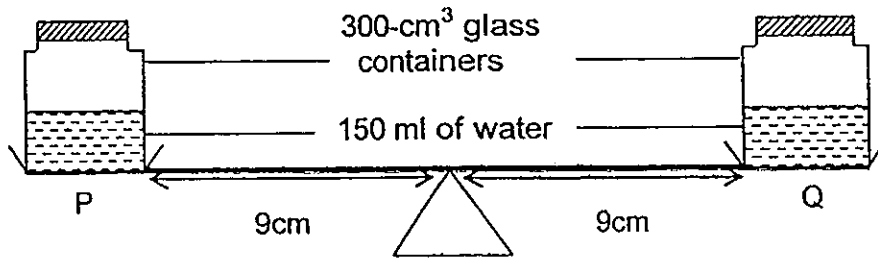
21. Ali pasted a piece of paper onto the inner bottom surface of a glass. He turned the glass upside down and pushed it into a basin of water. He noticed that the paper remained dry.



Which property of air does this experiment show?

- (1) Air has mass.
- (2) Air occupies space.
- (3) Air cannot dissolve in water.
- (4) Air takes the volume of the container.

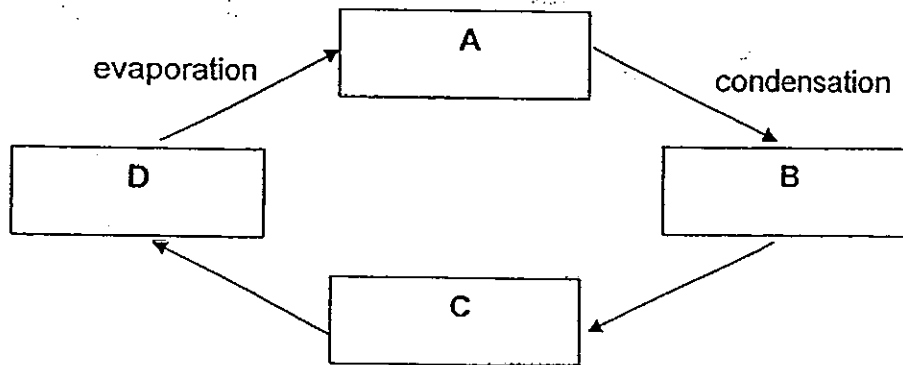
22. Sam balanced two identical 300-cm^3 glass containers, each containing 150 ml of water on a balance as shown in the diagram below.



After Sam pumped in an additional 50 cm^3 of air into Container P, which of the following would happen?

- A The balance remained balanced.
 - B The balance tilted downwards at Container P.
 - C Volume of air in Container P increased.
 - D Volume of air in Container P remained the same.
-
- (1) A and B only
 - (2) A and D only
 - (3) B and C only
 - (4) B and D only

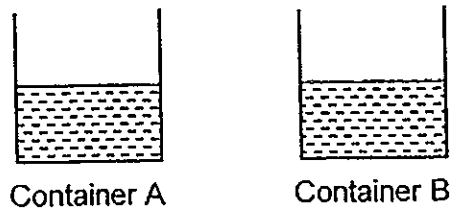
23. The diagram below shows the water cycle.



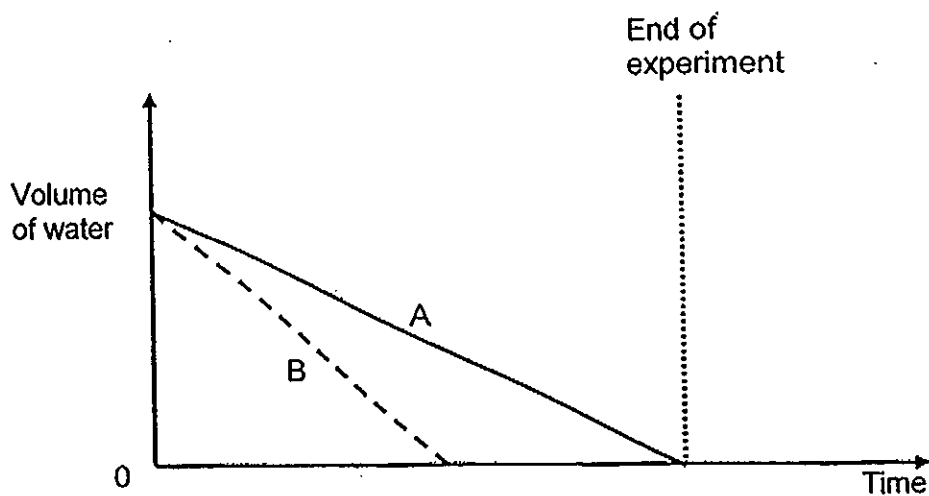
Based on the diagram above, what do A, B, C and D represent?

	A	B	C	D
(1)	rain	clouds	water vapour	water
(2)	water vapour	clouds	rain	water
(3)	clouds	rain	water	water vapour
(4)	water vapour	rain	clouds	water

24. Lily filled two identical containers with the same amount of water and then placed them in two different locations.



She measured the volume of water left in each container at regular intervals over some time and plotted the graph below.



Based on the graph above, which of the following statement(s) is/are likely to be true?

- A Container B was placed in a more windy location than Container A.
- B Container A was placed in a warmer location than Container B.
- C There was more water left in Container A than Container B at the end of the experiment.
- D All the water in both Containers A and B had evaporated at the end of the experiment.

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

25. The table below shows the freezing points and boiling points of three unknown substances, X, Y and Z.

Substance	Freezing Point (°C)	Boiling Point (°C)
X	44	98
Y	35	143
Z	27	76

Which of the substances, X, Y or Z, is/are liquid(s) at 80°C?

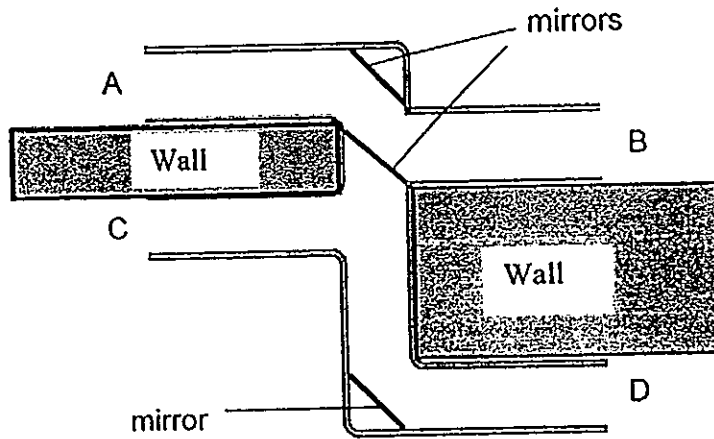
- (1) X only
 - (2) Z only
 - (3) X and Y only
 - (4) Y and Z only
26. Gopal conducted an experiment to find out if the temperature of water affects the rate of evaporation. He recorded the conditions in the table below.

Set-up	Exposed surface area of water (cm ²)	Temperature of water (°C)	Amount of water (mℓ)
V	30	80	200
W	50	50	200
X	30	40	250
Y	40	50	250
Z	50	80	200

Which pair of set-ups must he use to compare in order to form a correct conclusion?

- (1) V and W
- (2) V and Z
- (3) X and Y
- (4) W and Z

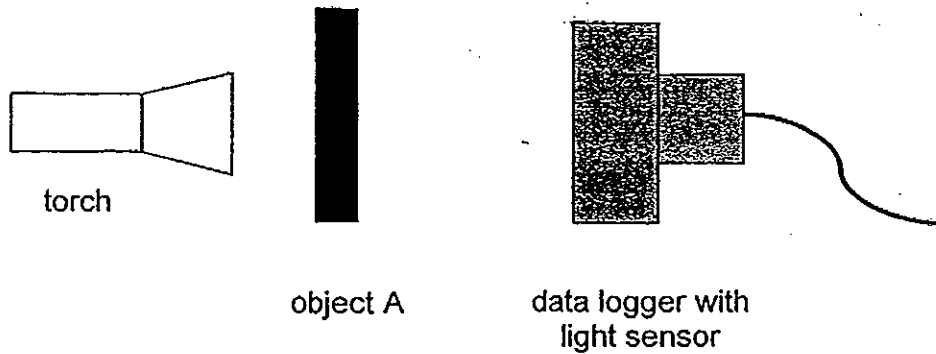
27. The diagram below shows a connection of pipes. Mirrors are fixed inside the pipes.



In order to see an object through the pipes, where should the eye and the object be placed respectively?

	Position of eye	Position of object
(1)	A	C
(2)	B	D
(3)	A	B
(4)	D	C

28. Three different objects, A, B and C are placed one at a time in front of a torch. A datalogger, which measures the amount of light that can pass through the object, is placed in front of the object as shown below.



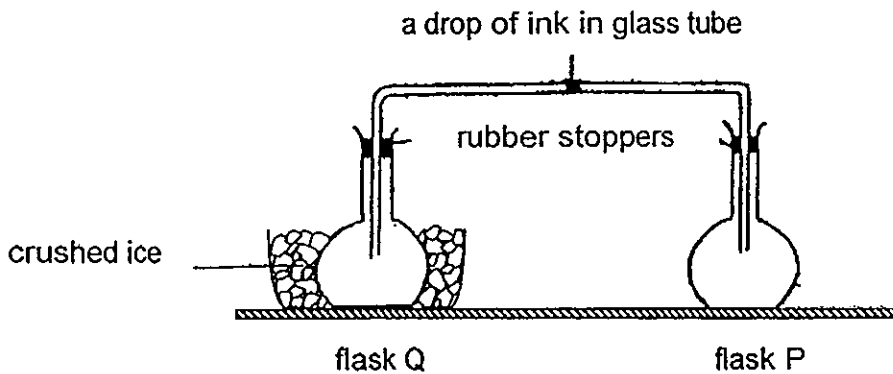
The amount of light that can pass through the object is recorded and shown in the table below.

Object	Amount of light measured (lux)
A	50
B	98
C	0

Which one of the following can objects A, B and C be?

	A	B	C
(1)	Clear glass panel	Frosted glass panel	Wooden plank
(2)	Mirror	Vanguard sheet	Clear plastic sheet
(3)	Frosted glass panel	Clear plastic sheet	Mirror
(4)	Vanguard sheet	Mirror	Clear glass panel

29. Sarah set up an experiment as shown in the diagram below. A glass tube containing a drop of ink connects the two identical glass flasks.



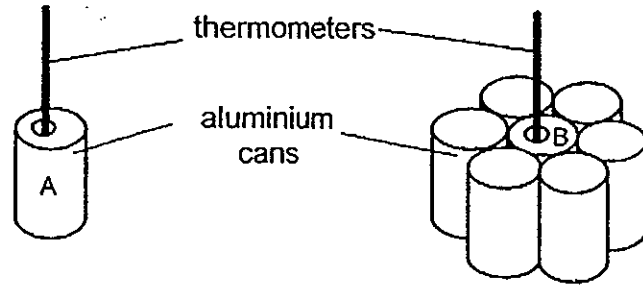
She placed flask Q in crushed ice for 10 minutes. She then observed that the drop of ink moved towards flask Q.

Which of the following would explain what Sarah had observed?

- A The air in flask Q lost heat to the crushed ice.
- B The air in flask P lost heat to the surroundings.
- C The air in flask Q contracted and pulled the drop of ink towards flask Q.
- D The air in flask P contracted and pushed the drop of ink towards flask Q.

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

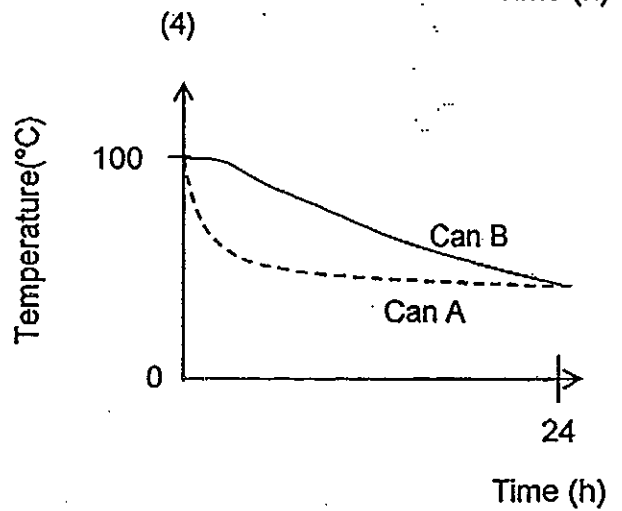
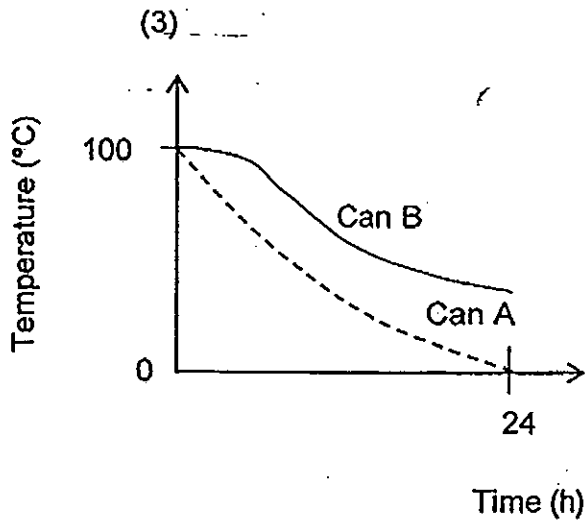
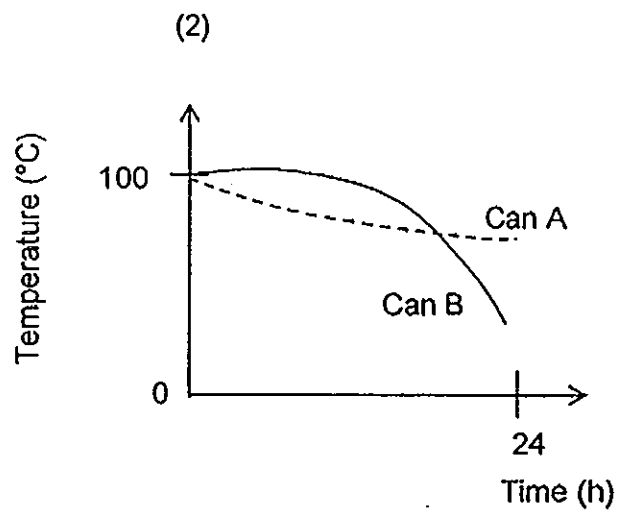
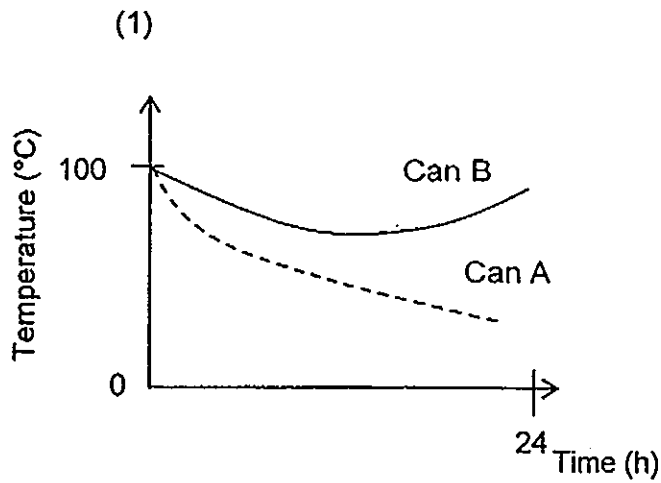
30. Some identical aluminium cans are filled up with boiling water as shown in the two set-ups below. The temperature of the water in cans A and B is measured and recorded over a period of 24 hours.

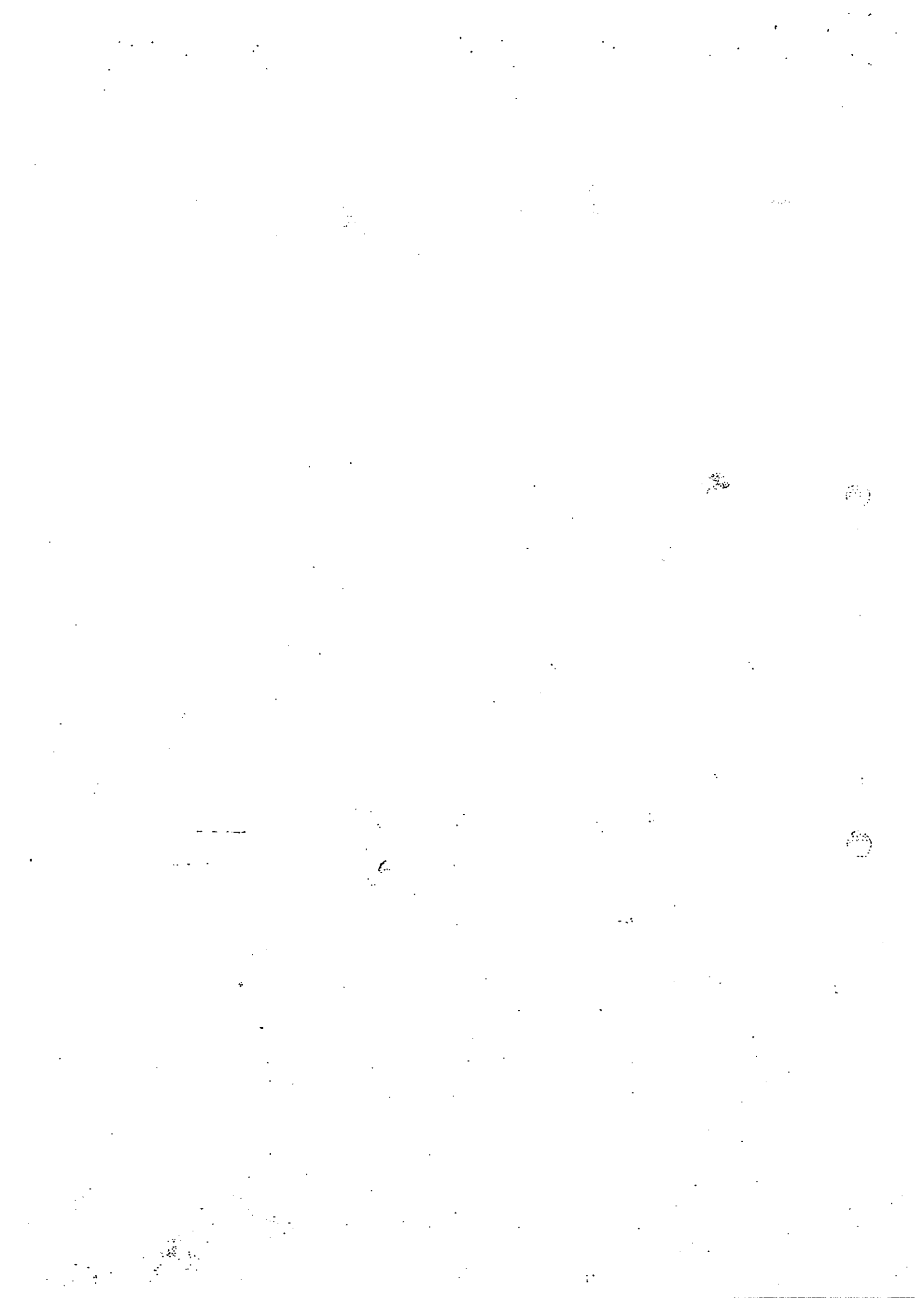


Set-up 1
A can is filled with boiling water

Set-up 2
All cans are filled with boiling water

Which of the following graphs would likely show the change in temperature of the water in cans A and B respectively?





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40

SECTION B (40 marks)

For questions 31 to 44, write your answers clearly in the spaces provided.

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

31. Nicole set up an experiment to find out which type of string, A, B, C or D, is the strongest. She attached weights to each string and recorded the maximum mass that each string could hold before it snapped. She recorded her results in the table below.

String	Maximum amount of mass the string could hold before snapping (g)
A	400
B	600
C	800
D	200

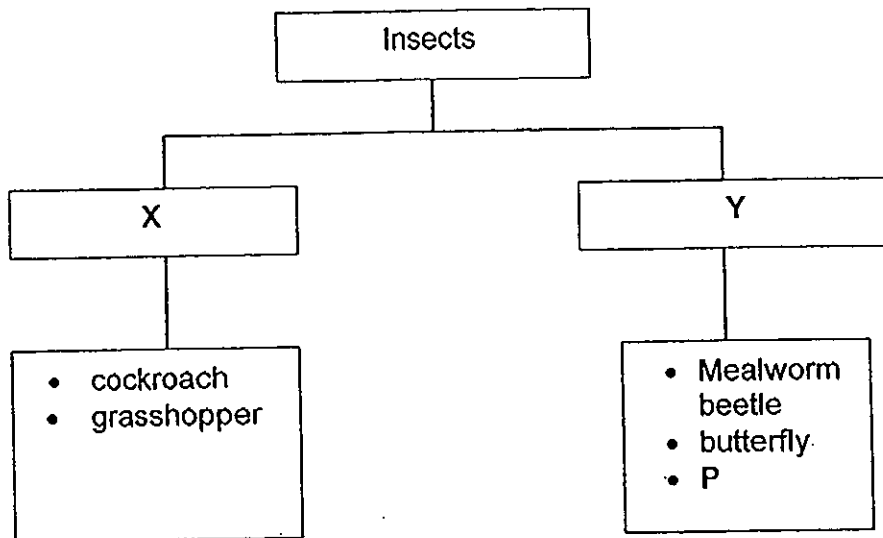
- (a) What is the changed variable in the experiment? [1]

- (b) Name one variable that she should keep constant for a fair test. [1]

- (c) Based on the data above, which is the strongest string? Give a reason for your answer. [1]

Score	3
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32. The diagram below shows how some insects are being classified.



(a) Write suitable headings for X and Y. [1]

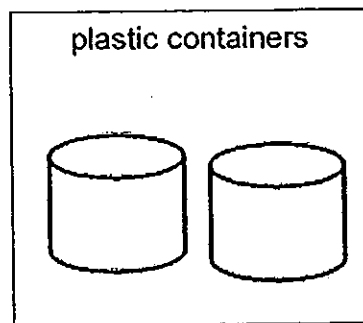
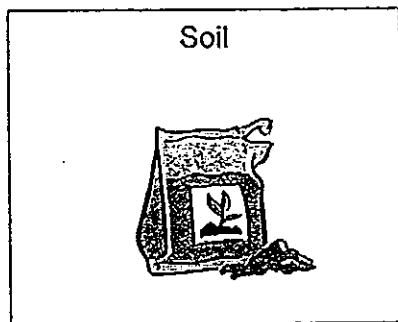
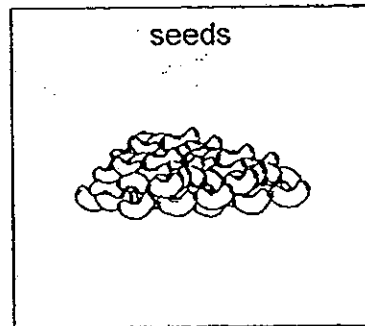
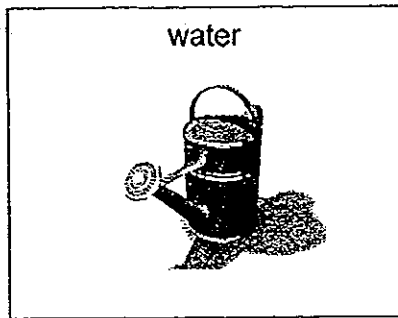
X: _____

Y: _____

(b) Name an example of P. [1]

Score	2
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33. Siti wanted to conduct an experiment to find out if water is needed for seeds to germinate.
The diagrams below show the materials which she can use in her experiment.

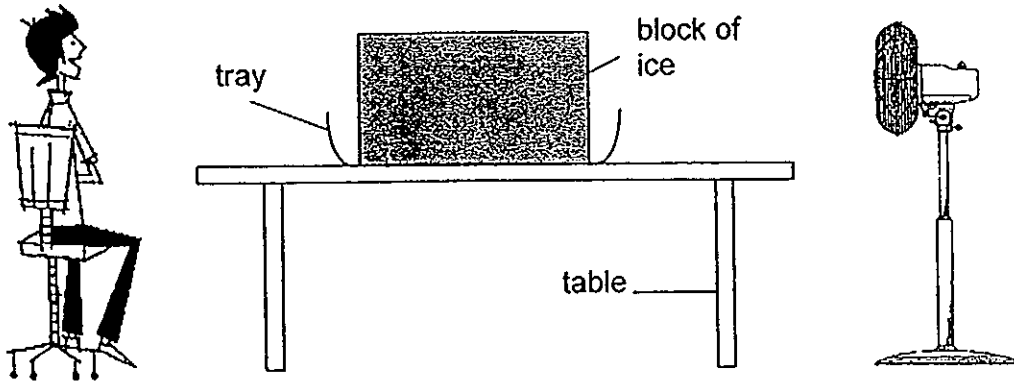


The statements below are the steps she has taken to conduct her experiment.
Reorder the steps in the correct sequence and write down the numbers 1, 2, 3, 4, 5 and 6 in the table below. [3]

Steps	Sequence
Observe in which container the seed will germinate after 3 days.	
Place the containers, A and B, filled with soil and seeds on the table.	
Label 2 containers, A and B, respectively.	
Put 5 seeds in containers A and B respectively.	
Put the same amount of soil in containers A and B.	
Water the seeds in container A only.	

Score	3
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34. Ali wanted to save energy by not switching on the air conditioner in his room. Instead, he placed a 4-kg block of ice on a tray and placed it on the table in the enclosed room as shown in the diagram below. Then he switched on the fan. He felt cooler at the position where he was seated after a while.

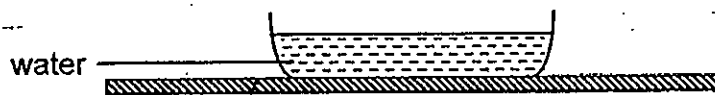


Ali sitting on a chair

electric fan

- (a) Explain how the set-up above helped Ali to feel cooler. [2]

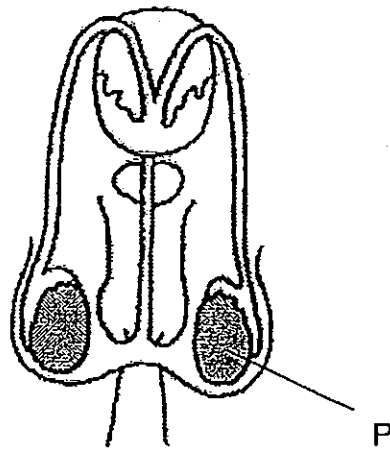
One day later, Ali found that the block of ice had completely melted and there was water in the tray. He measured the mass of the water in the tray and found that it was only 3kg 800g.



- (b) Why was there a decrease in the mass of the water? [1]

Score	3
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35. The diagram below shows the male reproductive system.

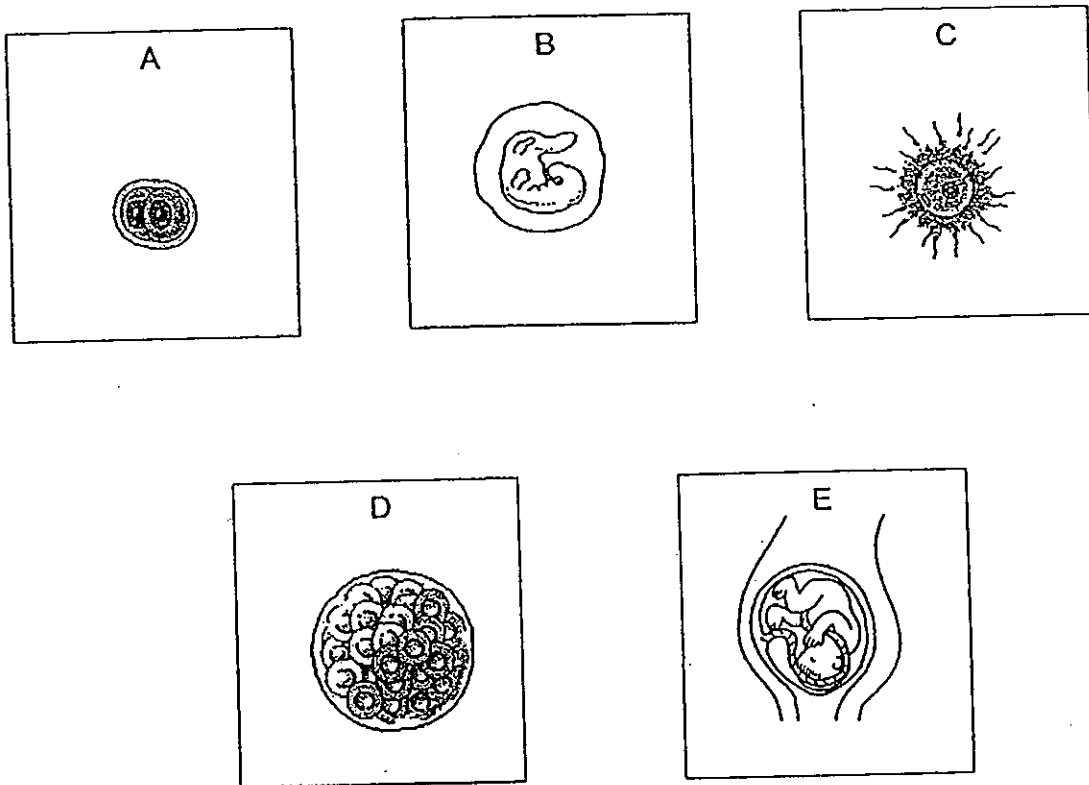


(a) Name the reproductive organ 'P' and state its function. [1]

Reproductive Organ 'P'	Function
_____	_____ _____ _____

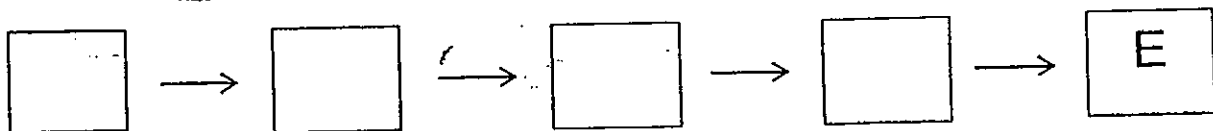
Score	1
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35 (b) The diagrams below show the different stages in human sexual reproduction.



Order the diagrams in the correct sequence.

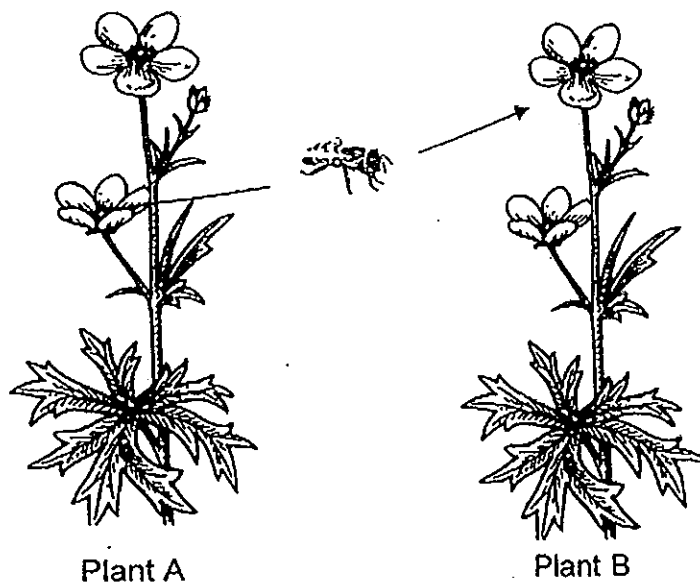
[1]



Score	1
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- 36 (a) Bees go from flower to flower to collect nectar. In what way is this behaviour of the bees helpful to the flowers? [1]

- (b) The diagram below shows an insect flying from a flower in plant A to a flower in plant B which is of the same species.

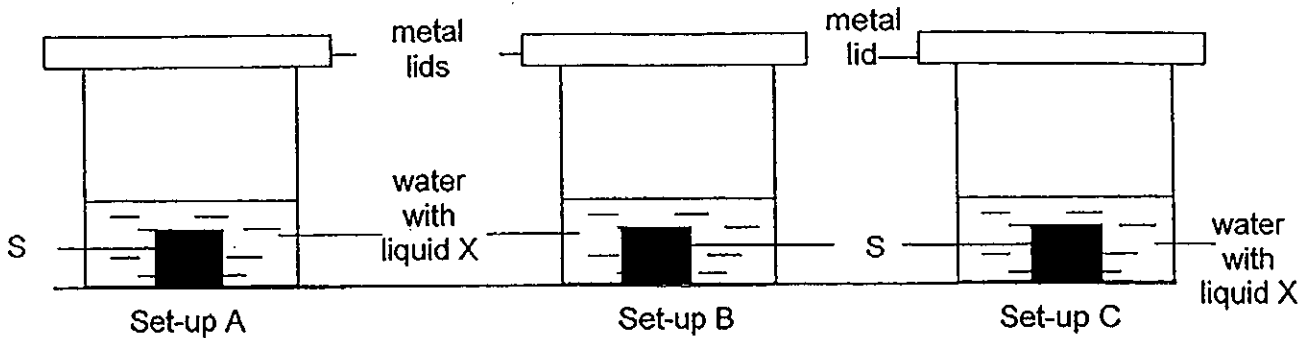


- (i) State which part of the flower will develop into a fruit. [1]

- (ii) Based on the process indicated in the diagram above, will the young plant that had developed from the seeds of plant B contain exactly the same characteristics as the parent plant B? Give a reason for your answer. [1]

Score	3
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37. Jia Xin conducted an experiment as shown in the diagram below. She put a cube of substance S into each set-up. Each set up contained 200ml mixture of water and liquid X as shown in the diagram below.



The table below shows the different proportions of water and liquid X in the mixture in each set up.

Type of liquid	Set-up A	Set-up B	Set-up C
water (ml)	130	100	50
liquid X (ml)	70	100	150
water and liquid X (ml)	200	200	200

Her teacher highlighted that the greater the amount of liquid X, the faster the rate at which substance S would break down into simpler substances.

(a) By comparing the set-ups above with the human digestive system, name the parts of the set-ups above which represent the following: [1]

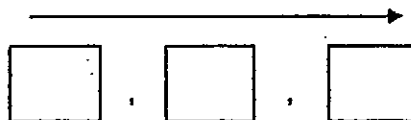
(i) Digestive juices : _____

(ii) Food : _____

(b) Based on the information above, arrange the set-ups, A, B and C, in increasing order according to the time taken for the cube of substance S contained in it to be broken down into simpler substances. [1]

shortest time taken

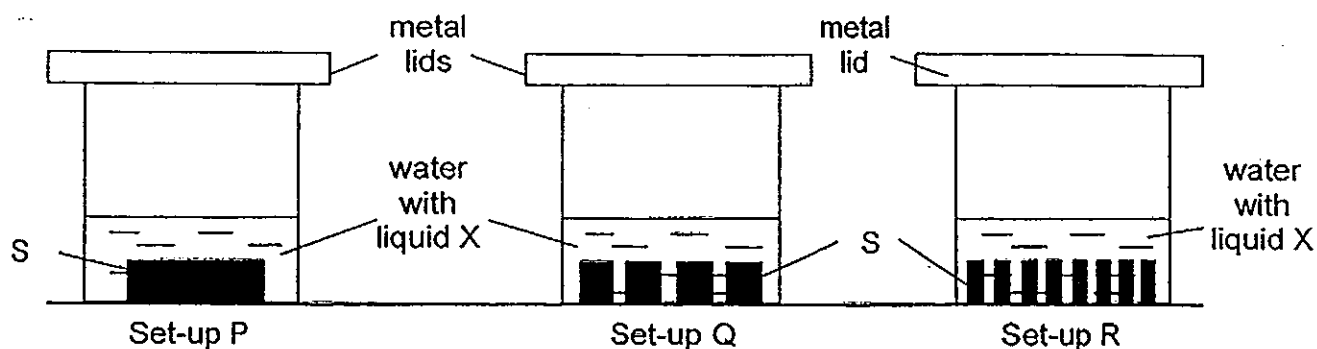
longest time taken



Score	2
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Continued from Pg.35

Jia Xin set up another experiment. She placed 10g of substance S and equal amounts of liquid X and water mixture in set-ups P, Q and R. The size of substance S in each set-up was changed as shown in the diagrams below.



Jia Xin recorded the amount of time taken for substance S to be broken down into simpler substances in the table below.

Set-ups	P	Q	R
Surface area of S (cm ²)	32	88	152
Time taken for S to break down (min)	50	28	15

- (c) What is the relationship between the surface area of substance S and the time taken for it to be broken down into simpler substances? [1]

Score	1
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38. Jane weighed 4 materials, P, Q, R and S, which were of similar sizes. She immersed each of them in a bowl of water which contained 20g of water for 2 minutes. Then, she removed them from the bowl before weighing them again.

She recorded her findings in the table below.

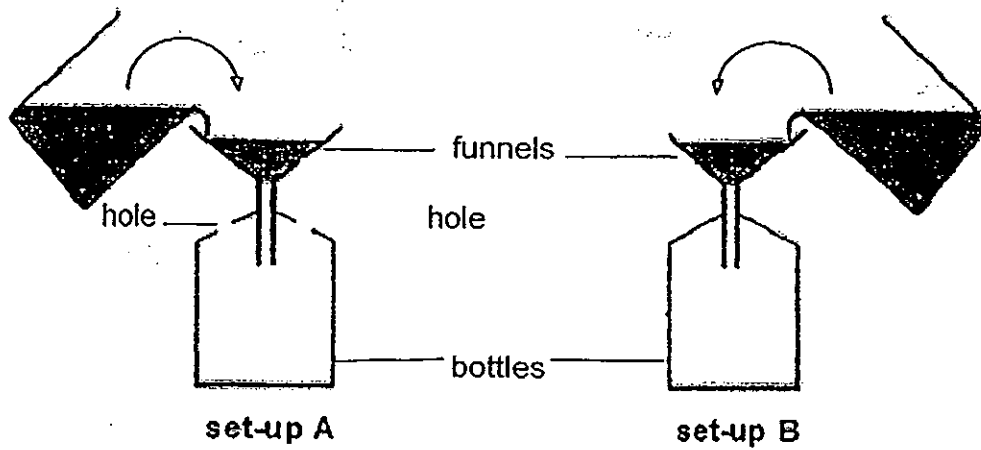
Materials	Mass of material before putting into water (g)	Mass of material after being immersed in water (g)
P	30	30
Q	30	37
R	30	50
S	30	40

- (a) Which one of the materials, P, Q, R or S, absorbed the most amount of water? [1]

- (b) From the data given, which one of the materials, P, Q, R or S, is most suitable for making umbrellas? Explain your answer. [2]

Score	3
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39. Fatimah set up an experiment as shown below. She poured 100ml of water in each funnel and left the set-ups for 3 minutes.

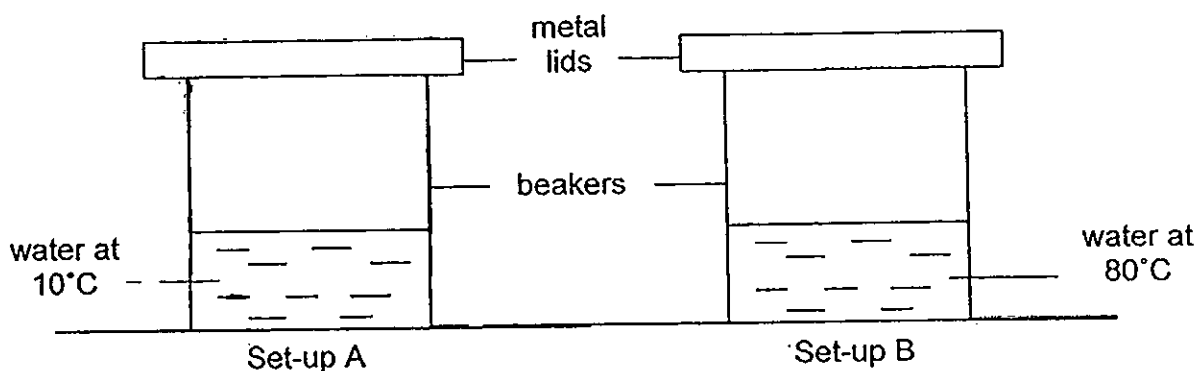


Which set-up, A or B, would have collected more water at the end of the 3 minutes? Explain your answer.

[2]

Score	2
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40. Jun Peng poured 500 ml of water into two identical containers. He then covered each container with a metal lid and placed them in a room with a constant temperature of 28 °C. After some time, he observed that tiny droplets of water had formed in both set-ups, A and B.

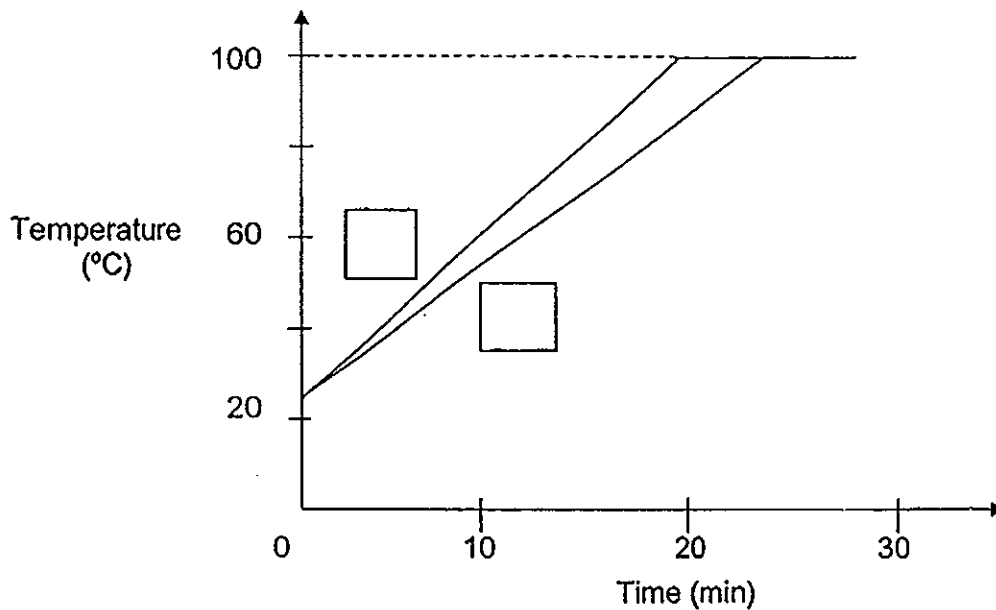


- (a) In the diagrams above, draw where the water droplets had formed in set-up A. [1]
- (b) Explain how the water droplets were formed in set-up A. [2]

Score	3
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41. Two containers, X and Y, made of different materials are of the same size and thickness. They each contained 500ml of water at 25°C. The same amount of heat was applied to the two containers for 30 minutes.

The diagram below shows the changes in the temperature of the water in the two containers.



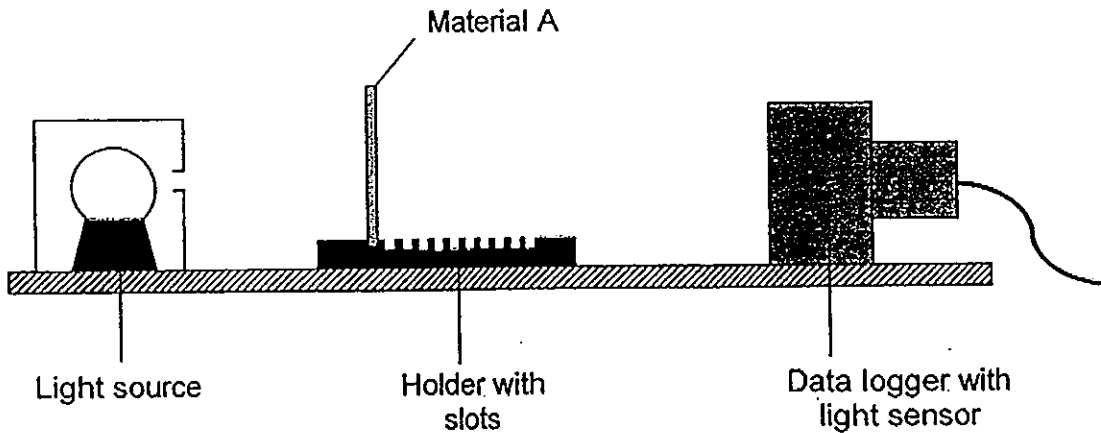
- (a) The water in container X took a shorter time than the water in container Y to reach boiling point.

Label the graphs above with 'X' and 'Y' correctly in the boxes provided.[1]

- (b) Explain why the water in container X reached the boiling point faster than the water in container Y. [1]

Score	2
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42. Ravi set up an experiment to measure the amount of light that passes through different types of materials. The materials he used are of the same size and thickness. He used a data logger with a light sensor to record the results. The holder with slots allowed different number of materials being placed at the same time.



He recorded his results in the table shown below.

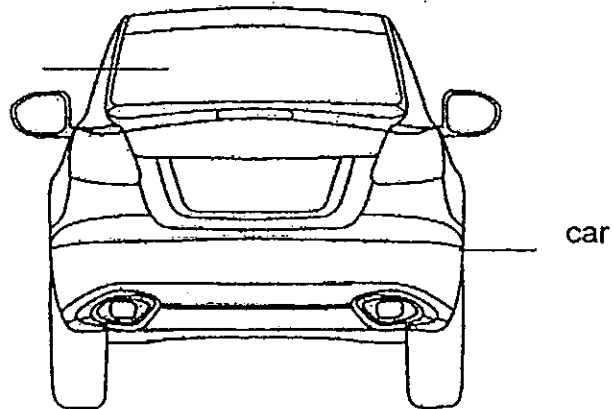
Number of material A	Amount of light recorded (Lux)
0	5000
1	3600
2	2700
3	2000
4	0
5	0

- (a) Based on the table above, describe the relationship between the number of pieces of material A used and the amount of light recorded. [2]

Score	2
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- (b) Ravi's father uses a film to paste on his car's windscreen to reduce the glare from the sun when he drives. The diagram below shows where he pastes it on the car.

Film pasted on the windscreen



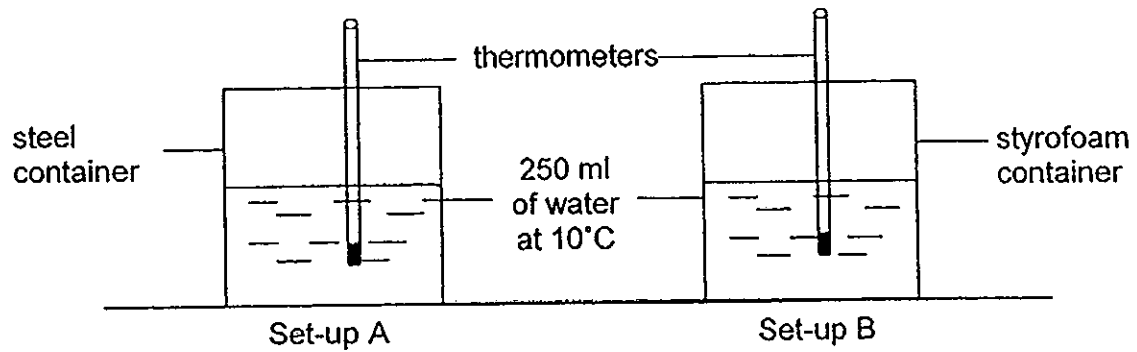
Based on the information above, what is the maximum number of sheets of film made of material A can he paste on his car windscreen to help reduce the maximum amount of glare from the sun while driving?

Give a reason for your answer.

[2]

Score	2
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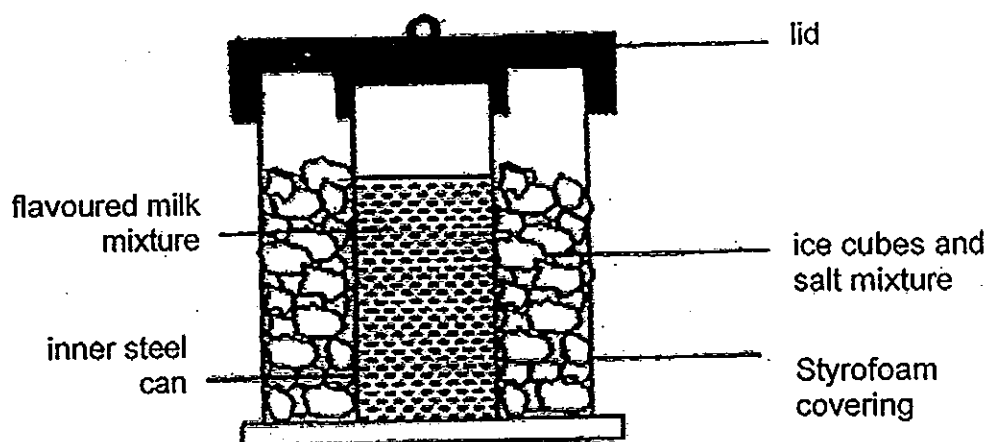
43. Rachel wanted to make ice cream without using the freezer. She carried out an experiment to investigate the heat conductivity of different materials. She prepared set-ups A and B using the apparatus shown in the diagrams below. She placed the two set-ups in the science laboratory.



She then recorded the temperature of the water in each set-up at every 10-minute interval.

Time (min)	Temperature (°C) of water in	
	steel container	styrofoam container
10	13	10
20	20	12
30	25	16
40	27	18
50	29	21
60	29	24

Based on the information above, she prepared a set-up as shown below to make ice cream without using the freezer.



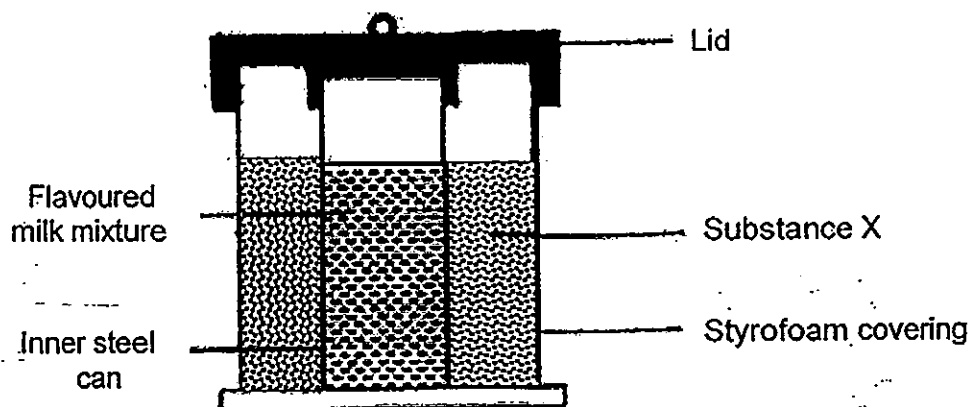
Continued from Pg.43

She used a styrofoam covering on the outer layer of the container and a steel can to contain the milk mixture in the inner layer of the container.

- (a) Explain why she chose to use these two materials for the set-up used to make ice cream. [2]

Materials	Explanations
styrofoam covering	
steel can	

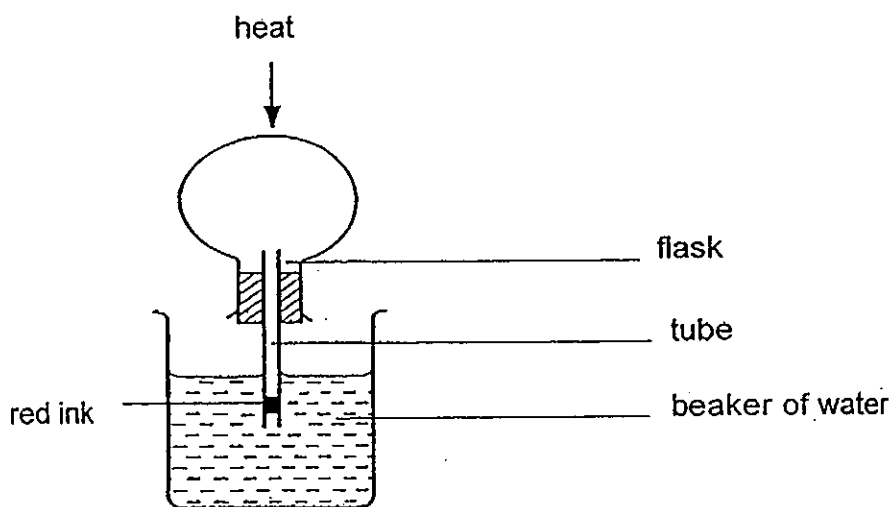
- (b) Rachel repeated the experiment using the same set-up but replaced the ice cubes and salt mixture with substance X. She observed that it took a shorter time for the milk mixture to turn into ice cream than using the previous set-up.



Explain why the milk mixture took a shorter time to turn into ice cream when the ice cubes and salt mixture is replaced with substance X. [1]

Score	3
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44. Samuel sets up the apparatus as shown below. In the set-up, a round bottom flask is inverted into a beaker of water with a glass tube containing a drop of red ink.



- (a) When the flask is heated with a gas burner, Samuel observes that the drop of red ink flows out of the tube and the water in the beaker turns slightly red.

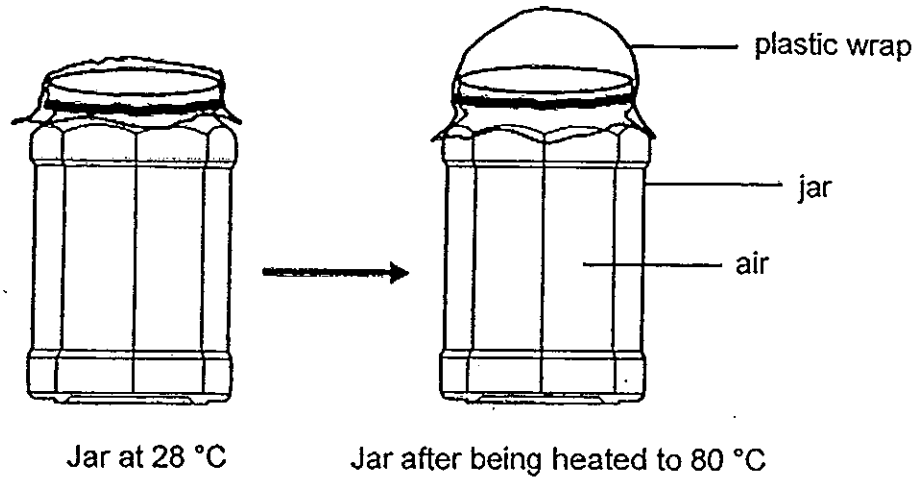
Explain what caused the drop of red ink to flow out of the tube. [2]

- (b) Besides the change in colour of the water in the beaker, predict one other observation Samuel will make. [1]

Score	3
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Continued from Pg.45

- (c) Samuel covered a jar tightly with a piece of plastic wrap so that air could not enter it. The diagrams below show the jar after Samuel had heated it.



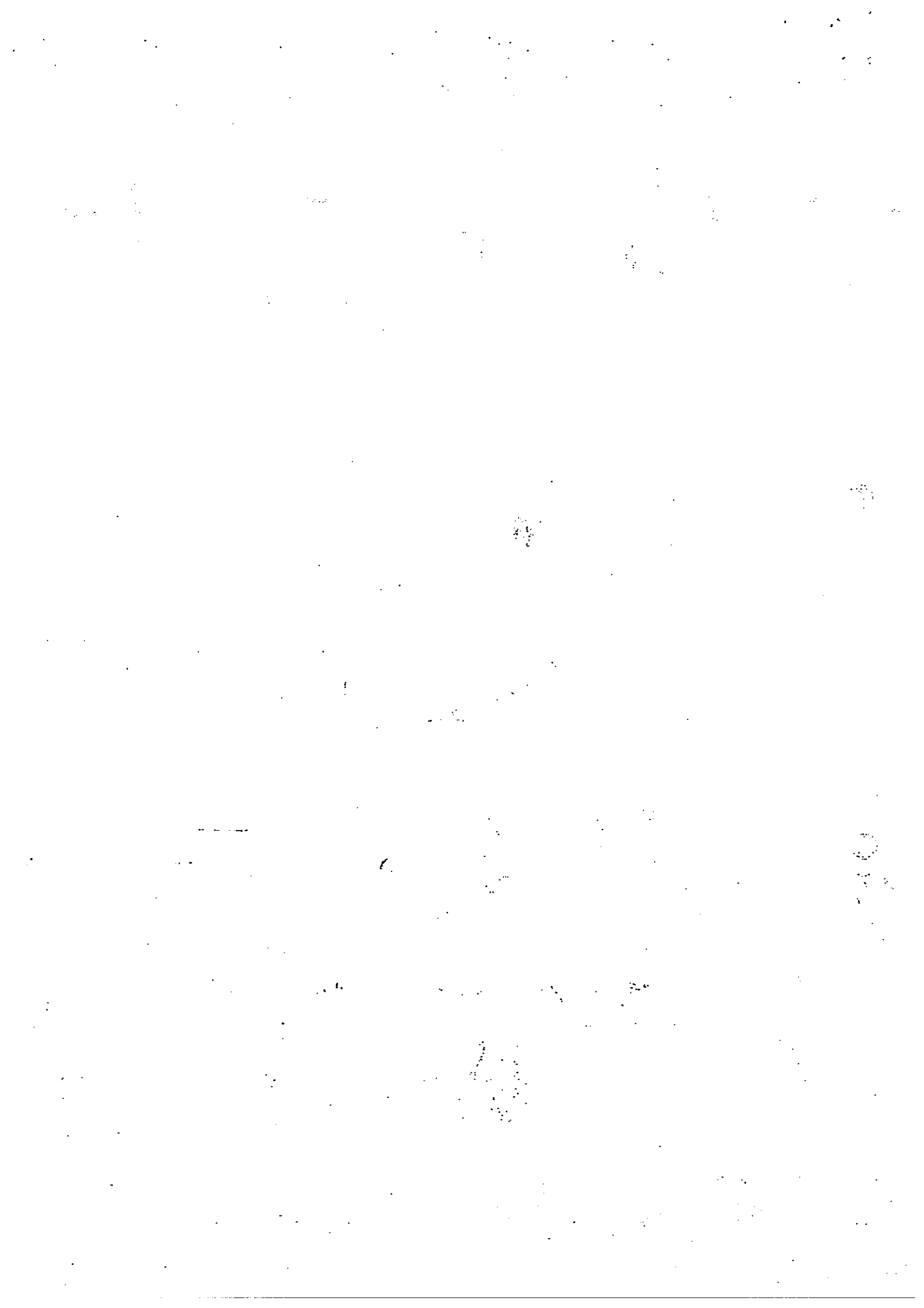
Indicate the changes in the mass of the air and the volume of air in the jar after the jar has been heated. [1]

Put a tick (✓) in the appropriate box(es) below.

	Increased	Decreased	Remained the same
(i) Mass of air in the jar.			
(ii) Volume of air in the jar	✓		

- END OF PAPER -

Score	1
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ANSWER SHEET

EXAM PAPER 2013

SCHOOL : RAFFLES GIRLS'

SUBJECT : PRIMARY 5 SCIENCE

TERM : SA1

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

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

- 31)a)The type of string.
b)The length of string.
c)String C. It holds the most amount of mass before it snapped.

- 32)a)X: 3 stag- life cycle.
Y: 4 stag- life cycle.
b)Housefly.

33)641325

- 34)a)The block of ice gained heat from the surrounding air and the surrounding air lost heat to the block of ice so when the wind blows the surrounding cooler air, Ali's body lost heat to the cooler surrounding air so he felt cooler.

b)200g of the water had evaporated which cause a decrease in mass.

- 35)a)testes / It reproduce the male reproductive cells called sperms.
b)C→A→D→B

36)a)It helps pollination to occurs as it transfers pollen grains from the anther to the stigma.

b)i)Ovary.

ii)No. This is only a cross-pollination process.

37)a)i)Liquid

ii)substance S

b)C, B, A

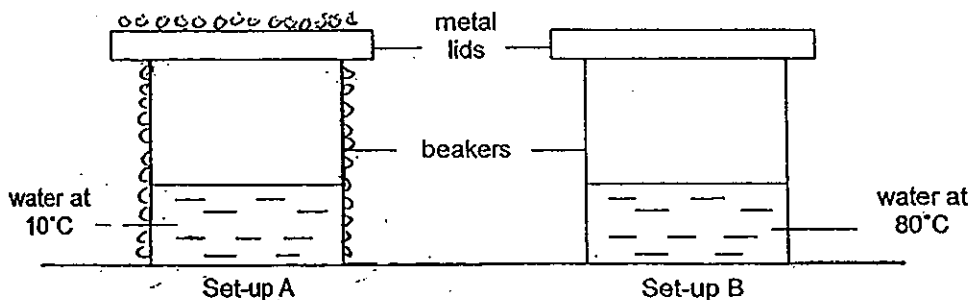
c)When the surface area of S increase, the time taken for S to break down decrease.

38)a)Material R.

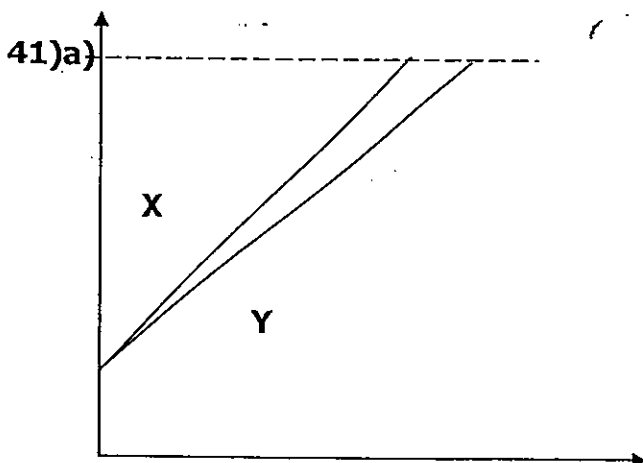
b)Material P. The mass of material after being immersed in water remain the same. It is waterproof.

39)Set-up A. In Set-up A, there are holes on the bottle which allow air to escape and not occupy the space in the bottle so the water will flow into the bottle to occupy the same. In Set-up B, there are no hole on the bottle for the air inside to escape, the air occupies the space in the bottle and very little water could enter the bottle.

40)a)



b)The water vapour in the surrounding air condenses on the cool outer surface of the container and metal lid to form tiny droplets of water.



41)b)The material of container X is a better conductor of heat than the material of container Y so the heat travels faster.

42)a)When the number of piece of material A increases, the amount of light recorded decreases. When 4 or more piece of material A are used, no light can pass through so the amount of light recorded is zero.

b)Maximum is 3 sheets. If he pastes 4 sheets, no light can pass through and he cannot see where he is driving. If he pastes 3 sheets, he can still see outside but the least amount of light can pass through thus reducing the maximum amount of glare form the sun while driving.

43)a)Styrofoam covering : Styrofoam is an insulator of heat so it will not gain heat from the surrounding. Thus the ice cubes will not melt easily.

Steel can : So it will keep the ice cubes and salt mixture and milk mixture at the same temperature.

b)Substance X has a lower freezing point than the ice cubes and salt mixture.

44)a)The air in the flask gained heat from the gas burner and expanded and pushed the drop red of red ink.

b)Bubbles of air can be seen in the water.

c)i)Remained the same.

ii)Increased

