



RED SWASTIKA SCHOOL

RED SWASTIKA SCHOOL

2011 SEMESTRAL ASSESSMENT 1

SCIENCE PRIMARY 6

Name : _____ ()

Class : Primary 6/ _____

Date : 16 May 2011

BOOKLET A

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

Booklet A: 30 questions (60 marks)


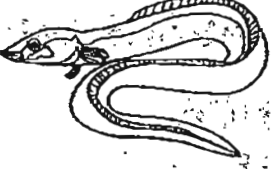


Note:

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 21
 - 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. Study the following organisms below carefully.

			
banana plant	eel	platypus	housefly

These organisms can be grouped together based on certain characteristics:

- A: need air, food and water
- B: move freely from one place to another
- C: can reproduce
- D: live on land

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

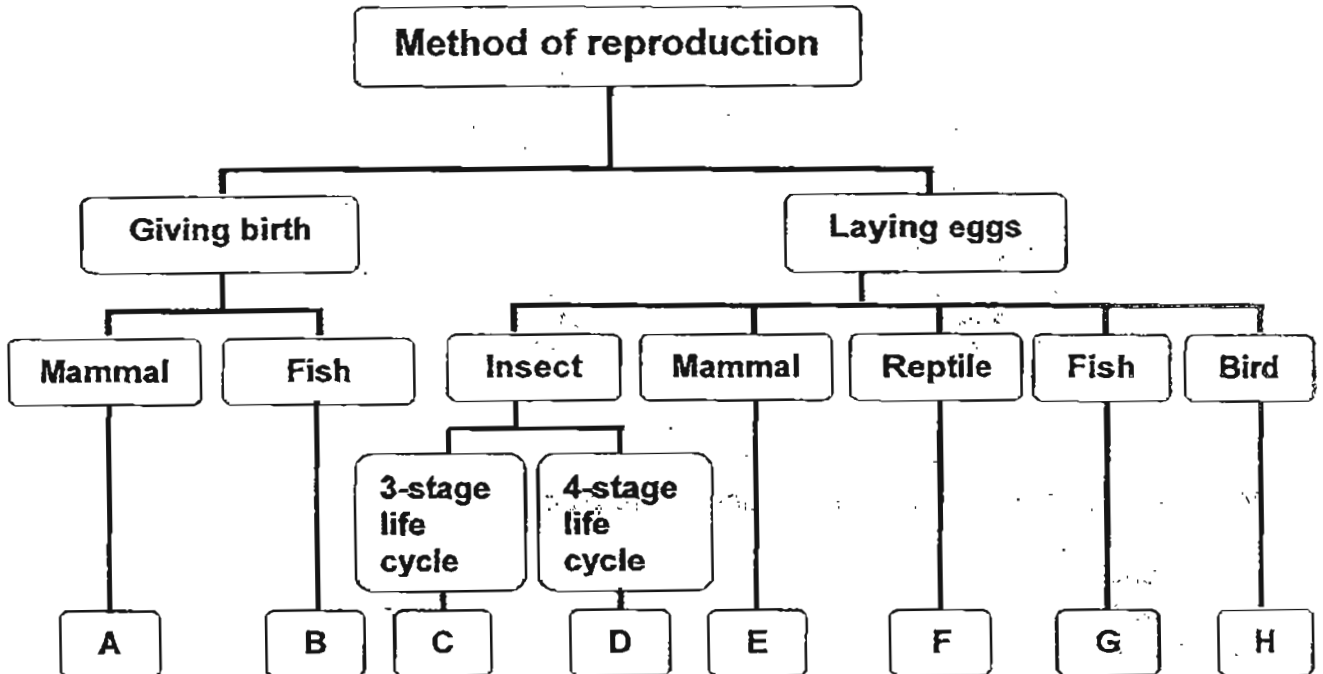
2. Alice wants to place the items listed below onto two separate shelves.

clear plastic bag	mineral water	porcelain spoon
orange juice	hand towel	
iodine solution	wooden ladle	metal fork

How should she classify the objects such that there are only four items on each shelf?

- (1) Conductors and non-conductors of electricity
- (2) Magnetic and non-magnetic materials
- (3) Opaque and transparent materials
- (4) Solid and liquid materials

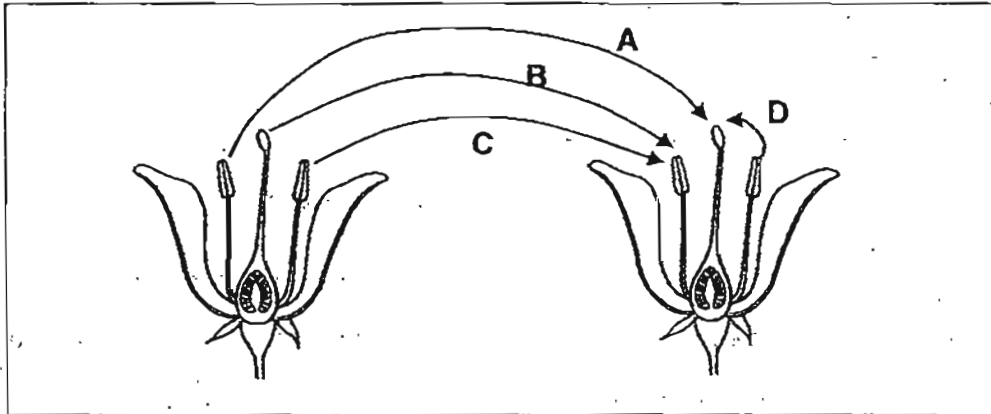
3. Study the chart below.



Which of the following represents the spiny anteater, the dragonfly and the dolphin?

	Spiny anteater	Dragonfly	Dolphin
(1)	A	C	A
(2)	A	D	B
(3)	E	C	A
(4)	E	D	B

4. The diagram shows two flowers from the same plant.



Which pair of arrows shows pollination taking place?

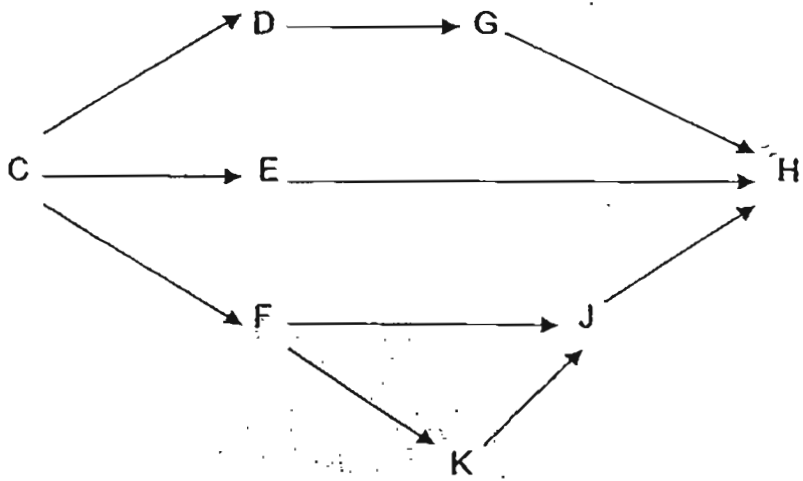
- (1) A and B
 - (2) B and C
 - (3) A and D
 - (4) C and D
5. An oil spill from a tanker covered a large area of water near the seashore. The organisms living in that area were badly affected.

Which of the following statements is/are true about how some seabirds were badly affected?

- A: They drank the water that was contaminated by the oil.
- B: They ate the fish which had swallowed the oil and were poisoned.
- C: Their feathers were soaked with oil and they could not fly.
- D: Their feathers were stuck together by the oil and they could not keep themselves warm.

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

6. Four statements are made about some organisms in a food web shown below.

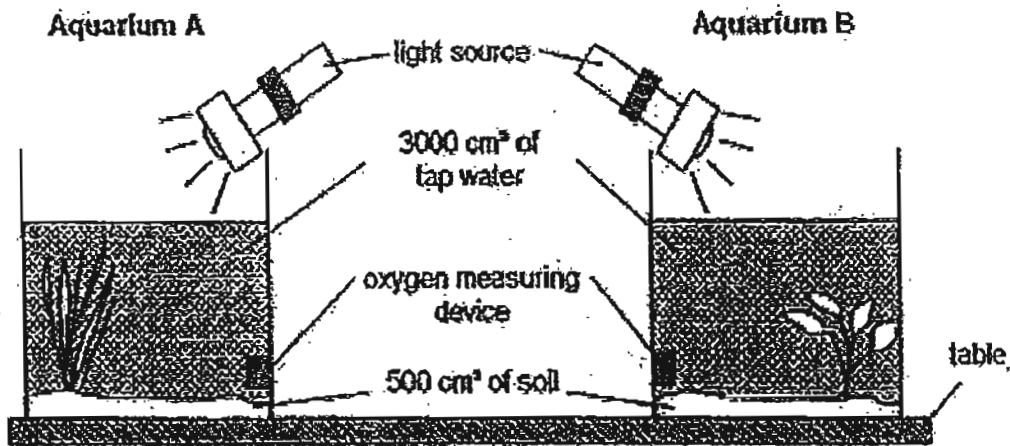


	Statement	True	False	Not possible to tell
A:	C is a maize plant.			√
B:	There are 3 plant-eaters.	√		
C:	F is both a prey and a predator.		√	
D:	H directly controls all the populations in the food web.			√

Which statement is wrongly ticked?

- A
- B
- C
- D

7. Richard has two aquariums; A and B, each containing a different type of plant as shown in the diagram below. Both aquariums were left under a similar light source for five hours. The amount of dissolved oxygen in each aquarium was measured at the start and at the end of the experiment.



What was the aim of the experiment?

- (1) To find out if the amount of light affects the rate of photosynthesis.
 (2) To find out if carbon dioxide is given out during photosynthesis.
 (3) To find out which type of plant has a faster rate of photosynthesis.
 (4) To find out if different amounts of dissolved oxygen affects the rate of photosynthesis.
8. Three children tested some food with iodine and recorded the results in a table shown below:

Food	Observation
Rice grains	Iodine turns dark blue
French fries	Iodine turns dark blue
Fish	Iodine remains the same colour
Chicken	Iodine remains the same colour

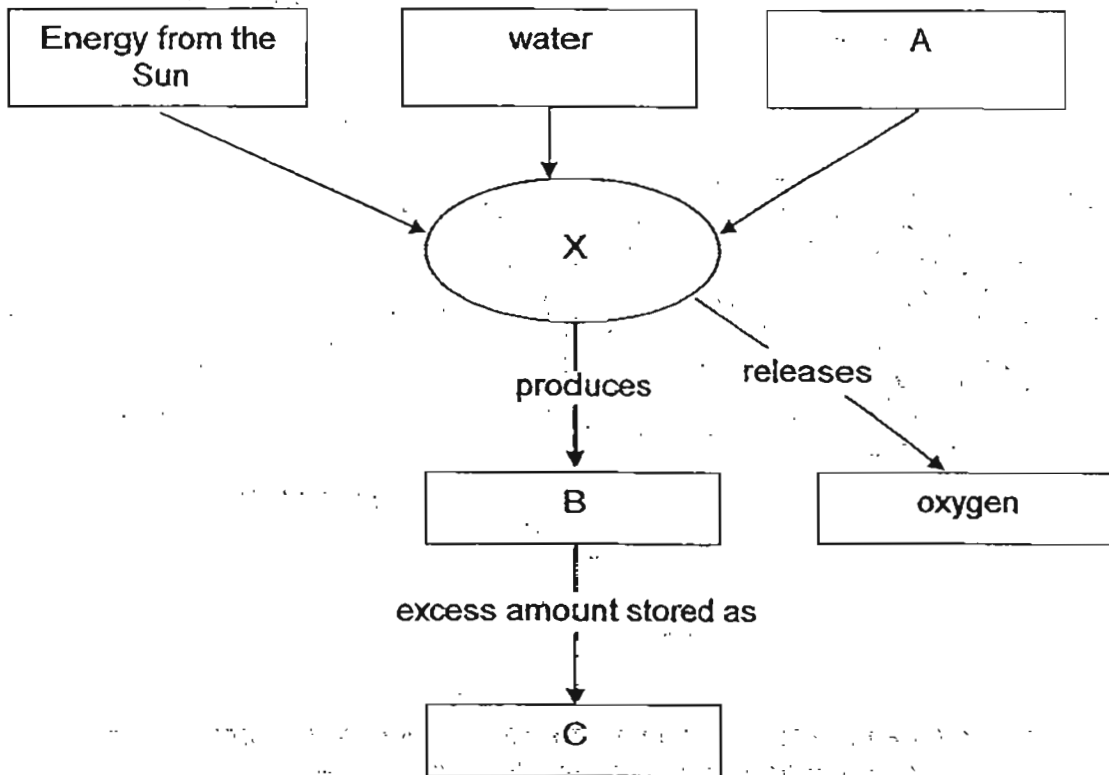
Based on the table above, the children made the following statements:

- Cindy: Starch is not present in the meat tested
 Sally: Starch is not found in meat but only in plants.
 Jane: Only seeds contain starch.

Who made the correct statements?

- (1) Cindy and Jane only
 (2) Cindy and Sally only
 (3) Sally and Jane only
 (4) All of the children

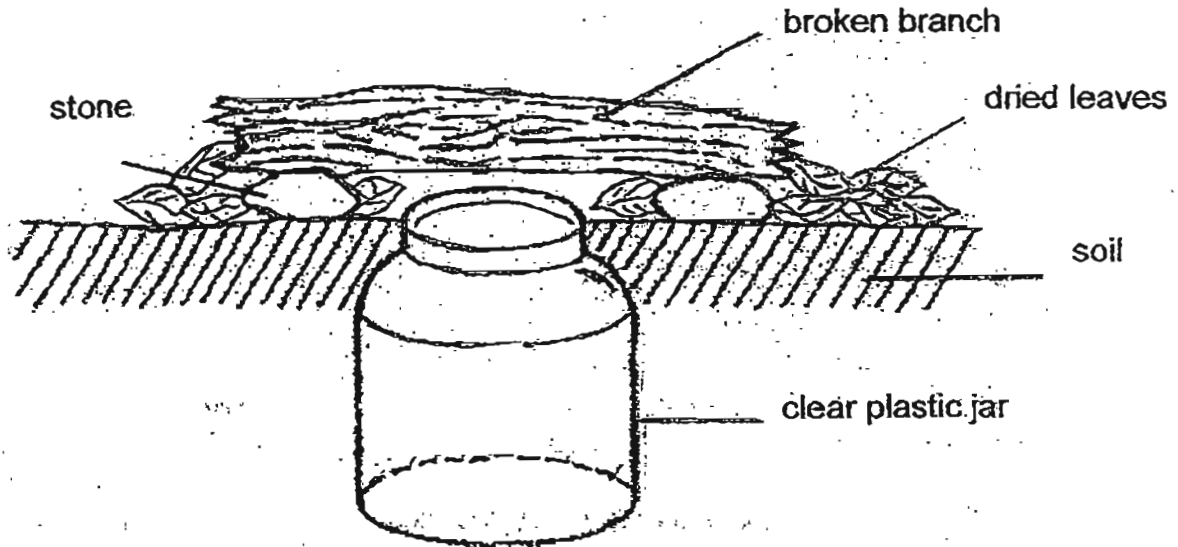
9. Study the following concept map.



Identify process X and substances A, B and C respectively.

	X	A	B	C
(1)	Photosynthesis	Oxygen	Starch	Sugar
(2)	Respiration	Carbon dioxide	Sugar	Starch
(3)	Respiration	Oxygen	Starch	Sugar
(4)	Photosynthesis	Carbon dioxide	Sugar	Starch

10. Rahman dug a hole in a shaded and damp location in his school garden. He placed a clear plastic jar without its lid into the hole. He then placed a broken branch over the opening of the jar as shown below.

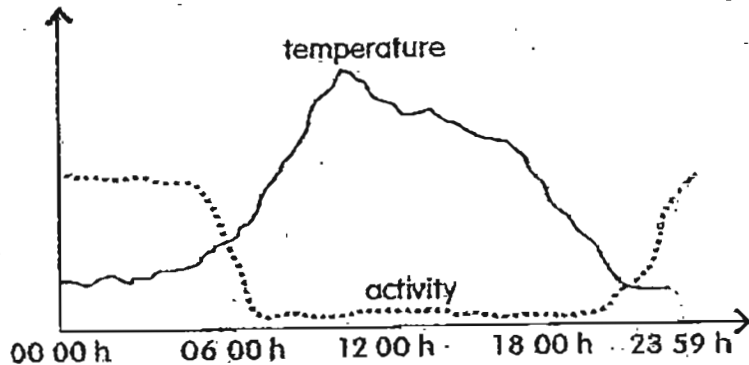


When he checked the jar a few days later, he found some organisms in it. Which of the following organisms would Rahman most likely find in the jar?

- A. Ants
- B. Spiders
- C. Millipedes
- D. Caterpillars

- E. B and C only
- F. A, B and C only
- G. A, C and D only
- H. B, C and D only

11. The fennec fox lives in the desert. The two line graphs below show the relationship between the behavioural patterns of the fennec fox and the temperature changes of the desert in a day.



What conclusion can you make about the fennec fox based on the graph?

- A: It is structurally adapted to survive in the hot desert.
 B: It is able to survive through long periods of drought in the desert.
 C: Its behavioural adaptation helps it to survive in the hot desert.
 D: Its activity increases when the temperature is cooler from 21 00h to 06 00h.
- A and B only
 A and D only
 B and C only
 C and D only
12. The table below showed the performance schedule of penguins at a particular park from 3rd to 9th January 2011.

	3 rd (Mon)	4 th (Tue)	5 th (Wed)	6 th (Thu)	7 th (Fri)	8 th (Sat)	9 th (Sun)
Number of shows	0	2	2	3	3	5	4

The trainer took note of the food intake of his penguins over that week. His data was shown in the table below:

	3 rd (Mon)	4 th (Tue)	5 th (Wed)	6 th (Thu)	7 th (Fri)	8 th (Sat)	9 th (Sun)
Number of fishes eaten	30	60	60	70	70	90	80

What conclusion can the trainer make about the penguins based on the schedule and data?

- Penguins need less energy when there are more performances.
 Penguins do not need energy when there is no performance.
 Penguins' intake of food does not depend on the number of shows per day.
 Penguins' intake of food increases when the number of performances increases.

13. The PSI (Pollutant Standard Index) values show the quality of the air in a particular location. The indication of the air quality with the associated range of PSI values are shown in the table below:

PSI Value	Air Quality
1 to 50	Good
51 to 100	Moderate
101 to 200	Unhealthy
201 to 300	Very unhealthy
Above 300	Dangerous

The PSI in this location was taken over five days and the results are shown below:

Days	PSI values
1	48
2	91
3	113
4	128
5	148

What is/are the possible reason(s) that explain(s) the patterns observed in the PSI values over the five days?

- A: A sudden volcanic eruption took place near the location.
- B: Ash caused by forest fire is released into the air forming a haze.
- C: Exhaust fumes containing carbon monoxide and sulfur dioxide are released by vehicles.
- D: Fumes containing harmful pollutants from factories are released into the atmosphere.

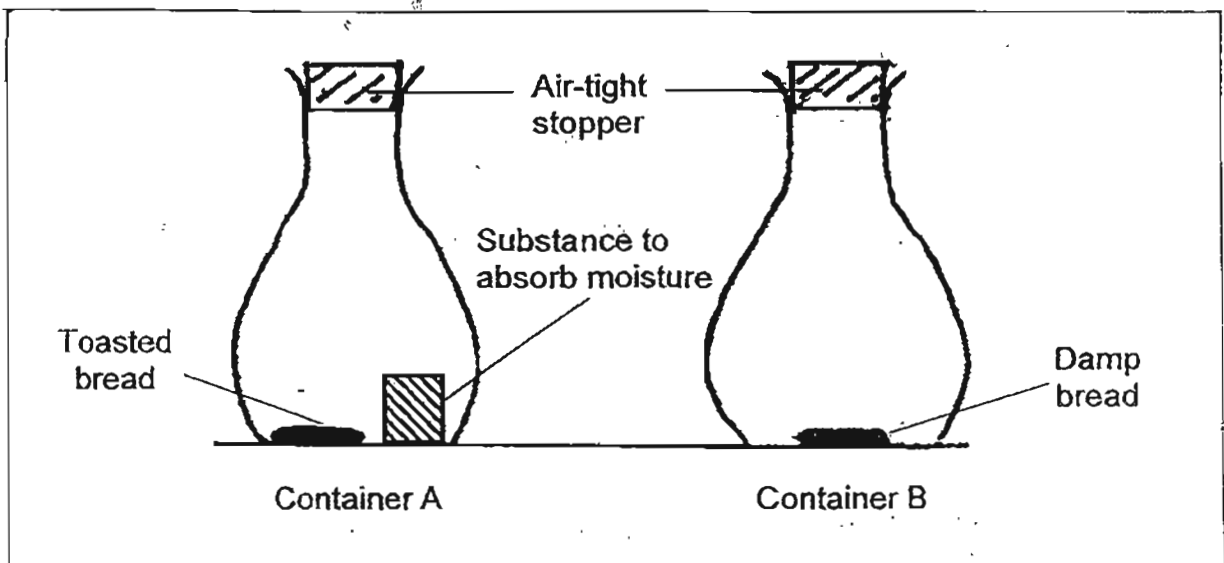
- (1) A only
- (2) B only
- (3) B, C and D only
- (4) A, B, C and D

14. Terence was reading an article in the National Geographic magazine and noted the interdependence of 4 organisms, P, Q, R and S as follows.
- A: If population R leaves the habitat, population P will gradually decrease.
 B: If population P increases, population Q will decrease.
 C: If population S dies, all the other populations will be affected and will eventually die.

Based on his observations, which one of the following shows a possible food chain linking the four organisms?

- (1) P → Q → R → S
 (2) S → R → Q → P
 (3) S → R → P → Q
 (4) P → Q → S → R

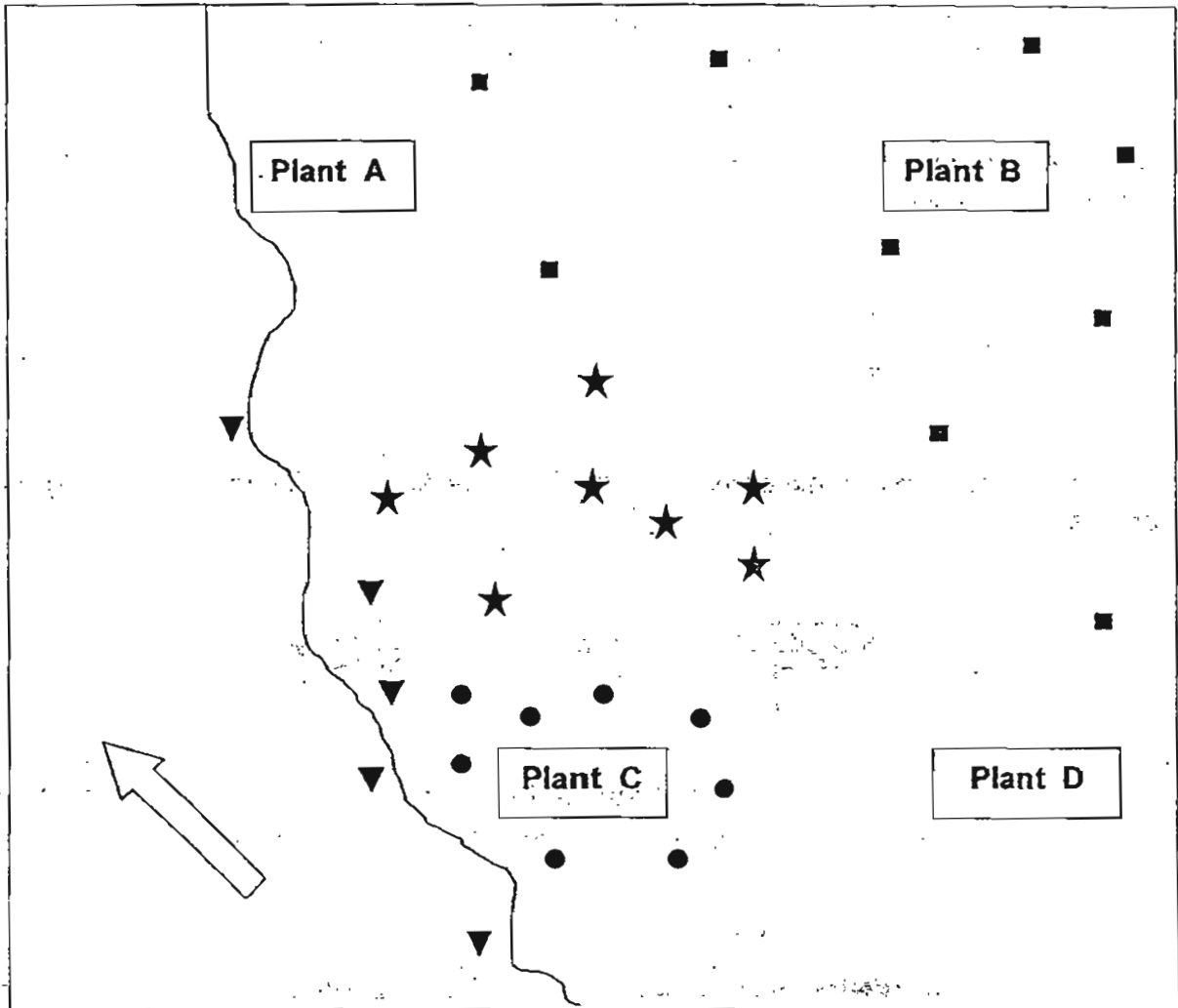
15. Xiao Wei conducted an experiment to find out if water is needed for moulds to grow on bread.



Which of the following statements is/are true about the experiment?

- A: The toasted bread did not decompose.
 B: Moulds appeared on the damp bread.
 C: Decomposition cannot take place in both containers A and B.
- (1) A only
 (2) B only
 (3) A and B only
 (4) A, B and C

16. Farmer Ah Hock planted 4 types of plants, A, B, C and D in his plot of land in June. The map below shows where the plants were located and the distribution of their dispersed seeds.

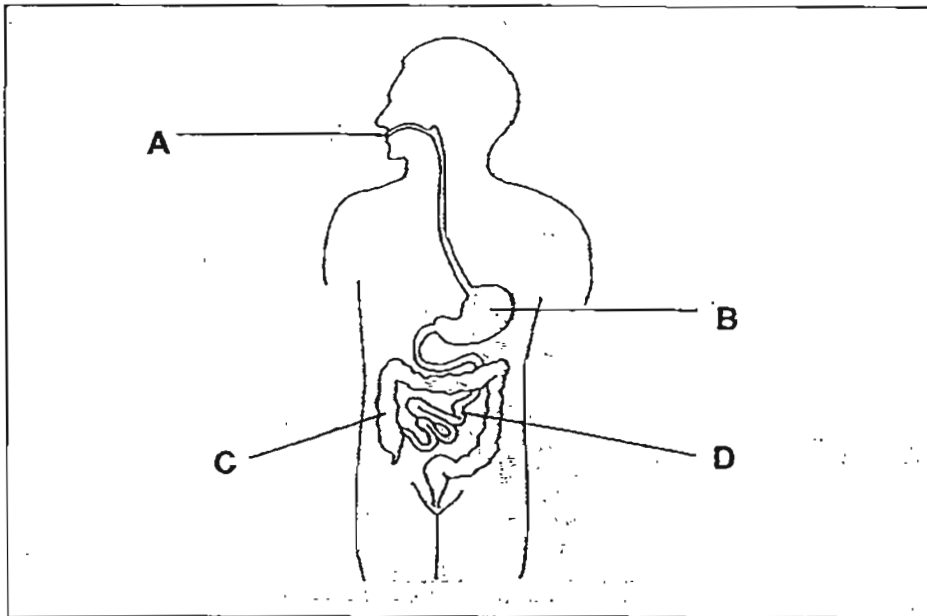


Key :	▼ Seed of plant A	■ Seed of plant B	River
	● Seed of plant C	★ Seed of plant D	Wind direction

How were seeds from plant A, B, C and D most likely dispersed?

	A	B	C	D
(1)	wind	animals	water	wind
(2)	water	wind	water	splitting
(3)	water	wind	splitting	animal
(4)	water	animals	splitting	wind

17. The diagram below shows the digestive system of a human body.



In which part, A, B, C or D, of the human digestive system would the digestion of a piece of bread start and end?

	Digestion starts.	Digestion ends
(1)	A	C
(2)	A	D
(3)	B	C
(4)	B	D

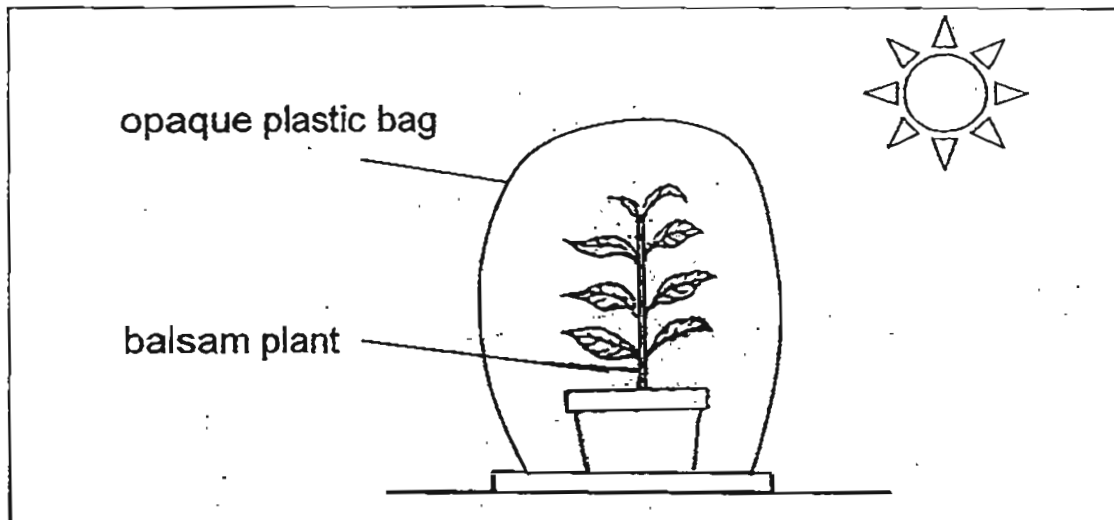
18. James was given cells A, B, C and D from different parts of a plant and an animal. He observed the sample cells under the microscope and recorded his observation in the table below.

	Cell A	Cell B	Cell C	Cell D
Nucleus		√	√	√
Cell wall		√		√
Cytoplasm	√	√	√	√
Chloroplast				√
Cell membrane	√	√	√	√

Which one of the following classifications is correct?

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

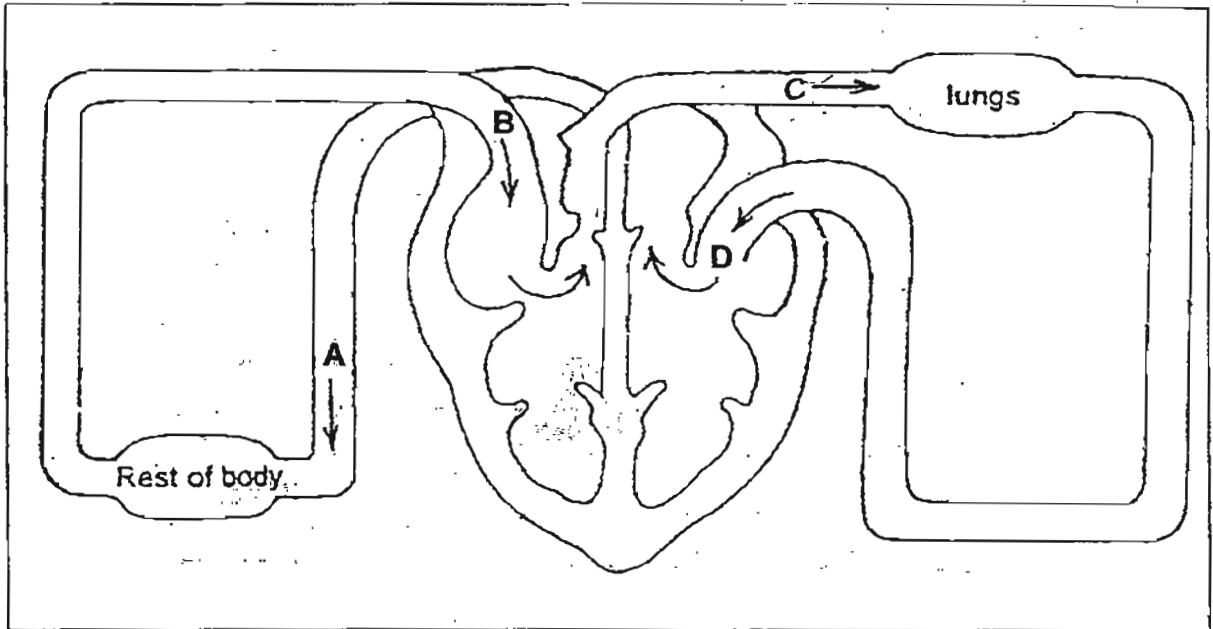
19. Mei Lin covered a pot of well watered balsam plant in an opaque plastic bag and sealed it tightly to prevent air from escaping and entering. Next, she placed the sealed potted plant in her garden under direct sunlight. The experiment was conducted at 10am in the morning.



Which one of the following correctly shows the change in the amount of gases present in the sealed potted plant in the afternoon and at night?

	Amount of oxygen		Amount of carbon dioxide	
	Afternoon	Night	Afternoon	Night
<input checked="" type="checkbox"/> (A)	decrease	decrease	increase	increase
<input checked="" type="checkbox"/> (B)	increase	increase	decrease	decrease
<input checked="" type="checkbox"/> (C)	increase	decrease	decrease	increase
<input checked="" type="checkbox"/> (D)	increase	decrease	increase	decrease

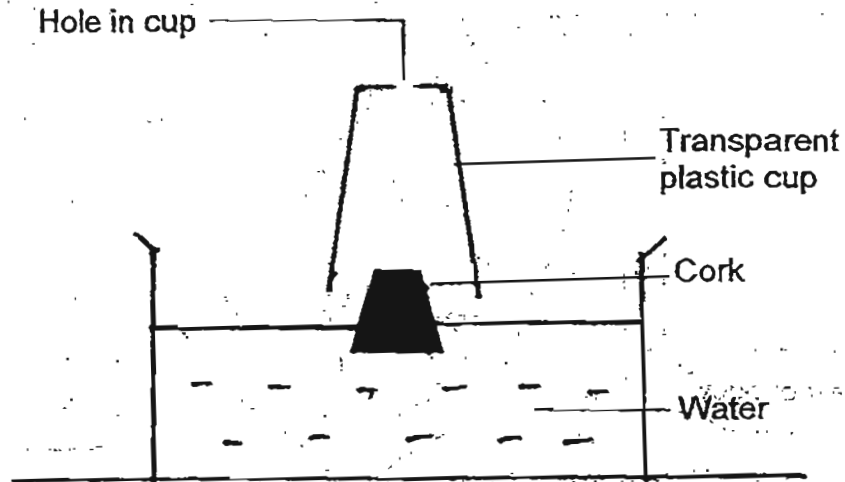
20. The diagram below shows the movement of blood to and from a human heart.



Which one of the following descriptions about the blood in blood vessels A, B, C and D is correct?

	A	B	C	D
<input checked="" type="checkbox"/>	rich in carbon dioxide	rich in oxygen	poor in carbon dioxide	poor in oxygen
<input checked="" type="checkbox"/>	poor in oxygen	rich in carbon dioxide	rich in oxygen	rich in carbon dioxide
<input checked="" type="checkbox"/>	poor in carbon dioxide	poor in oxygen	rich in carbon dioxide	rich in oxygen
<input checked="" type="checkbox"/>	rich in carbon dioxide	poor in oxygen	poor in carbon dioxide	rich in oxygen

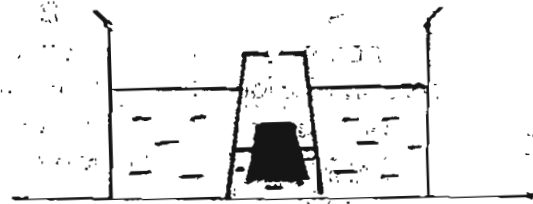
21. Jia Wen placed a piece of cork in a basin of water. Next, she made a hole at the bottom of a transparent plastic cup and placed it over the piece of cork. She then pushed the cup vertically down into the water.



Which one of the following diagrams shows the result of her experiment?



(1)



(2)



(3)



(4)

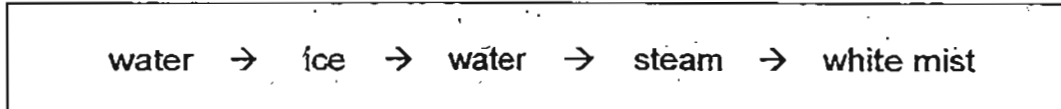
22. Boxes X, Y and Z describe the three states of matter.

X
No definite volume, no definite shape

Y
Definite volume, definite shape

Z
Definite volume, no definite shape

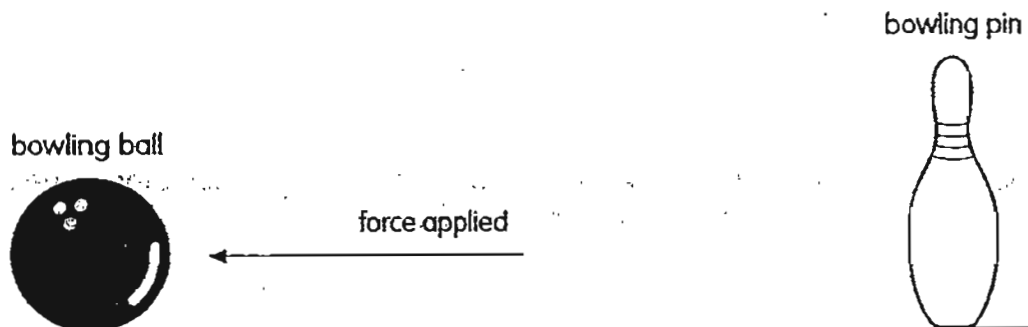
The changes in the state of water are shown in the diagram below.



Which one of the following correctly shows the above changes?

- (1) Z → Y → Z → X → Z
- (2) Z → Y → Z → X → X
- (3) Y → X → Y → Z → Z
- (4) Y → Z → Y → X → X

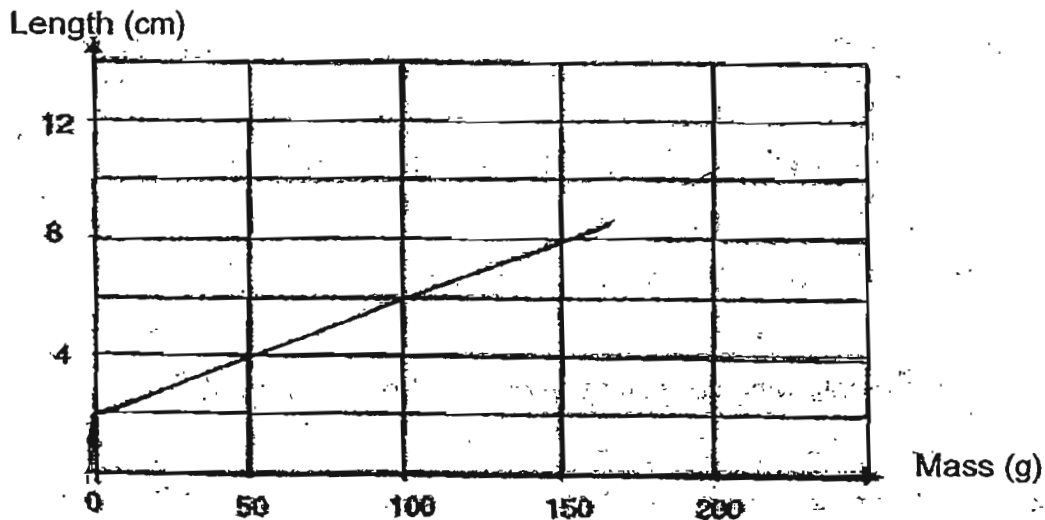
23. A ball is rolling towards a bowling pin. Ali applies a force on the ball in the direction opposite to the movement of the ball as shown below.



Which of the following could happen?
The ball could _____

- A: stop moving
 - B: move away from the bowling pin
 - ~~C: move towards the bowling pin at a slower speed.~~
 - ~~D: move towards the bowling pin at the same speed~~
- (1) C only
 - (2) A and B only
 - (3) A, B and C only
 - (4) A, B, C and D

24. The graph below shows the changes in the length of a spring when various weights are attached to it.



Using the graph, predict the extension of the spring when a 200g weight is attached to the spring.

- (1) 6 cm
 - (2) 8 cm
 - (3) 10 cm
 - (4) 12 cm
25. Rani prepared four set-ups, A, B, C and D by placing water into containers made of the same material. The table below shows the different conditions at the start of each experiment.

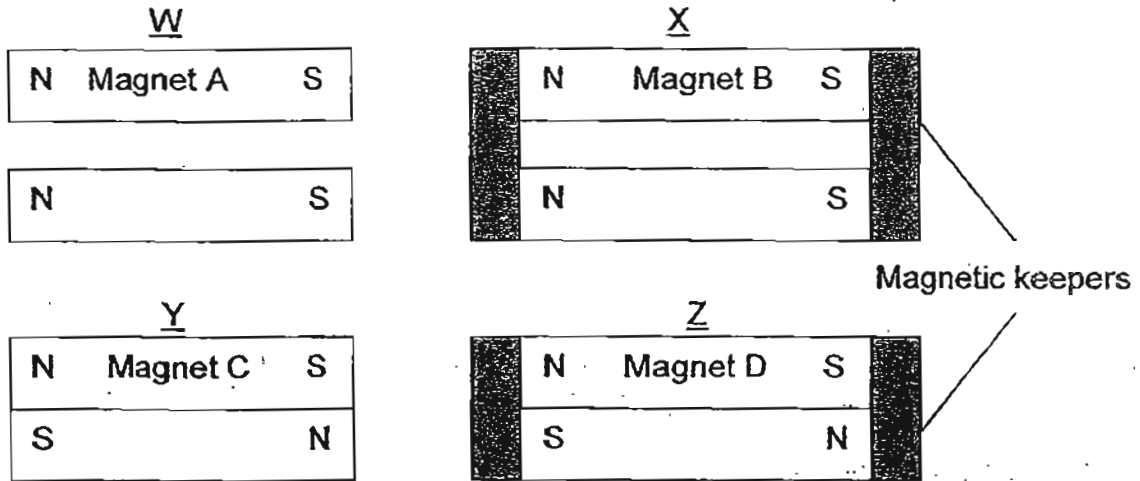
	Set-up			
	A	B	C	D
Room temperature ($^{\circ}\text{C}$)	27	27	27	32
Exposed surface area of water (cm^2)	80	140	80	80
Volume of water (cm^3)	400	600	600	600

Rani wanted to investigate how the rate of evaporation of water was affected by the exposed surface area.

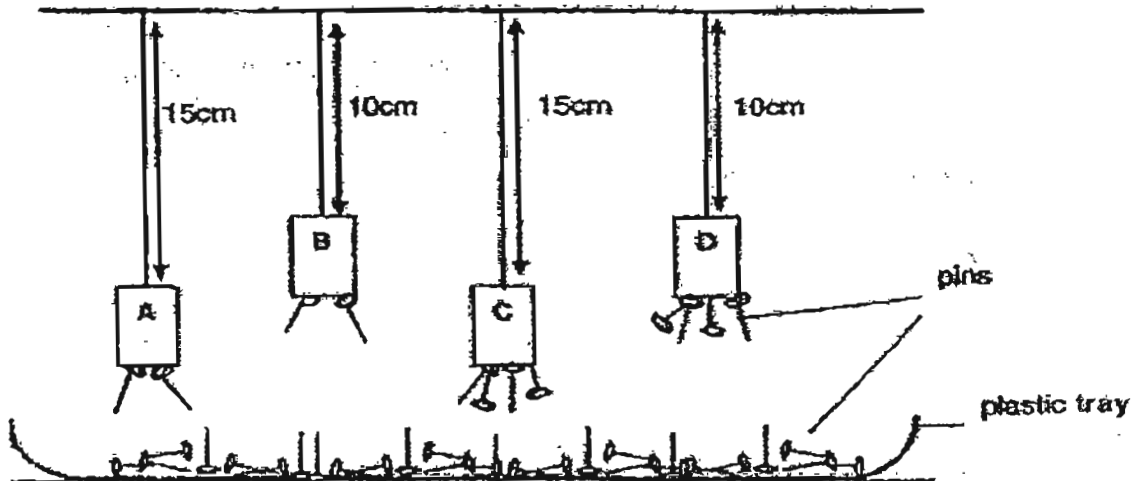
Which of the following set-ups should Rani compare?

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

26. Shen Han wanted to find out the best way to store magnets. He stored four identical magnets, A, B, C and D, with other magnets of similar strength as shown below.



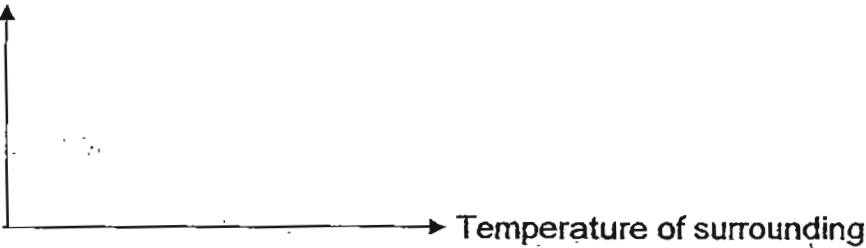
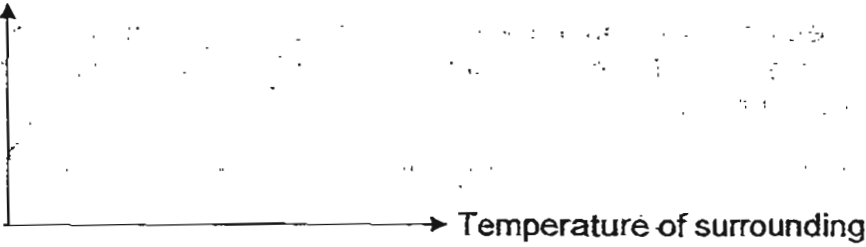
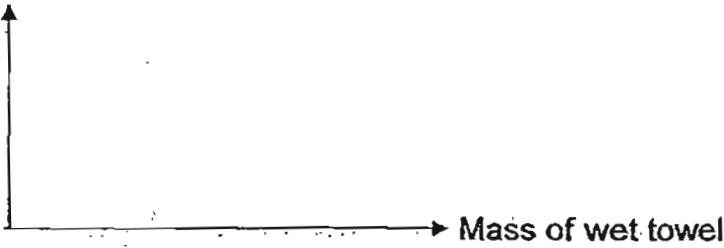
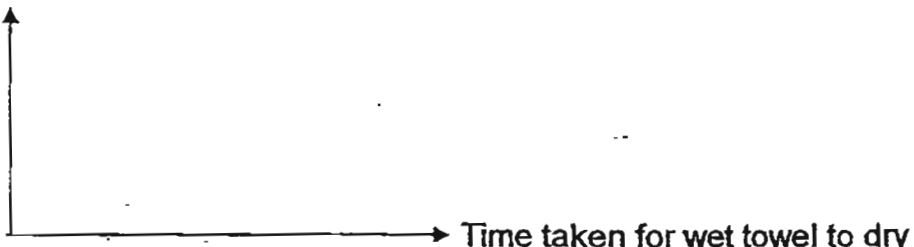
After two weeks, he suspended the four magnets, A, B, C and D above a tray containing some pins. He observed the number of pins attracted to each magnet to determine its strength.



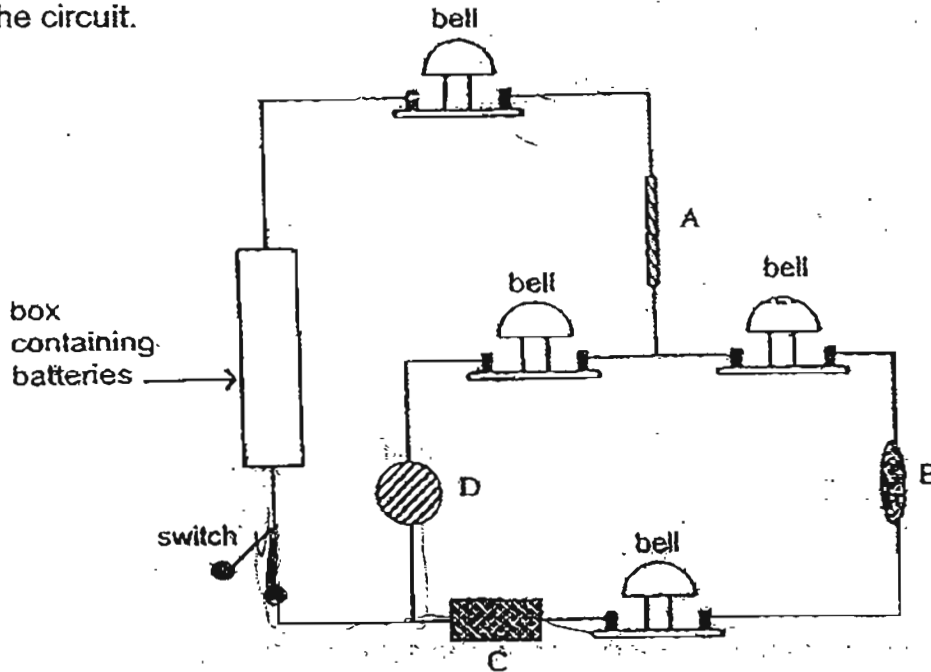
Based on his observations made, which is the best way to store magnets?

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

27. Wei Jian conducted an experiment to study the effects of temperature on the evaporation of water from 3 identical wet towels over a period of time. Which of the following graph should he use to present his results?

<p><input checked="" type="checkbox"/> Size of towel</p> 
<p><input checked="" type="checkbox"/> Mass of wet towel</p> 
<p><input checked="" type="checkbox"/> Exposed surface area of towel</p> 
<p><input checked="" type="checkbox"/> Mass of wet towel</p> 

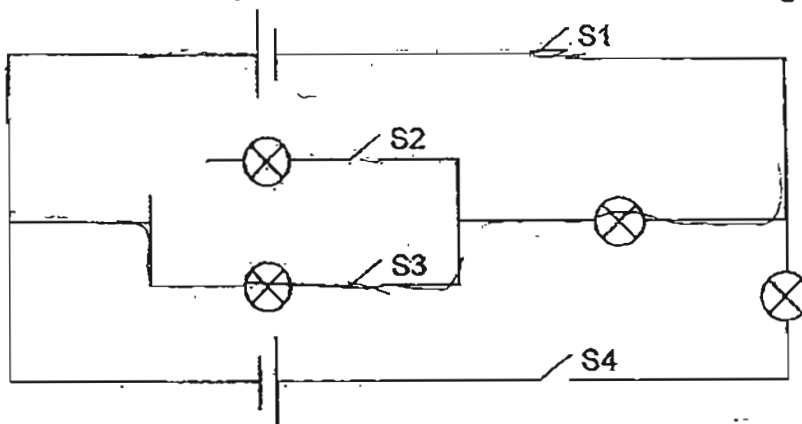
28. Sharifah set up an electrical circuit below. She connected four objects, A, B, C and D to the circuit.



When she closed the switch, only three bells in the circuit rang. Which one of the four objects, A, B, C or D is an electrical insulator?

- A
- B
- C
- D

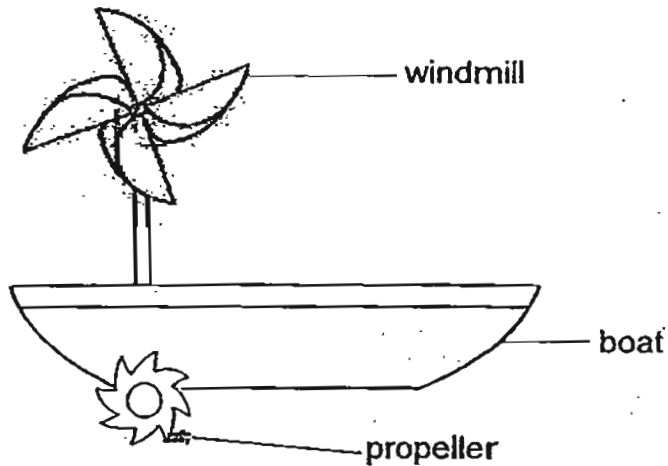
29. In the circuit below, the bulbs and batteries are all working properly.



What will happen to the bulb(s) if only S1 and S3 are closed?

- Only 1 bulb will light up.
- Only 2 bulbs will light up.
- Only 3 bulbs will light up.
- None of the bulbs will light up.

30. Adrian makes a toy boat as shown below. He attached the windmill to a propeller at the bottom of the boat. The boat moves swiftly in the water. However, half-way through, the windmill falls off. The boat continues to move but at a slower pace.



Which of the following tables correctly shows the source of energy?

(A)

Source of energy	Yes	No
Wind	√	
Heat	√	
Moving water		√

(B)

Source of energy	Yes	No
Wind	√	
Heat		√
Moving water		√

(C)

Source of energy	Yes	No
Wind	√	
Heat		√
Moving water	√	

(D)

Source of energy	Yes	No
Wind		√
Heat	√	
Moving water		√



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2011 SEMESTRAL ASSESSMENT 1 SCIENCE PRIMARY 6

Name : _____ ()

Class : Primary 6/ _____

Date : 16 May 2011

BOOKLET B

14 Questions
40 Marks

In this booklet, you should have the following:

- Page 22 to Page 36
- Questions 31 to 44

MARKS

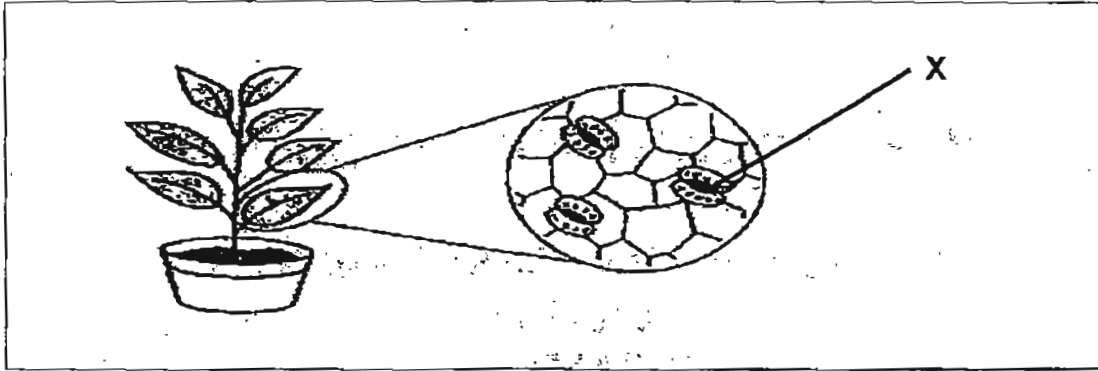
	OBTAINED	POSSIBLE
BOOKLET A		60
BOOKLET B		40
TOTAL		100

Parent's Signature : _____

Section B

Read the questions carefully and write the answers in the space provided.

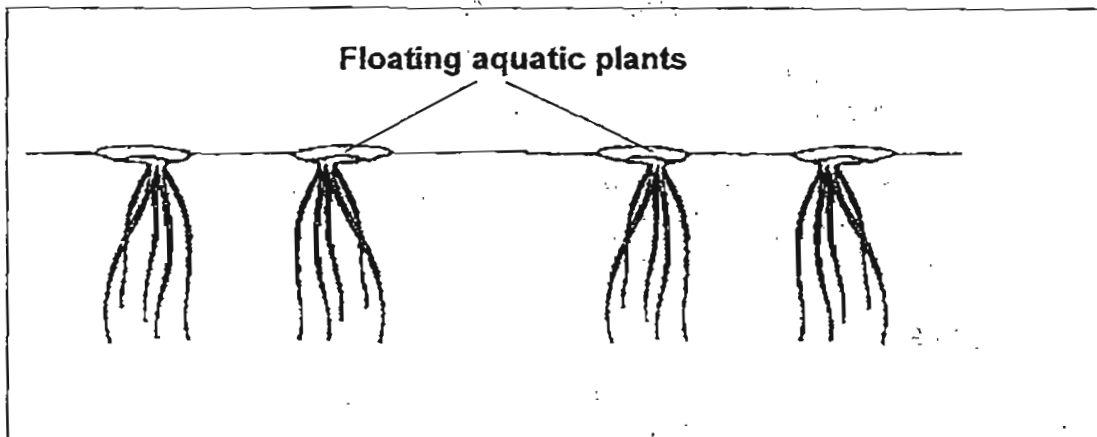
31. Rosy examined the leaf from a balsam plant under a microscope and found tiny openings on the underside of the leaf. The picture below shows what she saw.



- (a) Name 2 functions of the tiny opening X. (1m)

- (i) _____
- (ii) _____

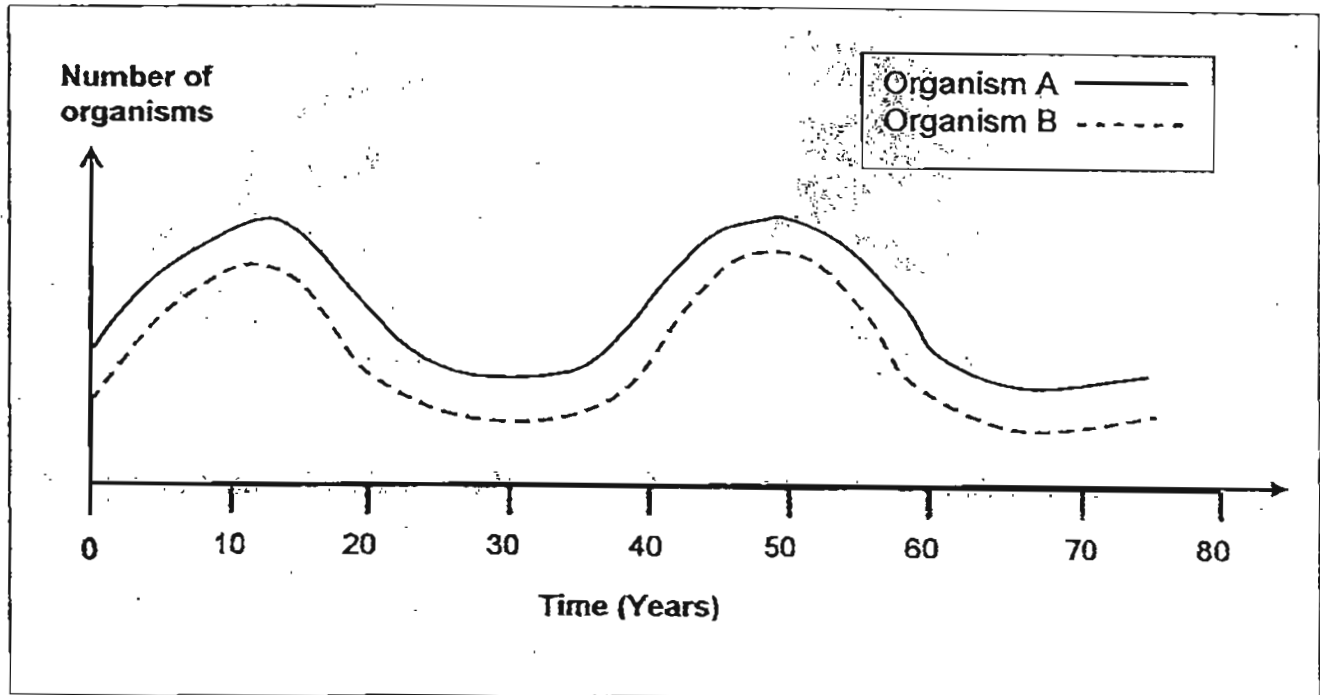
Rosy then observed the leaves of some floating aquatic plants.



- (b) On which surface of the leaf of the floating aquatic plants would Rosy find more tiny openings? (1m)

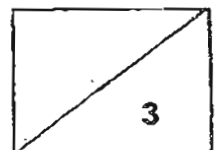
- (c) Explain your answer in part (b). (1m)

32. Susan studied about the environment and how different animals depend on one another. She came across a graph below which shows the change in the population size of two types of organisms, A and B within a habitat over a period of time. A and B are the two main animals within this habitat.

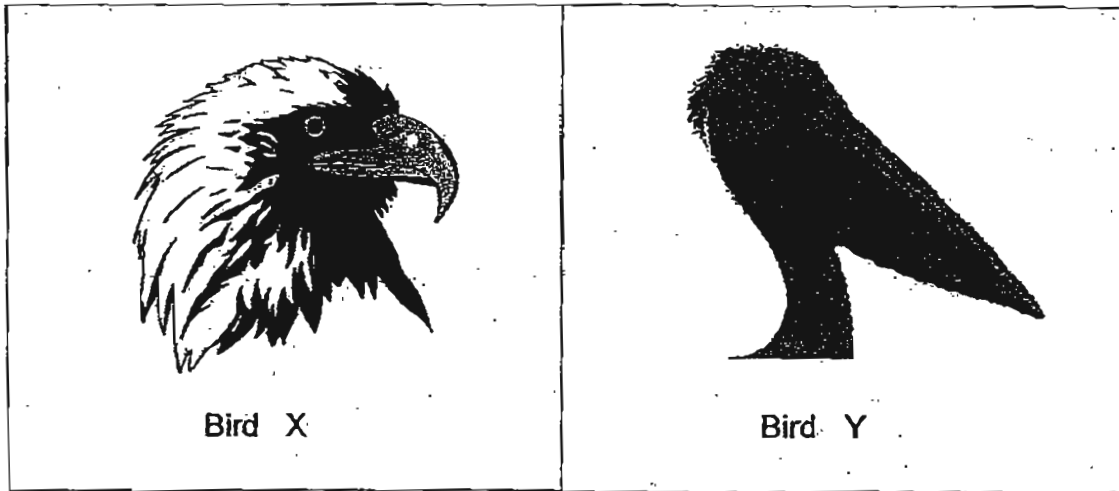


- (a) Based on this graph, what is the relationship between the population of organism A and the population of organism B? (1m)

- (b) Susan also concluded that organism A is the prey of organism B. Do you think that she is correct? Give a reason for your answer. (2m)

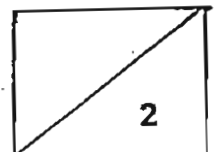


33. Study the pictures of the beaks of two different birds, X and Y, as shown in the diagram below.

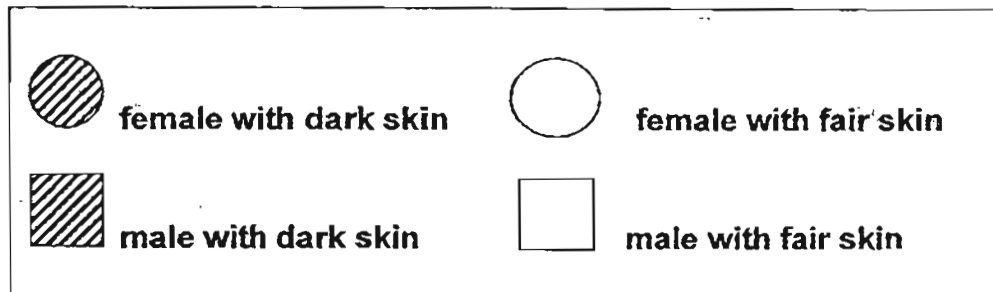
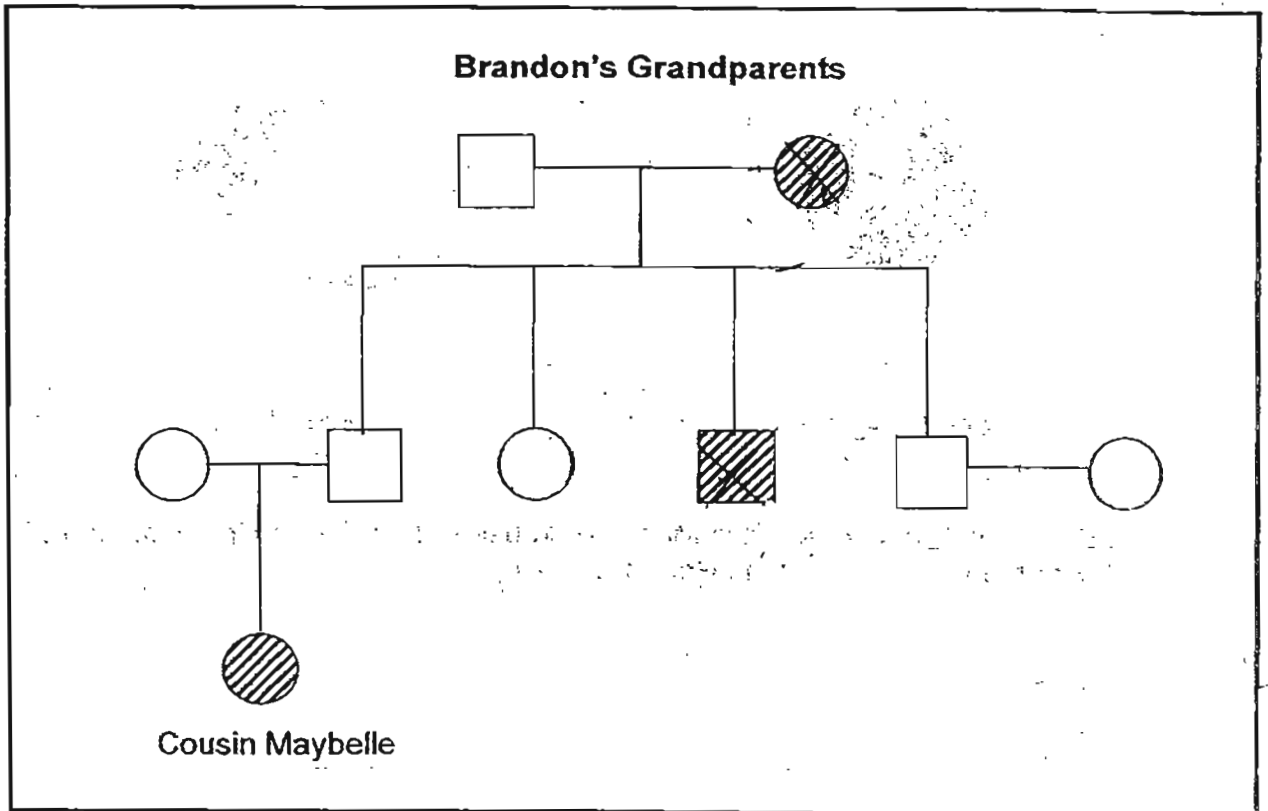


(a) Give a difference between the functions of the beaks of birds X and Y. (1m)

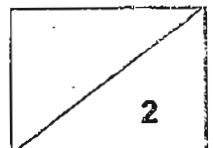
(b) Explain how the feet of birds X and Y would be adapted to help them survive in their environment. (1m)



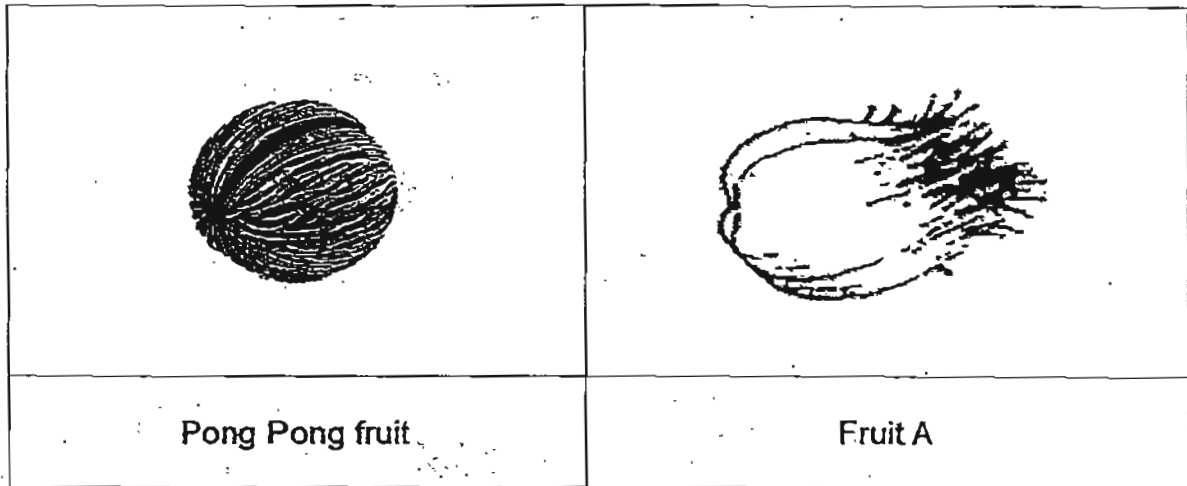
34. The diagram below shows Brandon's paternal family tree.



- (a) Complete Brandon's family tree by **drawing and labeling in the diagram** to show Brandon and his younger sister. Both of them have fair skin. (1m)
- (b) Cross (x) out the symbol on the family tree above that represents Brandon's single aunt. (½ m)
- (c) Circle the symbol on the family tree above to show from whom Maybelle got her dark complexion. (½ m)



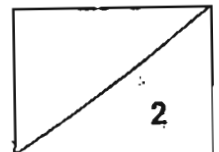
35 The picture below shows a Pong Pong fruit and fruit A.



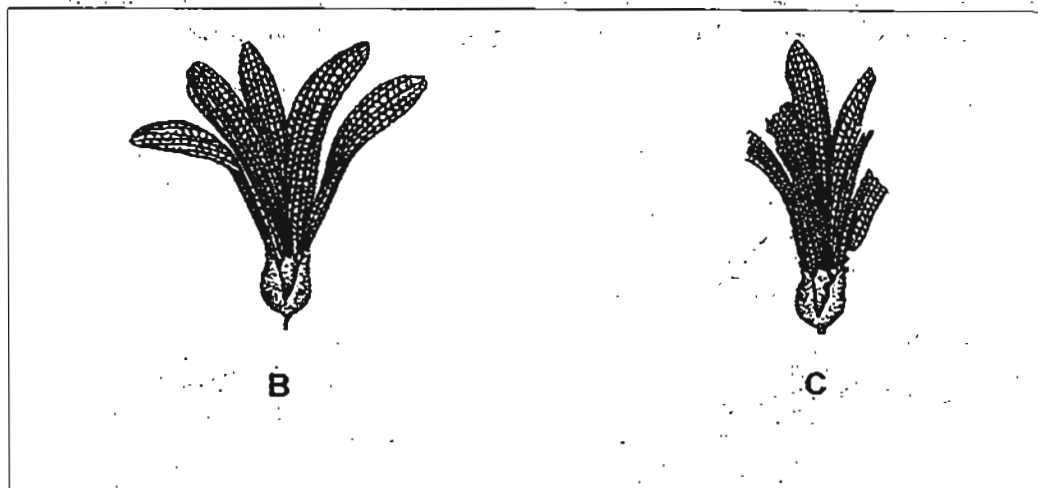
(a) List two methods which Kok Meng could use to find out if fruit A is scattered in the same way as the Pong Pong fruit. (2m)

Method 1:

Method 2:



- (b) Kok Meng dropped two shorea fruits B and C as shown in the diagram below from the same height.

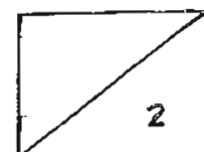


He recorded the time taken by each fruit to reach the ground. He did the experiment four times and recorded the results in a table as shown below. However, some of the results were recorded wrongly.

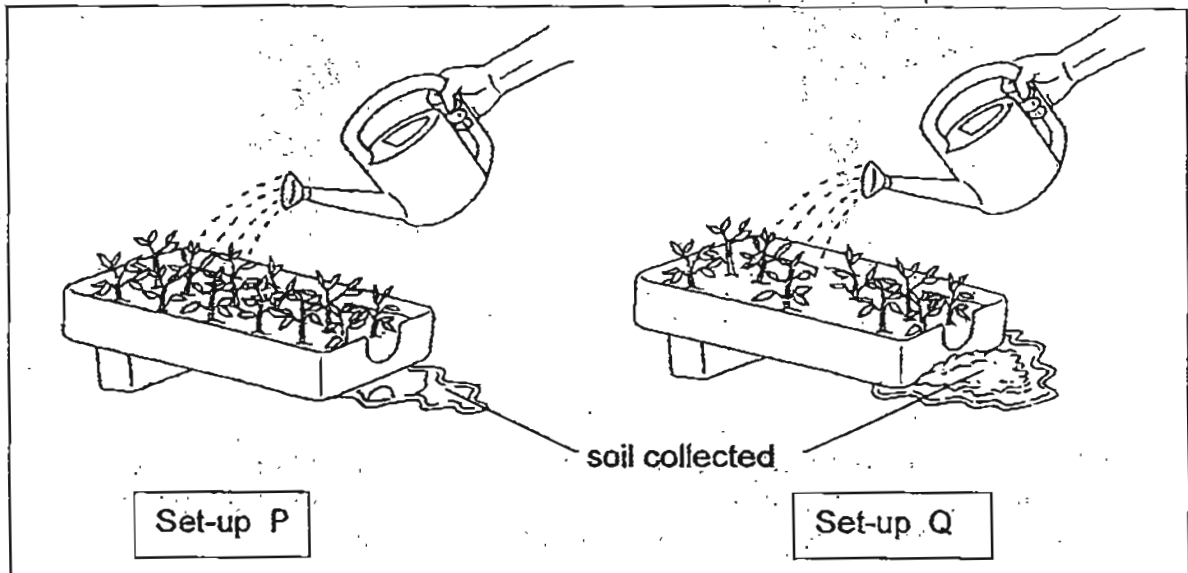
	B	C
Set 1	2.3 sec	3.6 sec
Set 2	3.6 sec	3.6 sec
Set 3	3.6 sec	3.3 sec
Set 4	3.6 sec	5.1 sec

- (i) Which of the above is most likely to be the correct set of records? (1m)

- (ii) Explain your answer in part (i). (1m)



36. Junita used the following set-ups to carry out an investigation to find out the amount of soil collected from each container after she had watered the plants. All variables in her experiment were kept the same except for the number of plants in each container.

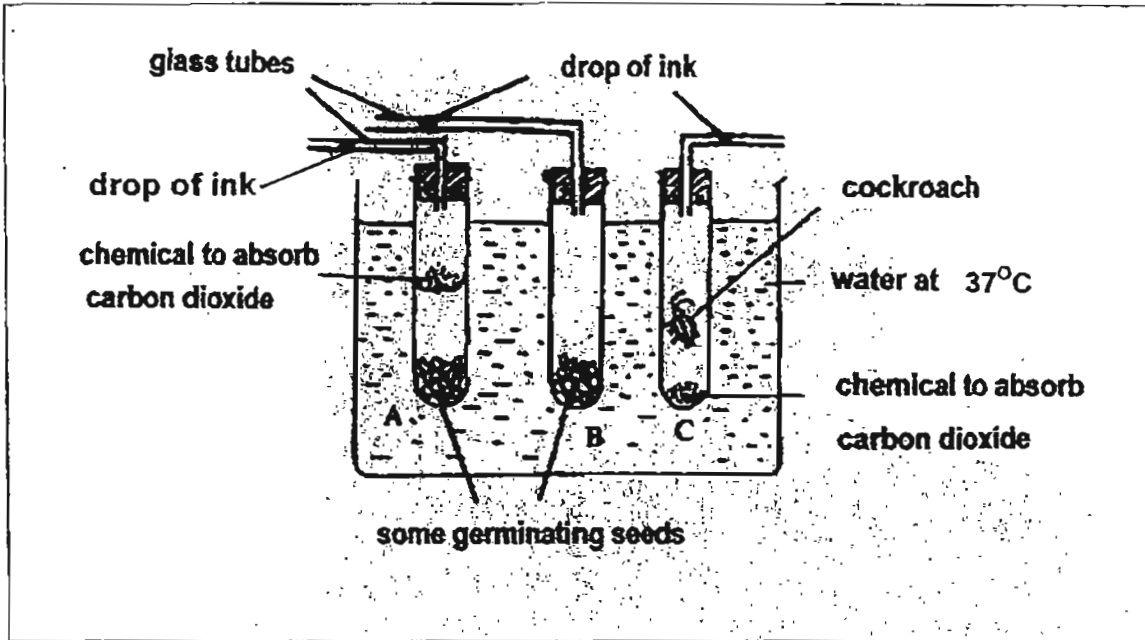


- (a) Junita used the same amount of water to water the plants in both set-ups. How does this make her experiment a fair one? (1m)

- (b) Based on the amount of soil collected from each set-up as shown in the diagram, what could Junita conclude from her experiment? (2m)

- (c) Based on this observation, suggest one programme that the government can introduce to reverse the negative effects of deforestation. (1m)

37. Mr Tan set up an experiment using some germinating seeds and a cockroach, as shown in the diagram below. In the set-up, the drop of ink prevents air from entering each of the test tubes A, B and C.

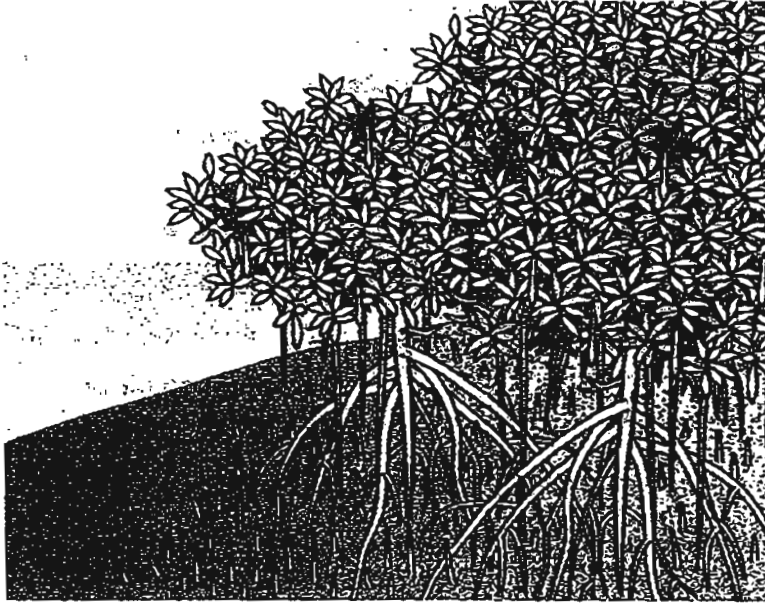


- (a) What do you think will happen to the drop of ink in each of the glass tubes inserted into test tubes A and C after three days? (1m)

- (b) Explain your answer in (a). (2m)

- (c) Name a gas inside the three test tubes that remained the same in amount throughout the experiment. (1m)

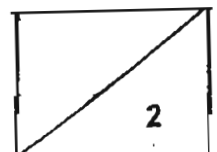
38. Some coastal regions experience high energy waves that can cause massive destruction of buildings and lives. The picture below shows mangroves growing along a coast.



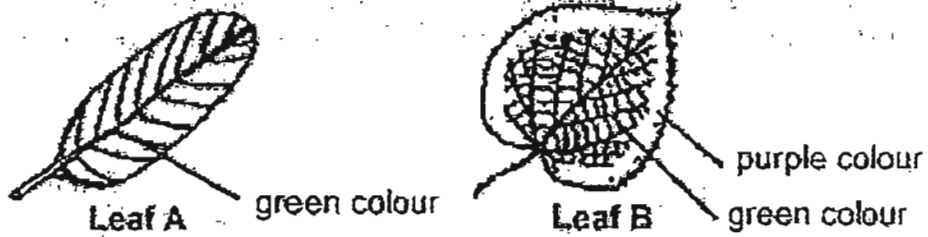
When high energy waves hit this coastal region, how do these mangroves help to reduce the impact of its destruction to buildings inland? (2m)

(i) _____

(ii) _____



39. The diagrams below show two leaves, A and B.



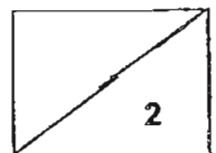
Leaf A was plucked from a healthy plant that had been left in a wooden cupboard for two days.

Leaf B was plucked from a healthy plant which had been in the sun for two days.

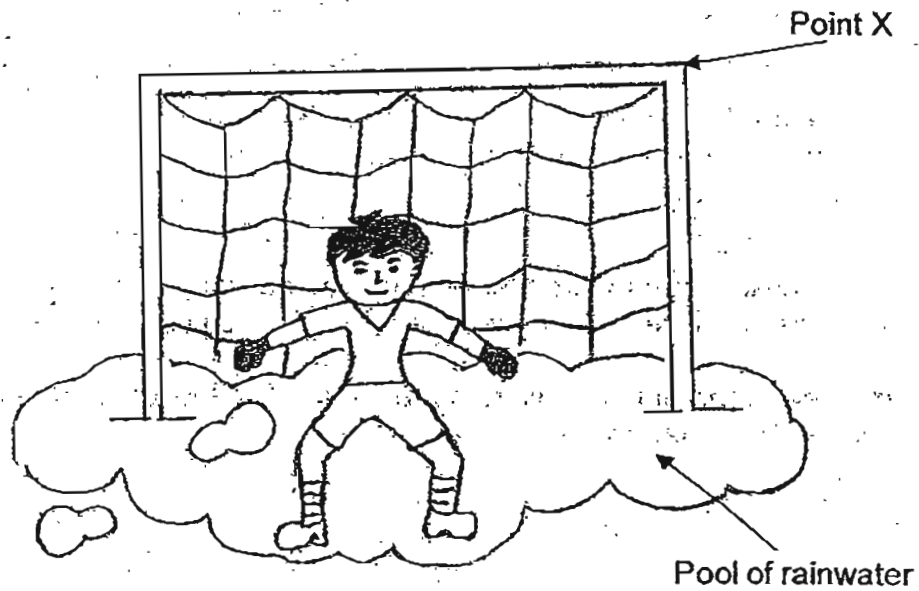
The colours of these leaves were first removed by boiling and soaking the leaves in alcohol. Then they were tested for the presence of starch using iodine.

(a) When a few drops of iodine were added to Leaf A, the iodine remained yellow. Explain this observation. (1m)

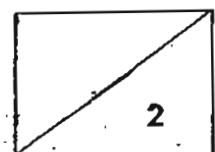
(b) When a few drops of iodine were added to the green and the purple parts of Leaf B, the iodine turned dark blue. What could be inferred from this observation? (1m)



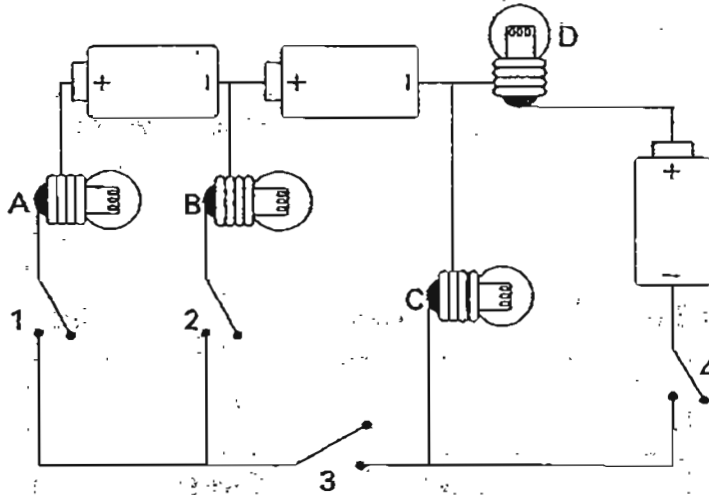
40. It was reported in the newspaper that lightning had struck an iron goal post during a sudden downpour. A soccer match was taking place at that time and the goalkeeper was standing alone near the goal post at the time of the incident, as shown in the diagram below. His life was in danger. The goal post was damaged but it did not collapse.



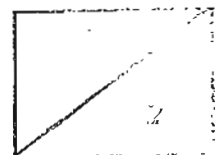
Investigations showed that the lightning bolt struck the goal post at point X. Suggest how the lightning could have 'hit' the goalkeeper and endangered his life. (2m)



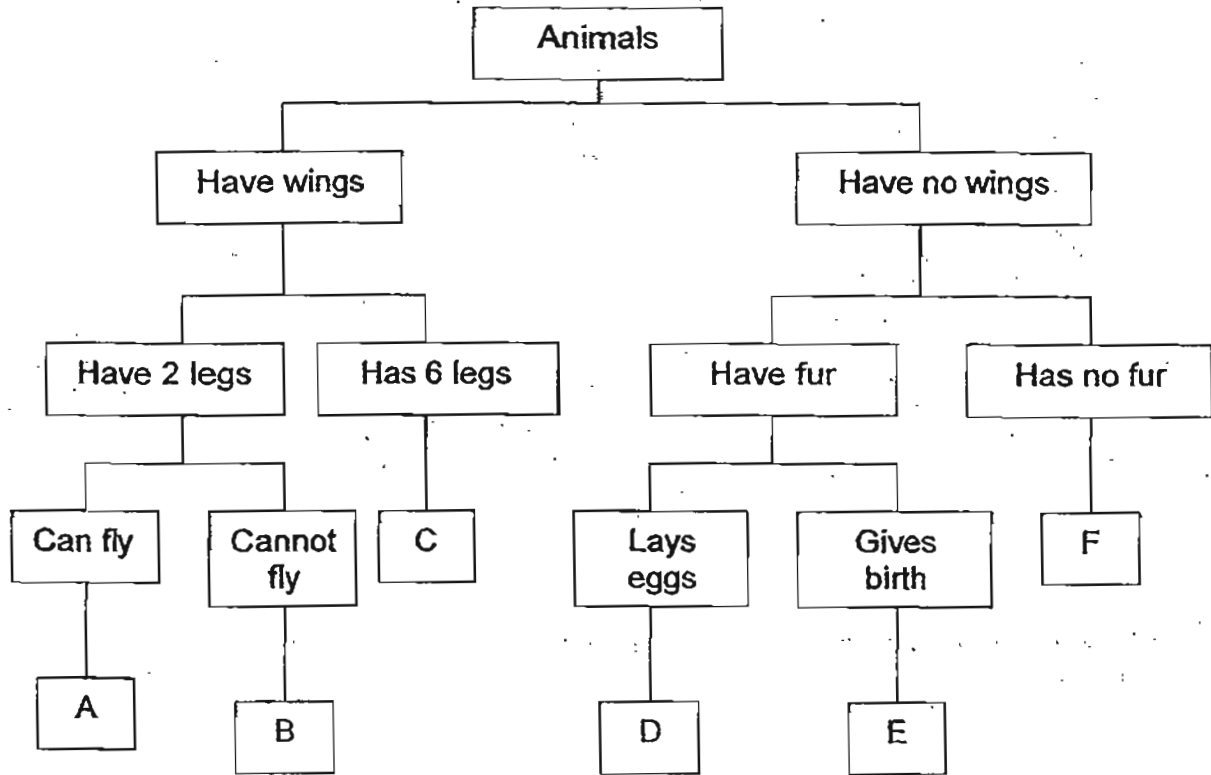
41. Study the circuit diagram below. The bulbs are labelled A, B, C and D. The switches are labelled 1, 2, 3 and 4.



- (a) Which two switches should be closed so that only bulbs B and C would light up?
(1m)
-
- (b) Which bulb(s) will remain lit if bulb D fuses when all the switches are closed?
(1m)
-

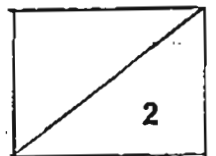


42. Study the following classification chart.

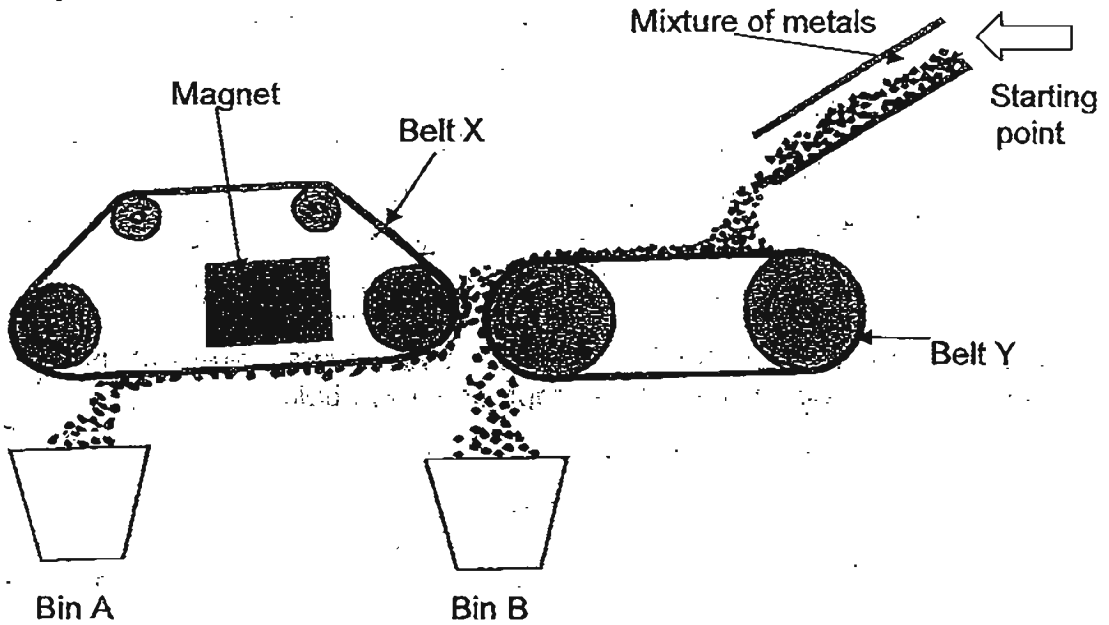


(a) Describe one other physical characteristic of animal C that is not given in the chart. (1m)

(b) Based on the chart above, describe two similar characteristics of animals D and E. (1m)



43. Mr Gopal owns a small recycling factory which separates magnetic metals and non-magnetic metals. The diagram below shows a mixture of metals going through conveyor belts, X and Y.

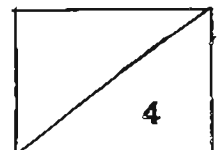


- (a) Name an example of a metal which will be collected in each bin. (1m)

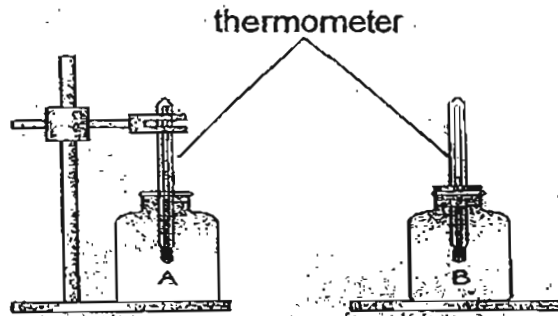
(i) Bin A: _____

(ii) Bin B: _____

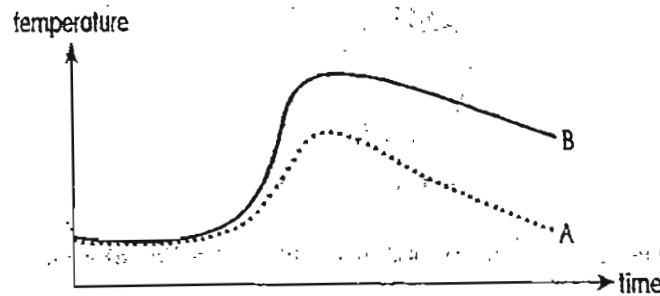
- (b) Beginning from the starting point, explain how both magnetic and non-magnetic materials were separated and collected using the above set-up. (3m)



44. Two identical glass bottles were placed in a field. Bottle A was left open while Bottle B was covered with a glass lid.



Temperature readings of the air in each bottle were taken at hourly intervals throughout the day and plotted into a graph as shown below.

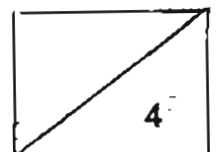


- (a) Explain why temperature readings in Bottle B were generally higher than in Bottle A. (2m)

- (b) How can Bottle B be used to explain the greenhouse effect? (1m)

- (c) Suggest one way to reduce global warming in the environment. (1m)

End of Paper



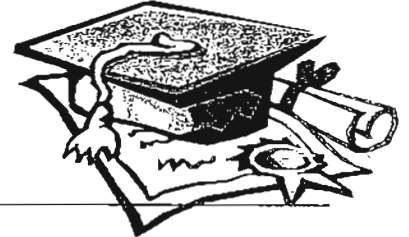


ANSWER SHEET

EXAM PAPER 2011

**SCHOOL : RED SWASTIKA
SUBJECT : PRIMARY 6 SCIENCE**

TERM : SA1



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

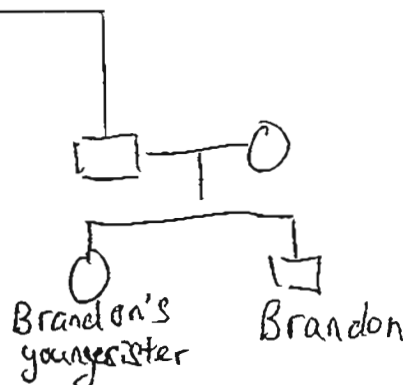
Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30
2	1	3	4	1	3	2	3	4	2	4	2	3

- 31)a)i)It allows gaseous exchange. ii)control the loss of water vapour.
b)On the above surface of the leaf.
c)More tiny opening are found on the leaf's upper surface to maximize gaseous exchange with the atmosphere.

- 32)a)If there is a decrease in the population of organism A, B will decrease.
b)Susan is correct. The number of preys should always be greater than the number of predators. A will supply food for B to sustain the food chain/keep the food chain going/otherwise there will be an imbalance of food source.

- 33)a)The beak of bird X helps to tear the flesh of the prey while the beak of bird Y helps to catch the fish from the water.
b)Bird X's feet would have sharp and curved claws to enable it to grip its prey while bird X's feet would be webbed to enable it to swim in the water to catch its prey.

34)a,b,c)



35)a)1)Place in the water to see if float like fruit A.

2)Open it to see if it has a fibrous husk.

b)i)Set 3.

ii)Fruit B has the complete wing-like structure which enable it to stay in the air for a longer period of time. Where as fruit C has its wing-like structure cut off.

36)a)The result of the experiment will be due to the only changed variable which is the only changed variable which I the number of plants.

b)She can conclude that more plants help to hold the soil firmly to the ground to prevent soil erosion.

c)Replant more trees in the forest.

37)a)The ink in glass tube A and C will move towards test tube A and C.

b)When the cockroach and germinating seeds respire, oxygen is taken in while carbon dioxide is given out. Since carbon dioxide is absorbed by the chemical in the test tube, less air is present to take up space. This cause the ink to move towards tube A and C.

c)Nitrogen.

38)i)The mangroves slow down/reduce the speed of the waves.

ii)They reduce the height of the waves.

39)a)Leaf A does not contain starch as it was not able to make food in the absence of light.

b)Both the green part and the purple part of leaf B contain chlorophyll so they can make food and excess food/sugar was stored as starch.

40)The iron goalpost and water are good conductors of electricity, the electric current was conducted through the iron goalpost to water and then the goalkeeper.

41)a)Switches 2 and 3.

b)Bulbs A, B and C.

42)a)Animal C has a pair of antennae.

b)Animal D and E have no wings but have fur.

43)a)i)Iron ii)Aluminium

b)Both magnetic and non-magnetic metals will travel along Belt Y. The non-magnetic metals will drop into Bin B. The magnetic metal will be attracted to the magnet. They will move along Belt X until the magnetic force is weakened as the magnetic metals move away from the magnet. They are then dropped into Bin A.

44)a)Bottle A was left open, air can pass through the bottle so the temperature would be around room temperature. Bottle B was covered with a glass lid, air is trapped inside, the temperature will be higher than bottle A.

b)The glass lid is like the layer of green house gases/carbon dioxide that traps the sun's heat on Earth.

c)Cut down fewer trees.