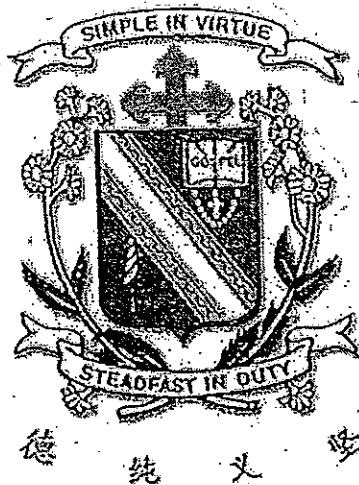


Name: \_\_\_\_\_ ( )

Class : Primary 5 \_\_\_\_\_

# CHIJ ST NICHOLAS GIRLS' SCHOOL



Primary 5

Second Semestral Assessment – 2010

SCIENCE

BOOKLET A

2 November 2010

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

30 questions

60 marks

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

*This booklet consists of 17 printed pages.*

**Section A : ( 30 x 2 MARKS )**

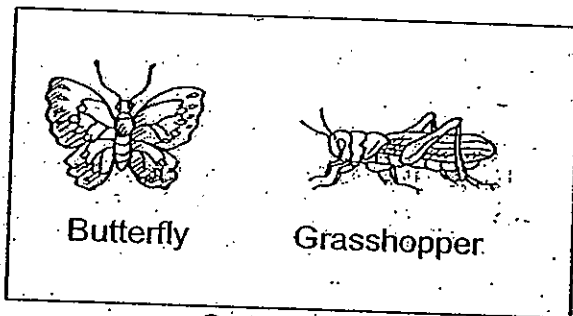
For each question from 1 to 30, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.

1. John saw an animal for the first time in the zoo. He concluded that it was a bird. Which of the following characteristic(s) should this animal have in order to be classified as a bird?

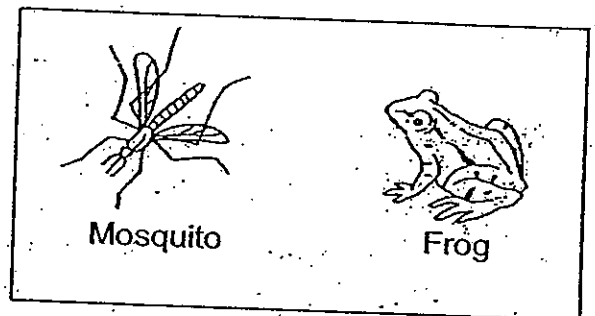
- A It can fly.
- B It has feathers on its body.
- C It has a beak.

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

2. Study the following groups of animals.



Group Y



Group Z

How are the animals in Group Y different from the animals in Group Z?

	Group Y	Group Z
(1)	Insects	Not insects
(2)	Lay eggs on land	Lay eggs in water
(3)	4-stage life cycle	3-stage life cycle
(4)	Internal fertilisation	External fertilisation

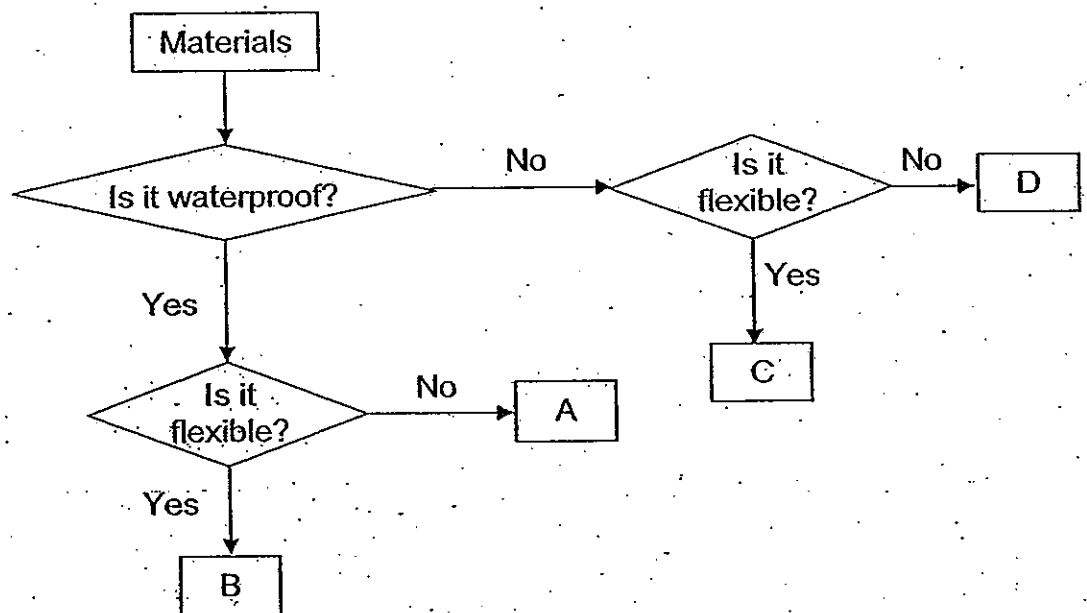
3. Stelle was given 4 different objects, P, Q, R and S. She scratched the four objects one against the other. She then wrote down her observations as follows:

R could scratch P.  
Q could scratch S.  
P could scratch Q.

Based on her observations, which one of the following statements is correct?

- (1) S is harder than P.
- (2) Q is harder than P.
- (3) R is harder than Q.
- (4) P is the hardest of the four objects.

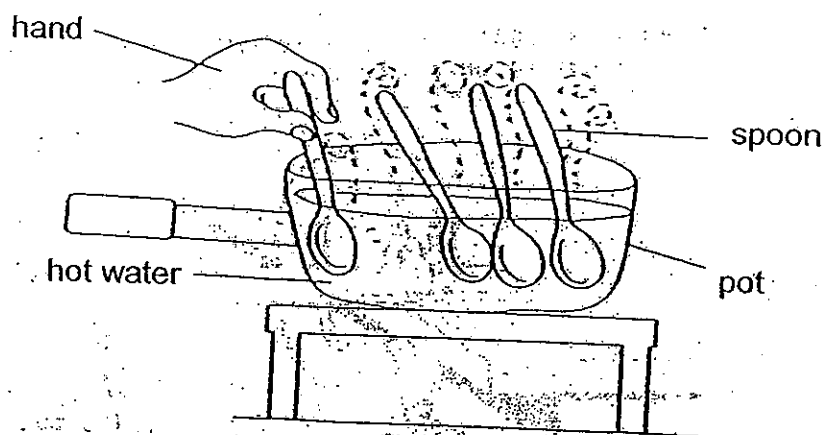
4. Study the classification flowchart below.



Which material, A, B, C or D, is most suitable to be used to make a raincoat?

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

5. Four pupils were each told to hold onto a spoon while hot water was poured into the pot as shown below. The spoons were similar in size but made from different materials such as wood, metal, plastic and porcelain. The pupils were told to let go of the spoon the moment they could feel the heat on the spoon.



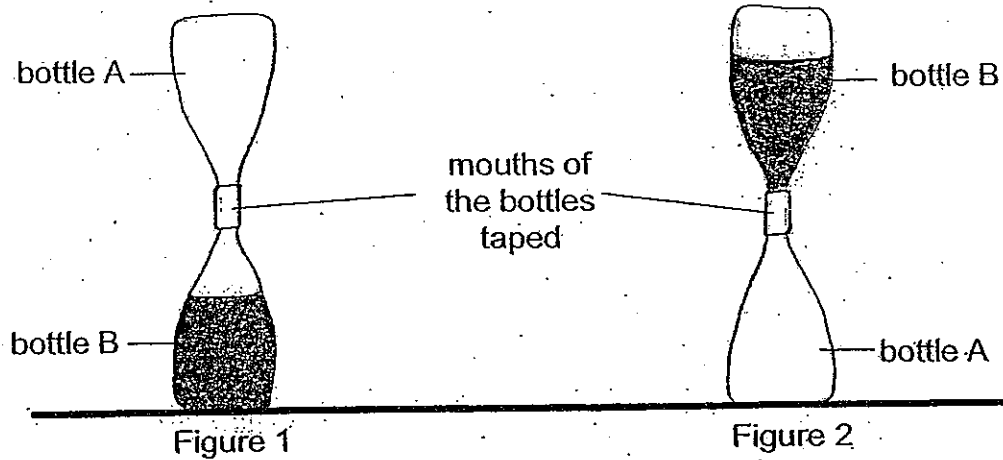
The table below shows the time each pupil held onto his spoon before the spoon was let go.

Pupil	Time (Seconds)
W	90
X	110
Y	35
Z	10

From the above results, which pupil is most likely holding a spoon that is made of metal?

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

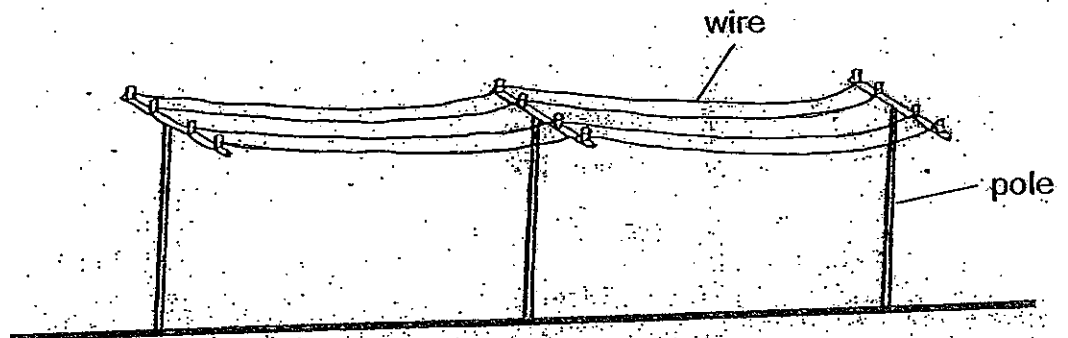
6. Halima filled bottle B with coloured water. He taped the mouth of bottle B to the mouth of an empty bottle A as shown below in Figure 1.



He then turned the bottles as shown in Figure 2. A trickle of the coloured water was seen flowing into bottle A for a short while and then it stopped. He found that the coloured water in bottle B did not flow into bottle A completely.

What could be the possible reason?

- (1) The mouths of the two bottles were too small.
  - (2) The air in bottle A prevented the coloured water in bottle B from flowing in.
  - (3) The coloured water in bottle A prevented the air in bottle B from flowing in.
  - (4) The tape prevented the coloured water in bottle A from flowing into bottle B.
7. In some countries, telephone wires are hung on poles above the ground as shown in the diagram below.



Why are the wires hung loosely between the poles?

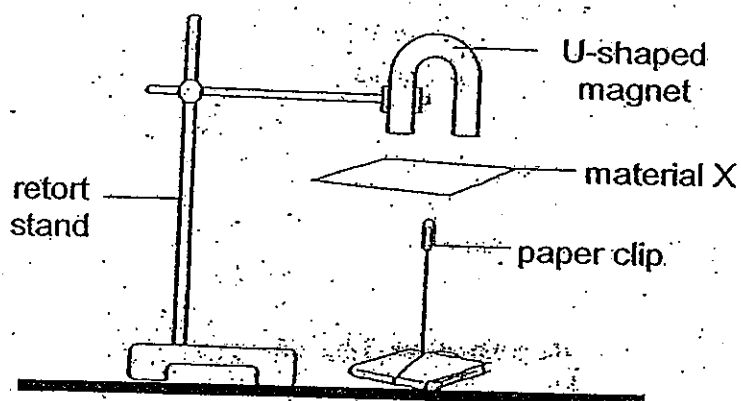
- (1) It is to allow for expansion on hot days.
- (2) It is to allow for contraction on hot days.
- (3) It is to allow for expansion on cold days.
- (4) It is to allow for contraction on cold days.

8. Below is a table showing the melting and boiling points of various substances.

Substance	Melting Point	Boiling Point
A	0°C	100°C
B	5°C	20°C
C	15°C	30°C
D	20°C	110°C
E	32°C	80°C
F	44°C	175°C

Which of the substances given above are in their liquid state at a temperature of 35°C?

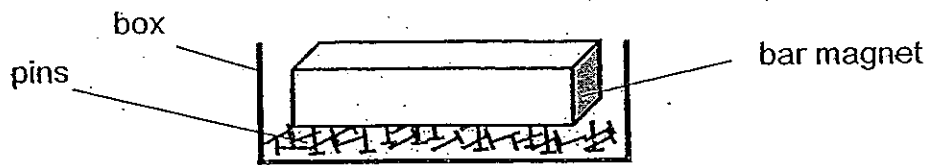
- (1) Substances B and C only
  - (2) Substances E and F only
  - (3) Substances A, D and E only
  - (4) Substances A, B, C, D and E only
9. A piece of material X is placed between a U-shaped magnet and a paper clip as shown in the diagram below. The paper clip remains floating.



What could material X be made of?

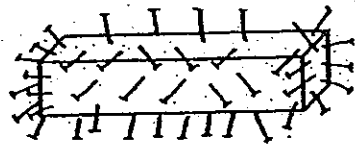
- A Steel
  - B Nickel
  - C Plastic
  - D Styrofoam
- (1) A and C only
  - (2) A and B only
  - (3) B and C only
  - (4) C and D only

10. A bar magnet is gently lowered completely into a box of pins as shown in the diagram below. The magnet is then being rotated such that all the sides touched the pins that were in the box.

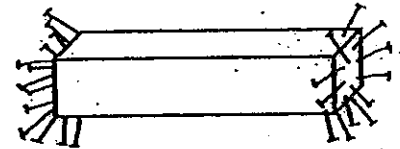


Which one of the following diagrams shows how the magnet would most likely look like when it is lifted from the box of pins?

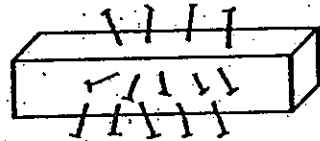
(1)



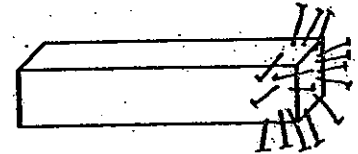
(2)



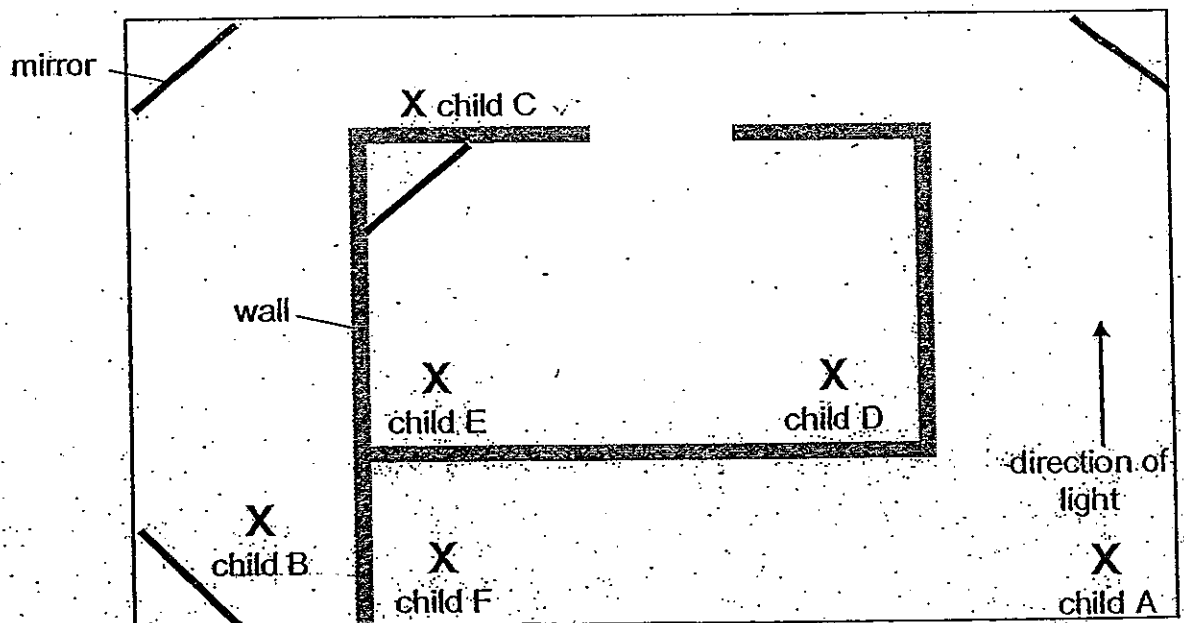
(3)



(4)



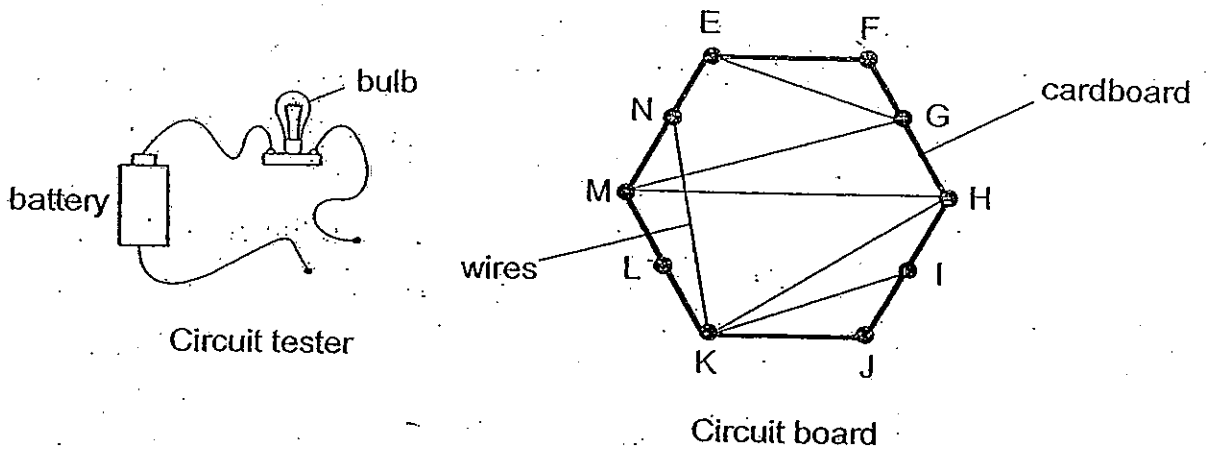
11. The diagram below shows the positions of six children, A, B, C, D, E and F in a dark room. Child A shone a torch in the direction shown.



Who can see the beam of light from the torch?

- (1) Child B and C only
- (2) Child C and D only
- (3) Child B and E only
- (4) Child E, D and F only

12. Anson set up a circuit tester and connected it to the following points in the circuit board as shown in the diagram below.

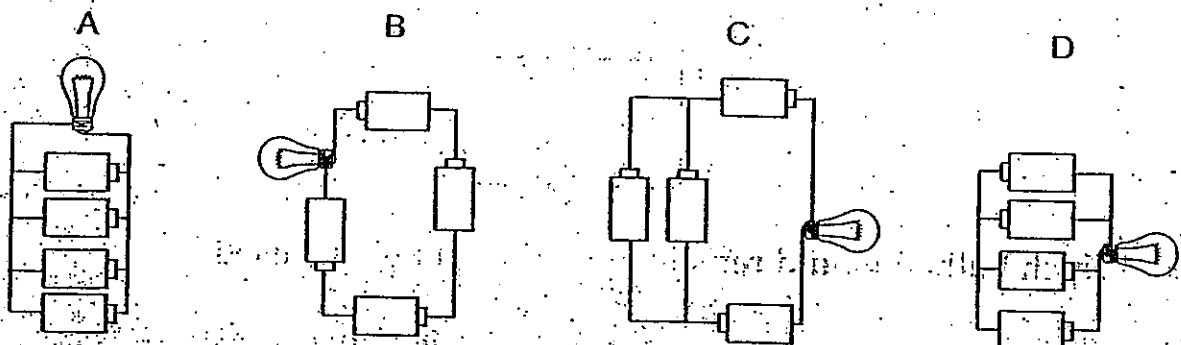


Which of the following combinations will light up the bulb?

- A Points E and N
- B Points F and H
- C Points G and I
- D Points J and M

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

13. In the four electric circuits below, all the batteries, wires and bulbs used are identical.



Which of the following show the correct arrangement of the electric circuit starting from the brightest to the least bright?

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



14. Which one of the following **best** explains why there is an urgent need for Singaporean to conserve water?

- (1) We have limited water resources.
- (2) We use a lot of water in our industries.
- (3) It is expensive to treat water at the waterworks.
- (4) It is difficult to obtain rain water as it does not rain daily.

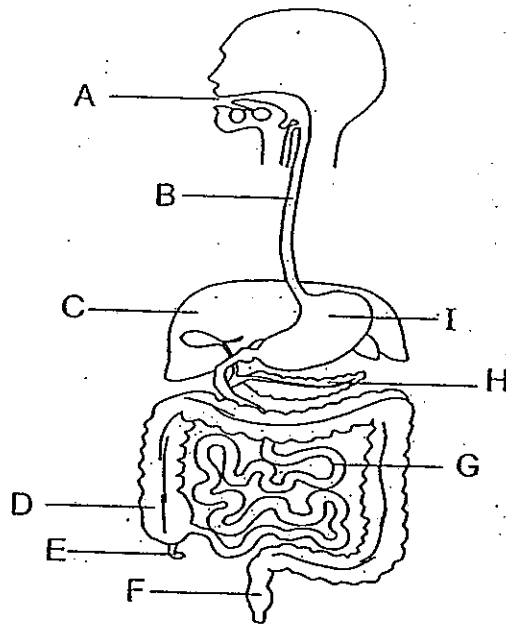
15. Diva wants to find out which type of material will allow perspiration to evaporate most quickly. She conducts an experiment by spraying water on the different materials and hanging them out to dry. She then observes how long it takes for each material to dry completely.

Which of the following variables should she keep constant in order to conduct a fair test?

- A The surface area of the material.
- B The amount of water sprayed on the material.
- C The place where the materials are hung to dry.
- D The time taken for the material to dry completely.
- E The time of the day when the materials are hung to dry.

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

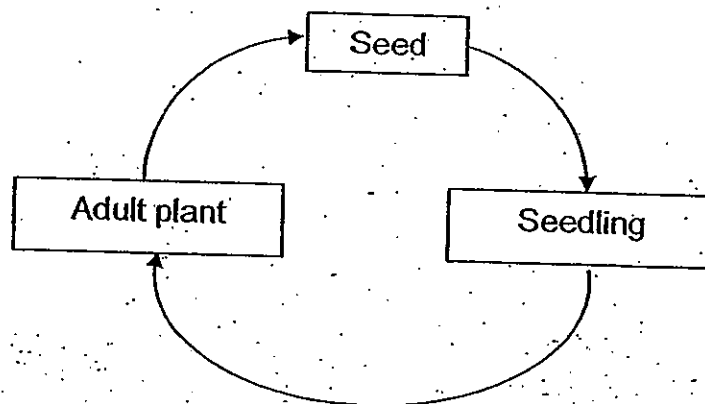
16. The diagram below shows parts of the human body.



Using the appropriate letters A to I from the diagram above, which of the following shows the correct order of the organs when each mouthful of food or drink passes through the human body.

- (1) A → B → C → D → E → F
- (2) A → B → H → G → D → E
- (3) A → B → I → D → G → F
- (4) A → B → I → G → D → F

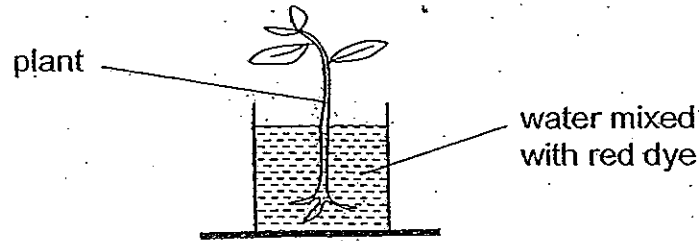
17. The diagram below shows the life cycle of a plant.



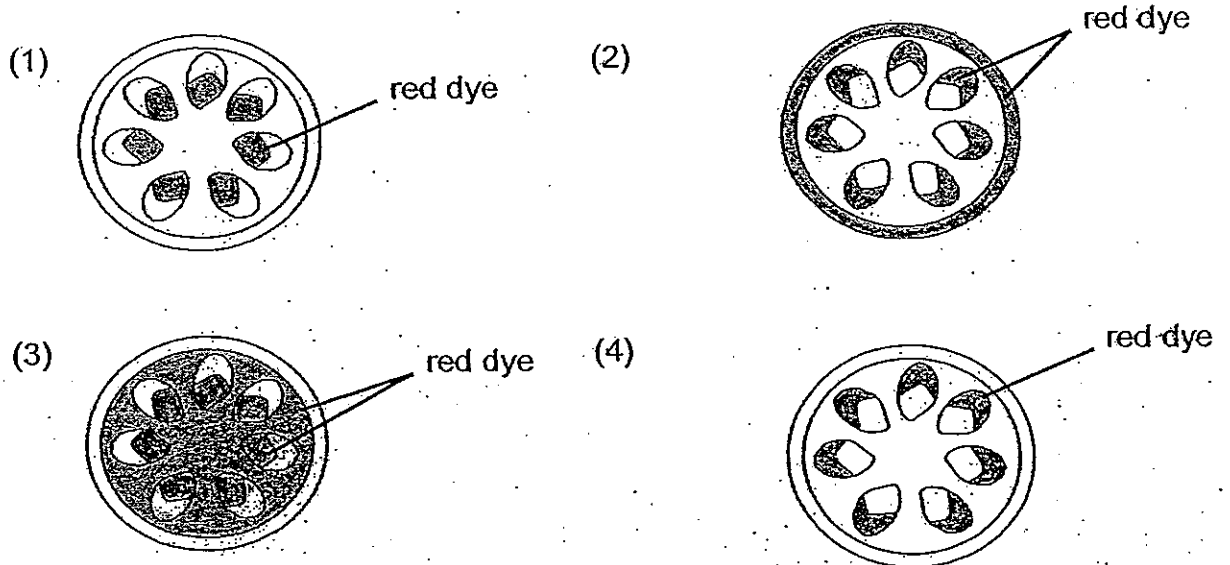
Which of the following organisms have a similar life cycle as the plant above?

- (1) Tomato and fern
- (2) Balsam plant and shorea
- (3) Mushroom and chilli plant
- (4) Toadstool and cotton plant

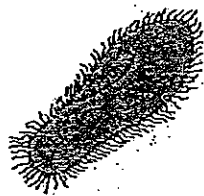
18. Jonathan placed a plant into a beaker of water mixed with red dye as shown in the diagram below.



He placed the plant near a window sill for 3 days. He then cut out the stem of the plant horizontally. What should he observe under the magnifying glass?



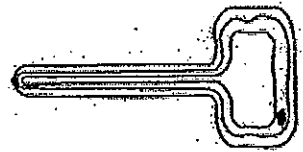
19. The picture below shows three different types of cells, J, K and L, viewed from a microscope.



Cell J



Cell K

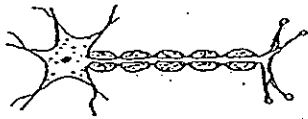


Cell L

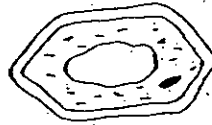
Which of the following best describe cell types J, K and L?

	Cell J	Cell K	Cell L
(1)	Can move freely	Can move freely ✓	Cannot move freely
(2)	Cannot make their own food	Cannot make their own food	Make their own food
(3)	Has no nucleus	Has no nucleus	Has a nucleus ✓
(4)	Reproduce from seeds ✗	Do not reproduce from seeds	Reproduce from seeds

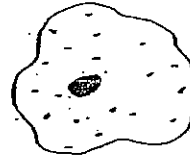
20. The following diagrams show the cells of four organisms.



Cell A



Cell B



Cell C

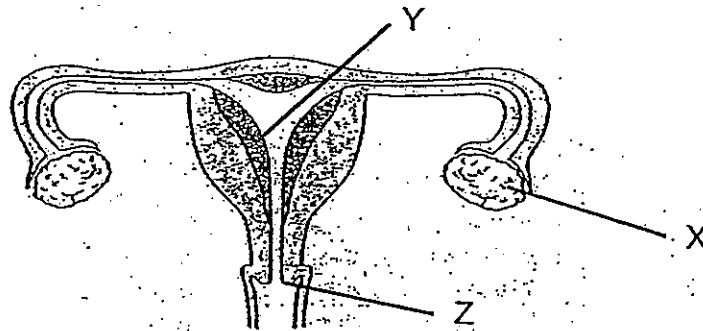


Cell D

Which cell(s), A, B, C or D, come(s) from an organism that can make its own food?

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

21. The diagram below shows the female reproductive system.



In which part(s) of the female reproductive system will the foetus reside in?

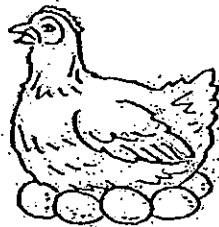
- (1) Y only
- (2) X and Y only
- (3) Y and Z only
- (4) X, Y and Z.

22. Which of the following statements is/are **incorrect**?

- A Usually one egg is fertilised by one sperm.
- B Human's foetus gestation period is 8 months.
- C Both human and plants fertilise their egg cells internally.
- D Human's sperm cells have similar function as the plant's anther.

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

23. The life cycle of a chicken starts with an egg.

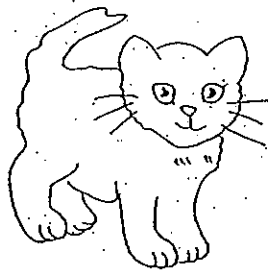


Which of the following statements about the chicken is/are true?

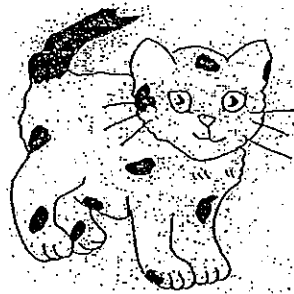
- A The egg is fertilised externally.
- B The chicken has two stages in its life cycle.
- C The newly hatched chick looks like the parent.
- D A hen sits on eggs to provide air, water and warmth for the development of the embryo in the egg.

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

24. The diagram below shows the parents of Tom the kitten.



Tom's Mother



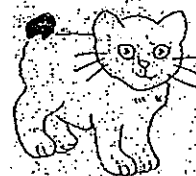
Tom's Father

Which one of the following is not a possible match of Tom's siblings?

(1)



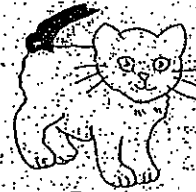
(2)



(3)



(4)

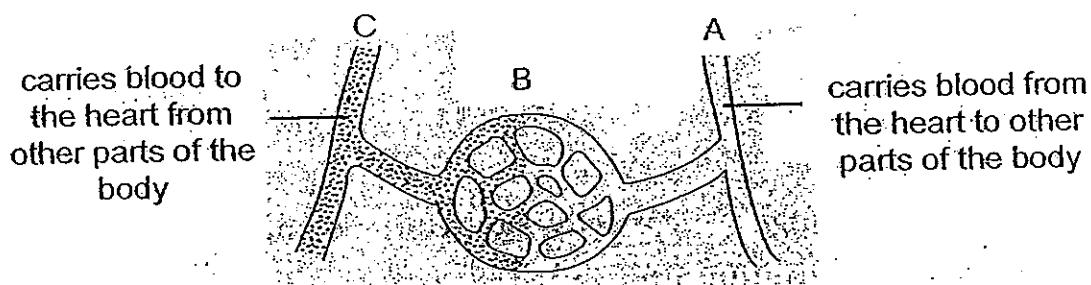


25. Which of the following statement(s) is/are true?

- A A mother cannot pass her characteristics to her son.
- B A father can pass his characteristics to his granddaughter.
- C Parents can only pass down physical characteristics to their children.
- D When children become adults, they may change their traits by changing the cells in their body.

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

26. The diagram below shows some of the blood vessels in our body.



carries blood to the heart from other parts of the body

carries blood from the heart to other parts of the body

What type of blood vessels are A, B and C?

	A	B	C
(1)	Capillaries	Arteries	Veins
(2)	Veins	Arteries	Capillaries
(3)	Arteries	Capillaries	Veins
(4)	Veins	Capillaries	Arteries

27. Mary and Priscilla participated in the recent Youth Olympic Games. During their training, their coach kept track of their fitness by measuring their heartbeats before and after exercising. The following shows one of the data their coach obtained.

Name	Type of exercise	Duration of exercise	No. of heartbeats per min before exercising	No. of heartbeats per min after exercising
Priscilla	Swimming	30 min	75	110
Mary	Jogging	20 min	80	120

What could have caused their heartbeat to increase after exercising?

- (1) When they exercise, blood will circulate faster and that causes their heartbeat to increase.
- (2) When they exercise, they breathe faster and that causes their heartbeat to increase.
- (3) Their heartbeat increases because their body needed more oxygen for respiration to produce more energy.
- (4) Their heartbeat increases because more oxygen is produced in their body, so they need to breathe faster to get rid of it.

28. The picture below shows Lolita blowing a flute.



Which of the following correctly describes what happens to her ribs, diaphragm and chest when she blows into the flute?

	Ribs	Diaphragm	Chest
(1)	Move out and upwards	Move upwards	Smaller
(2)	Move out and upwards	Move downwards	Bigger
(3)	Move in and downwards	Move upwards	Smaller
(4)	Move in and downwards	Move downwards	Bigger

29. Study the bell-shaped flower as shown in the diagram below.



Which one of the following birds is most likely able to pollinate the flower above?

(1)



(2)



(3)



(4)

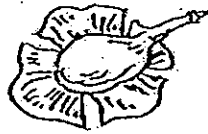




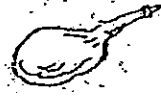
30. Roger prepared four specimens of angšana fruit as shown below to determine how the wing-like structure of an angšana fruit affects the time taken for it to land on the ground.



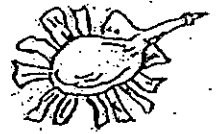
Fruit A



Fruit B



Fruit C



Fruit D

He held each fruit from a distance above the ground, dropped it and then noted the time taken for it to land on the ground. He repeated his experiment four times.

Which one of the tables below shows the correct results of his experiment?

(1)

Test	Time (in seconds)			
	Fruit A	Fruit B	Fruit C	Fruit D
1	4.1	3.8	2.2	5.6
2	4.4	3.6	2.6	5.5
3	4.7	3.3	2.5	5.1
4	4.1	3.3	2.5	5.6

(2)

Test	Time (in seconds)			
	Fruit A	Fruit B	Fruit C	Fruit D
1	2.2	5.6	3.8	4.1
2	2.6	5.5	3.6	4.4
3	2.5	5.1	3.3	4.7
4	2.5	5.6	3.3	4.1

(3)

Test	Time (in seconds)			
	Fruit A	Fruit B	Fruit C	Fruit D
1	2.2	3.8	5.6	4.1
2	2.6	3.6	5.5	4.4
3	2.5	3.3	5.1	4.7
4	2.5	3.3	5.6	4.1

(4)

Test	Time (in seconds)			
	Fruit A	Fruit B	Fruit C	Fruit D
1	5.6	4.1	2.2	3.8
2	5.5	4.4	2.6	3.6
3	5.1	4.7	2.5	3.3
4	5.6	4.1	2.5	3.3

End of Section A

Name : \_\_\_\_\_ ( )

Class : Primary 5 \_\_\_\_\_

# CHIJ ST NICHOLAS GIRLS' SCHOOL



**Primary 5**

**Second Semestral Assessment – 2010**

**SCIENCE**

**BOOKLET B**

**2 November 2010**

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

**14 questions  
40 marks**

Booklet A	60
Booklet B	40
Total	100

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

\_\_\_\_\_  
**Parent's Signature/Date**

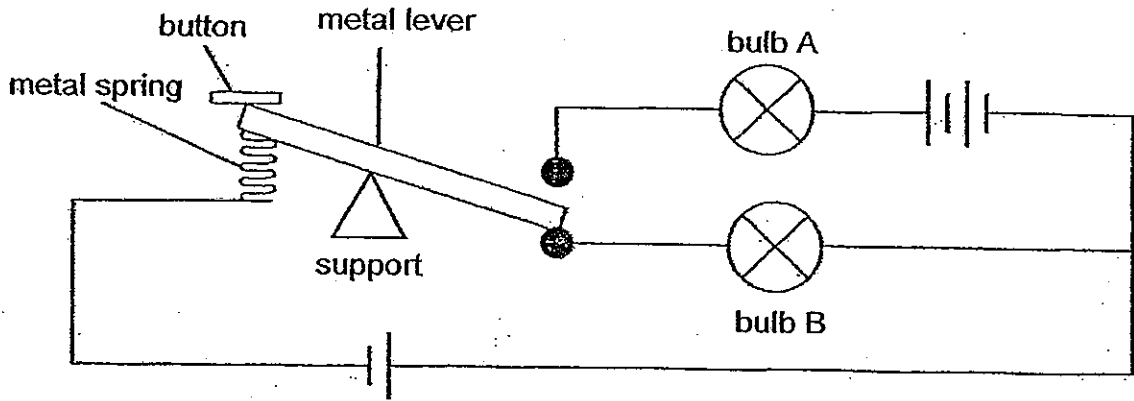
*This booklet consists of 16 printed pages.*

**Section B : (40 marks)**

For questions 31 to 44, write your answers in this booklet.

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

31. Study the circuit below. Three identical batteries and two identical bulbs, A and B, are used.



- (a) Put a tick (✓) in the box to indicate which bulb will light up when the button is pushed or released. [1]

Position of button	Bulb A lit up	Bulb B lit up
Released		
Pushed		

- (b) Farad compared the brightness of both bulbs as he pushed and released the button.

Which bulb will light up brighter than the other? Explain your answer. [2]

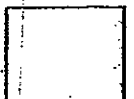
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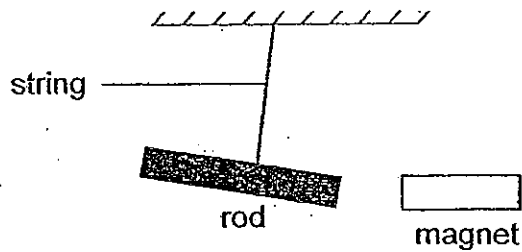
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32. Ken set up the experiment as shown below.



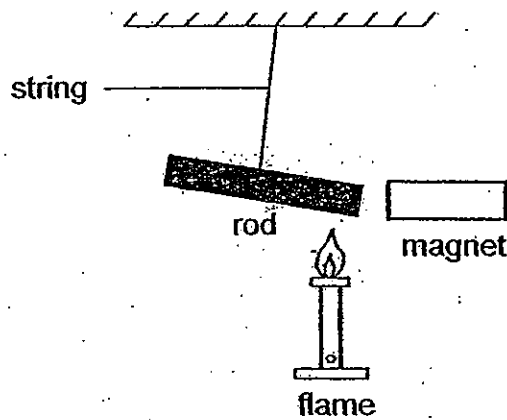
A rod is tied to a string and a magnet held near it. The rod swings away from the magnet when the magnet is moved nearer to it.

- (a) Ken concluded that the rod is a magnet. Is his conclusion correct? Explain your answer. [1]

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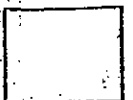
Ken then placed a flame at one end of the rod as shown in the diagram below. After a while, the rod starts to move towards the magnet.



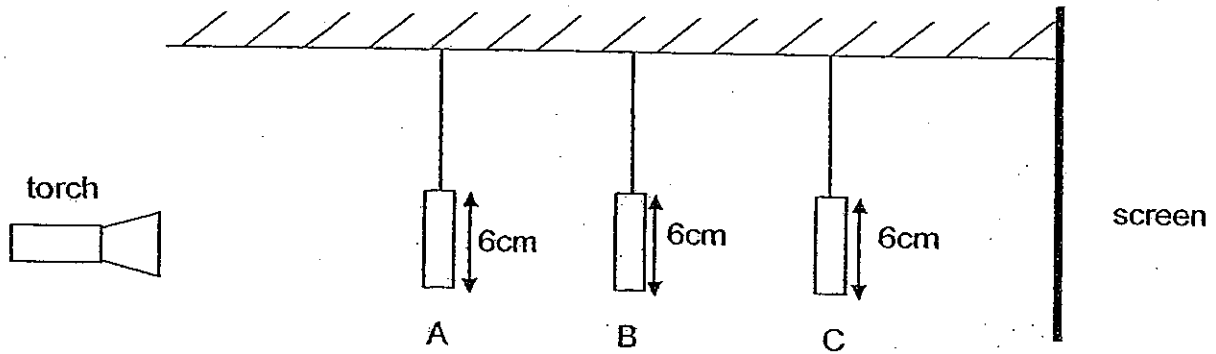
- (b) Explain what could have caused the rod to move towards the magnet. [1]

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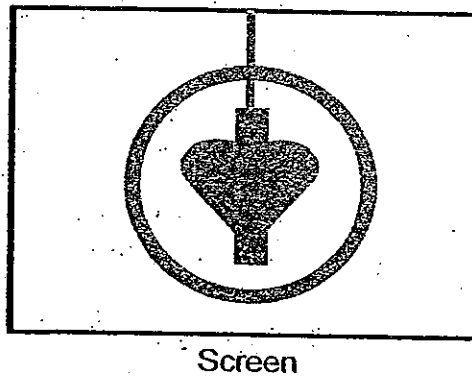
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33. The set-up below shows light shining on three cardboard objects, A, B and C. They are placed at different distances from the torch.



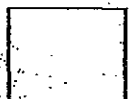
The diagram below shows the shadow cast on the screen.



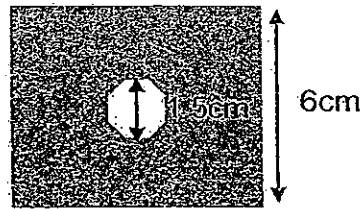
- a) Which one of the following best represents object A, B and C? Write down the letters, A, B or C in the respective box correctly. [3]

Objects	Letter that represents the object
Ring 	
Heart 	
Block 	

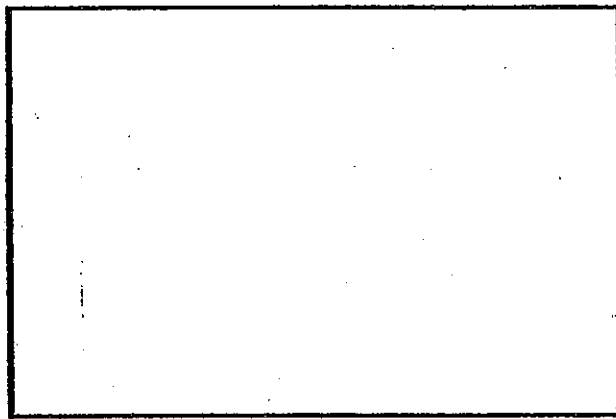
Continue on page 5



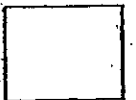
33. A cardboard shown below was placed directly behind object C, leaving no space in between object C and the cardboard. A new shadow was cast on the screen.



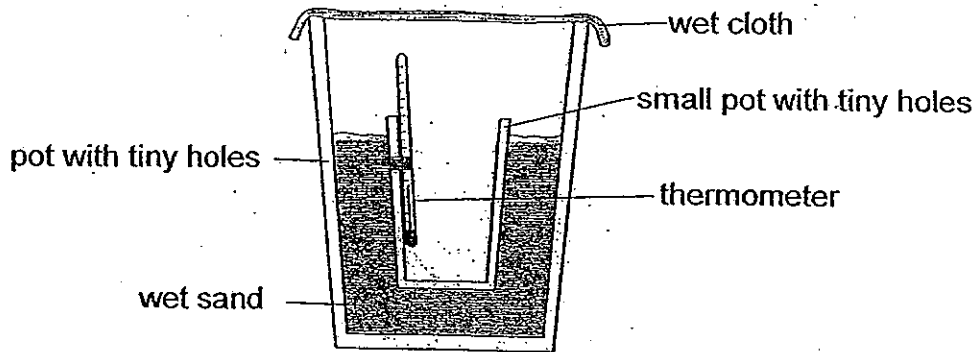
- b) Draw the new shadow cast on the screen in the space given below. [1]



Screen



34. Karina set up the experiment as shown below.



She placed the set-up in a dry room. She recorded the temperature of the air inside the small pot at interval of 10 minutes. Her results are as shown below.

Time (Minutes)	Temperature ( $^{\circ}\text{C}$ )
0	30
10	28
20	26

Karina observed that there was a drop in the temperature of the air inside the small pot. She concluded that it was mainly due to the water evaporating from the wet sand.

a) Was the conclusion made by Karina correct? Give an explanation for your answer. [2]

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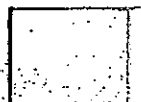
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Karina then repeated the same experiment by placing it under the sun and measured the temperature of the air inside the small pot.

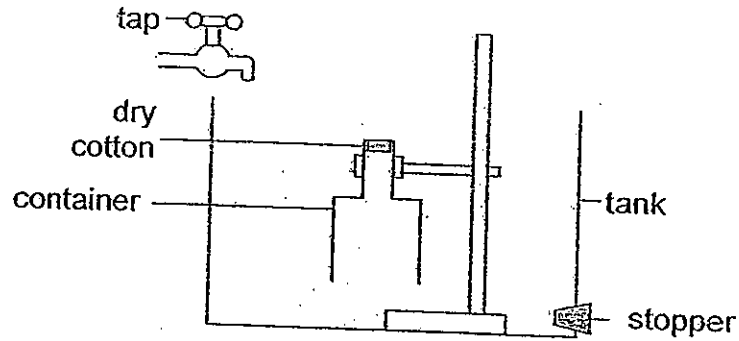
b) Will the temperature of the air in the small pot increase or decrease after 20 minutes? Explain your answer. [2]

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35. Ronnie used the following set-up in an experiment. A piece of dry cotton was glued to the inside of a container.

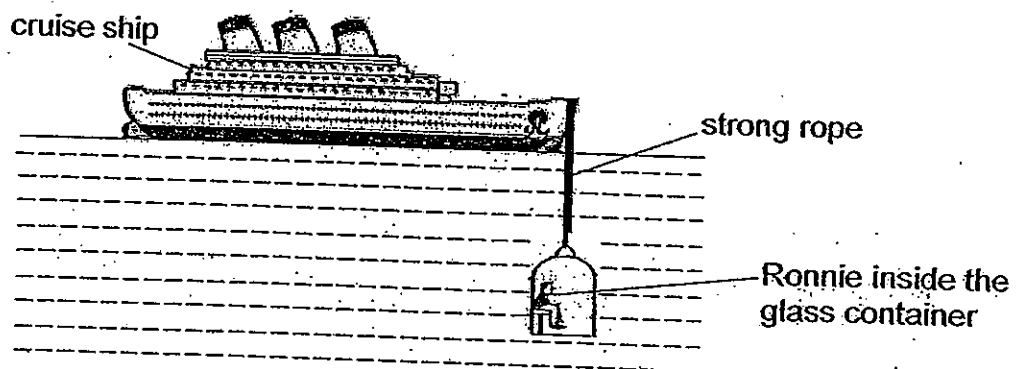


At first, the tank was empty. Ronnie turned on the tap to allow water to flow slowly into the tank until the container was completely under water. After 10 seconds, the stopper was removed to allow the water in the tank to drain away completely. Ronnie observed that the cotton that was glued to the inside of a container remains dry.

- (a) Give a reason why the cotton glued to the inside of a container remains dry.

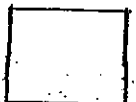
[1]

Ronnie recalled an experience he had when he went on a cruise. He sat inside a large strong glass container which was attached to a strong rope. It was lowered into the sea until it was completely underwater as shown below. He was able to observe marine life in a glass container without getting wet.



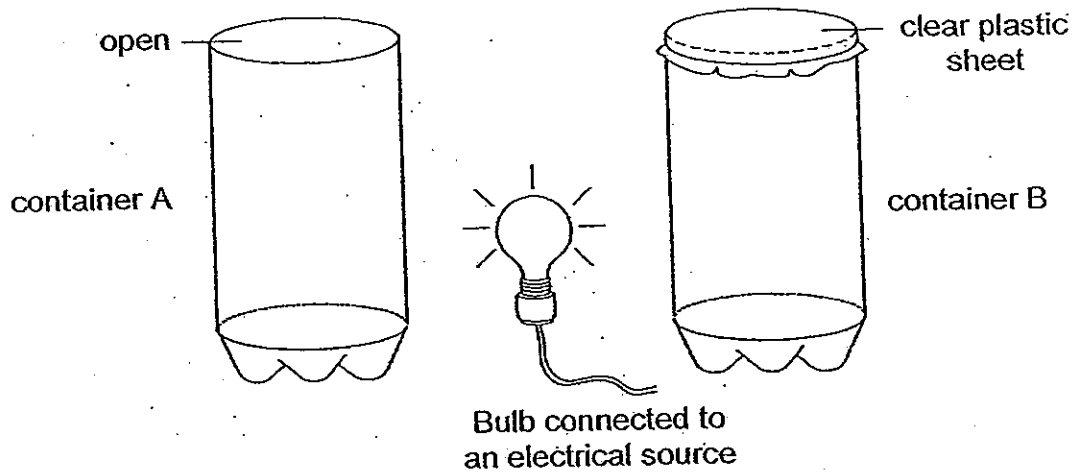
- (b) Give a reason why Ronnie cannot remain in the glass container for a long period of time?

[2]



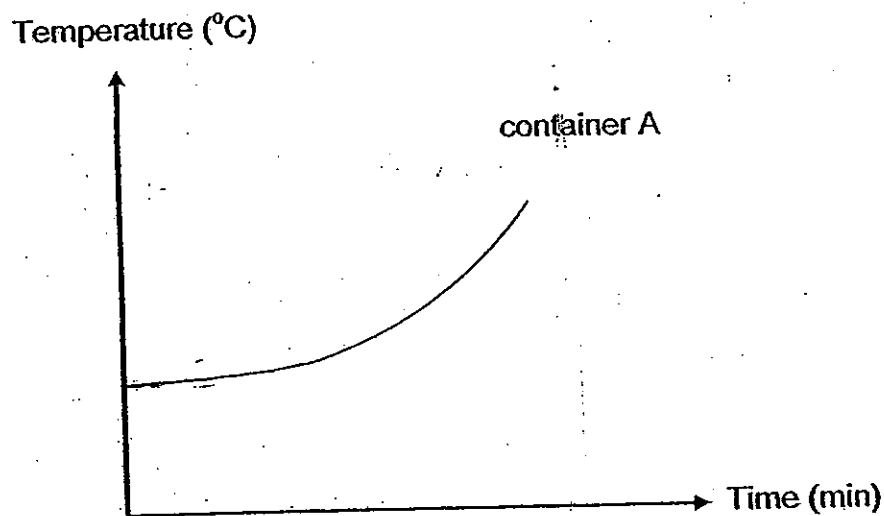


36. The diagram below shows a lamp placed at the same distance from two identical glass containers A and B. Container A is left open while container B is covered with a clear plastic sheet.



The temperature in container A is recorded in the graph below.

- (a) Draw and label another line in the graph below that indicates the temperature of container B after some time. [1]



- (b) Give an explanation to the graph that you have drawn above for container B. [1]

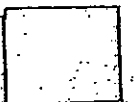
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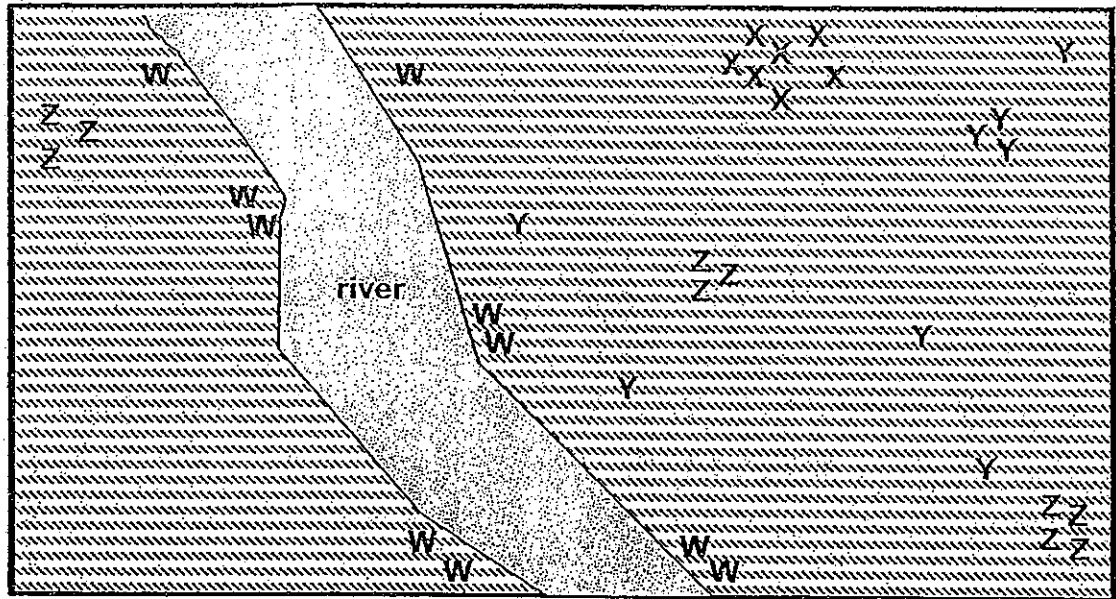
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37. The diagram below shows the map of an island. There are wild animals <sup>roaming</sup> about in the island and plants of different kinds, W, X, Y and Z, are also found on the island.



- (a) Identify the possible types of dispersal for plants W, X and Y. Write the methods in the table below. [3]

Plant	Dispersal method
W	
X	
Y	

- (b) Paul told Karen that plant Z was dispersed by wind only. Karen disagreed with Paul and said that it was dispersed by both wind and explosive action. Do you think Karen is correct? Explain your answer. [1]

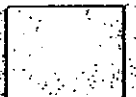
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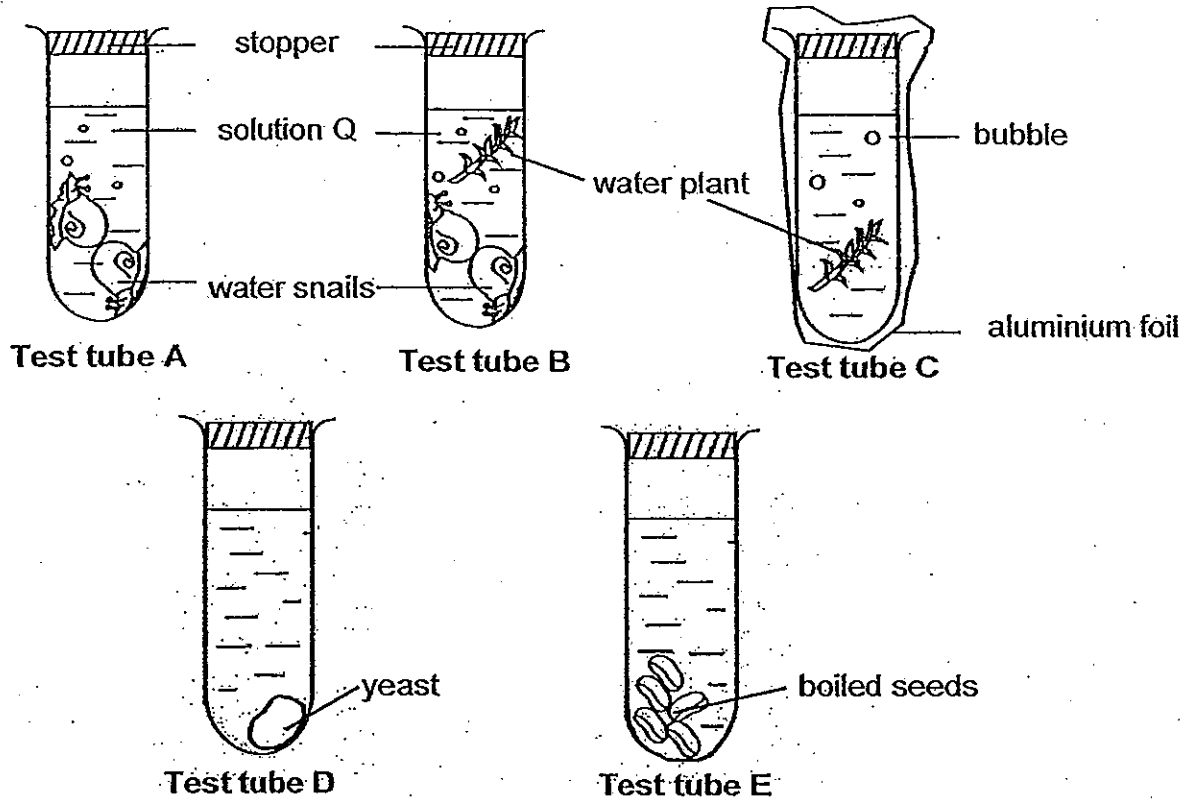
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38. The diagram below shows five test tubes, A, B, C, D and E. 20 ml of an indicator, solution Q, is added into each test tube. It is reddish-orange in colour and turns bright yellow when carbon dioxide dissolves in it and purple when the carbon dioxide is removed from the solution.



The five test tubes were left in sunlight for a few hours.

- (a) In which of the test tubes will the colour of solution Q change bright yellow? Explain your answer. [2]

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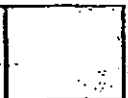
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- (b) If the seeds in test tube E are changed to uncooked seeds, will there be a change of colour in solution Q? Explain your answer. [1]

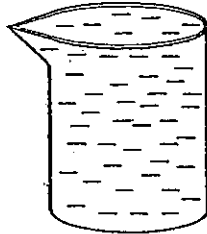
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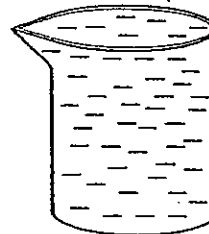
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39. Caroline placed two identical containers near a window. She filled one container completely with liquid X and filled the other container completely with liquid Y.

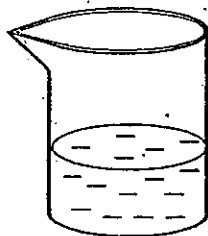


Container filled with liquid X

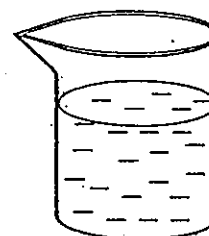


Container filled with liquid Y

The next day, Caroline observed that the liquid levels in the two containers were no longer the same as shown in the diagram below.



Container with liquid X



Container with liquid Y

- (a) Explain why the liquid levels in the two containers were different the next day [1]

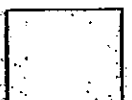
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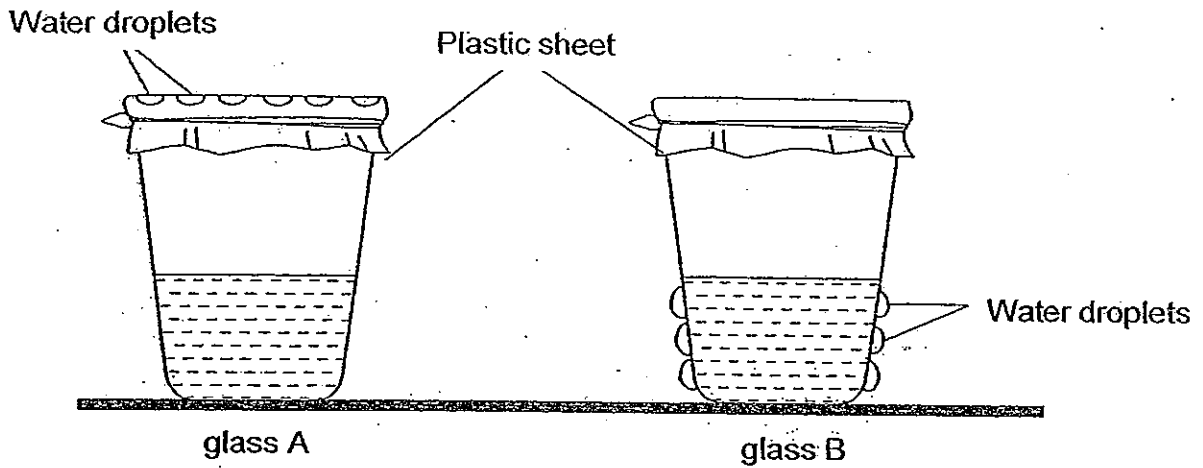
- (b) What could Caroline do if she wanted to reduce the amount of liquid Y in the container in a shorter period of time without pouring it out? [1]

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40. Two glasses, A and B, with sealed openings are placed on a table as shown below. One is filled with hot water and the other with cold water.



- (a) Which glass, A or B, contains cold water? Explain your answer. [1]

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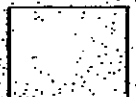
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- (b) Explain clearly how the water droplets in glass A are formed. [1]

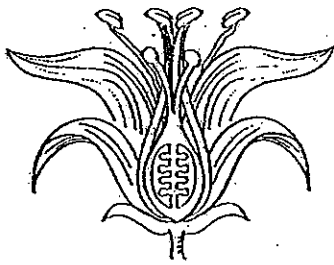
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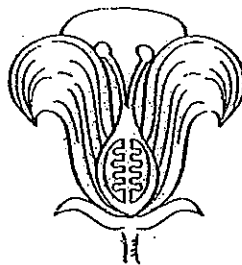
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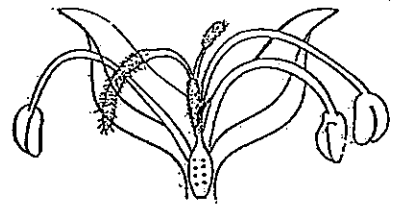
41. The diagram below shows the cross-sections of three flowers from three different plants.



flower A



flower B



flower C

- (a) Based on your observation of the flowers above, which flower is most likely wind pollinated? Explain your answer. [1]

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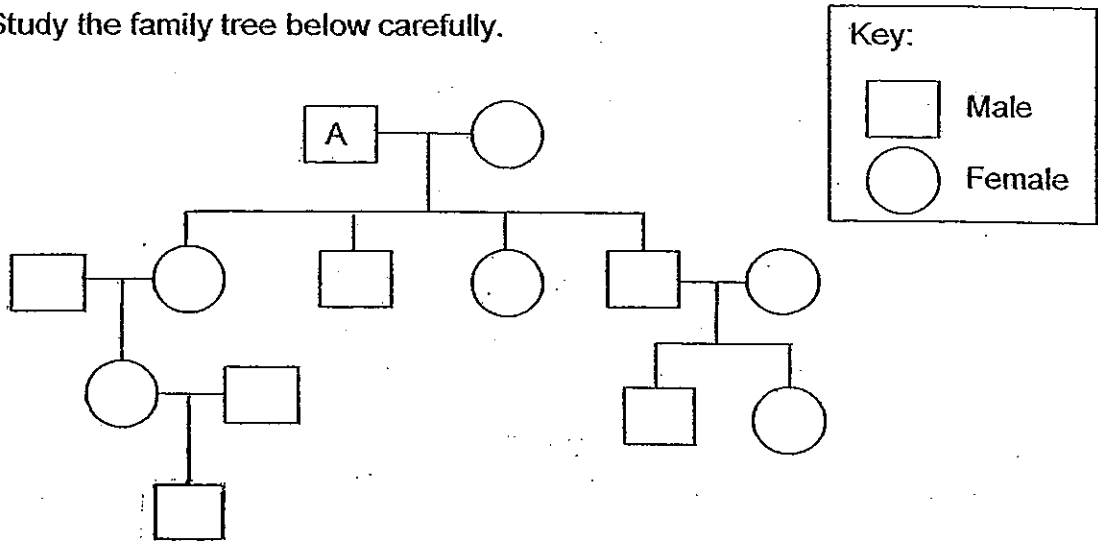
- (b) Which flower(s) above can be self pollinated? Explain your answer. [1]

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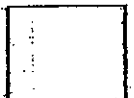
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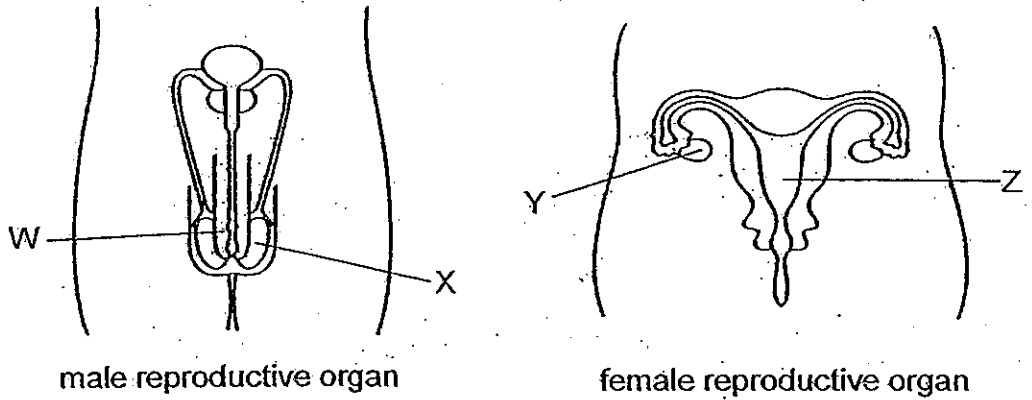
42. Study the family tree below carefully.



- (a) How many generations are shown in this family tree? [1]
- 
- (b) Chris is the only child in the family. Shade the shape that represents Chris. [1]
- (c) How many children do <sup>great</sup> grandfather A have? [1]
- 



43. The diagram below shows the male and female reproductive organs.



(a) Name the parts W, X, Y and Z. Write your answers in the table below. [2]

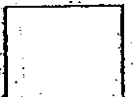
Parts	Name of organ
W	
X	
Y	
Z	

(b) Write down one difference between the reproductive organ of the female flower and female human being. [1]

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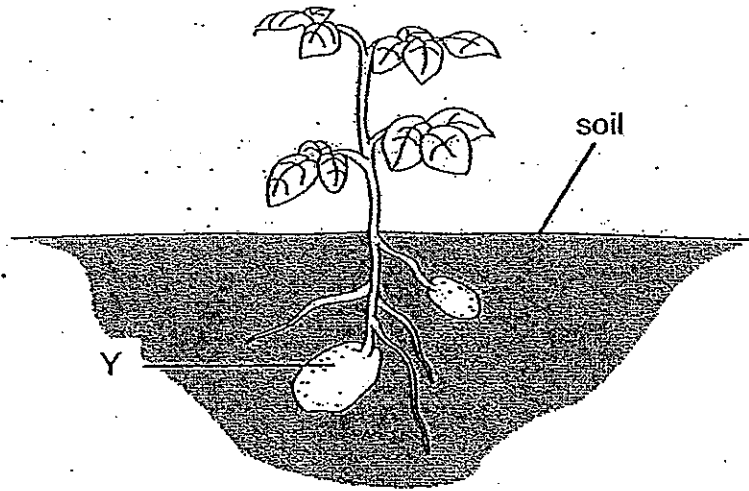


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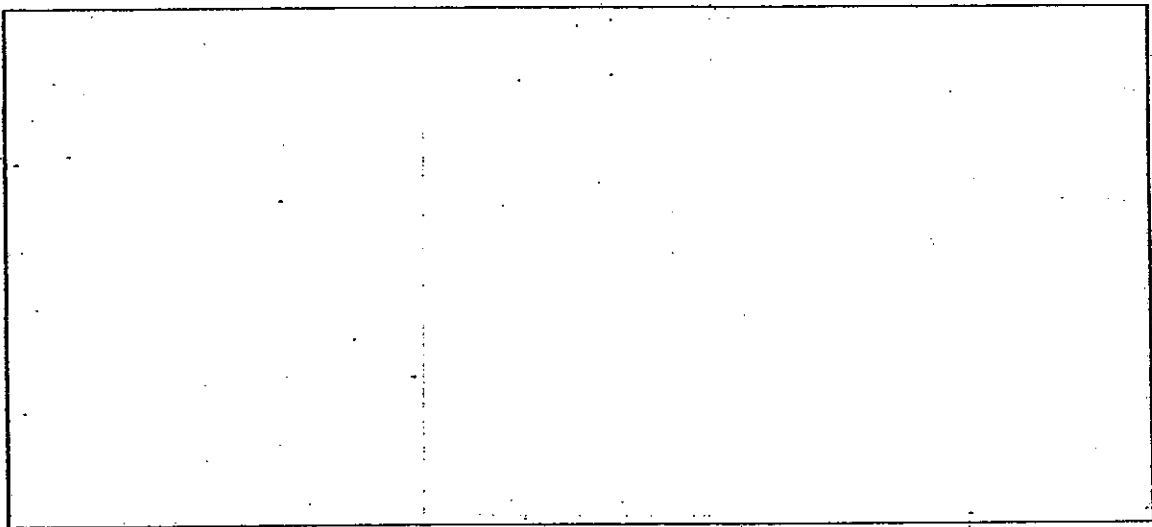




44. The diagram below shows a green plant.



- (a) In the space given below, draw and label all the parts clearly the structure of a cell taken from part Y. [2]

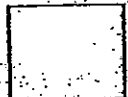


- (b) State a difference between a plant cell and an animal cell. [1]

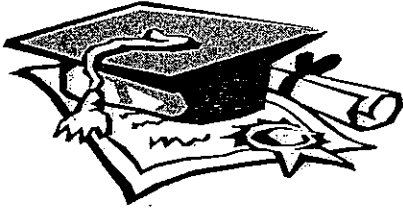
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- End of Paper -





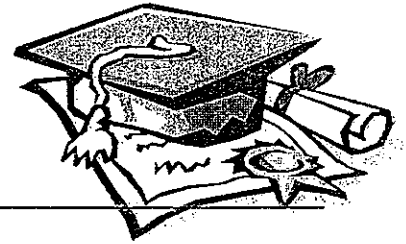


# ANSWER SHEET

**EXAM PAPER 2010**

**SCHOOL : CHIJ PRIMARY**  
**SUBJECT : PRIMARY 5 SCIENCE**

**TERM : SA2**



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

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

31)a)Released==Bulb B lit up      Pushed==Bulb A lit up  
b)Bulb A will light up brighter than Bulb B. When the button is pressed, bulb A will have a higher voltage than bulb B.

32)a)Yes. The rod moves away from the magnet. Only a magnet can repel another magnet.  
b)The rod has lost some of its magnetism due to the heat.

33)a)Ring=A    Heat=C    Block=B

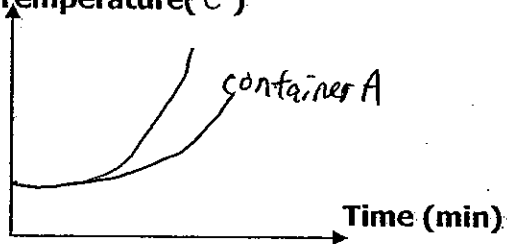
b)



34)a)Yes. As the water evaporates, heat is removed from the air inside the pot, causing the temperature to drop.  
b)The pot and the sand will cause the temperature of air in the pot to rise.

35)a)The cotton remained dry as the air in the container takes up space and prevented from entering and coming into contact with the cotton wool.  
b)Ronnie cannot remain in the glass container for a long period of time as there will be a lack oxygen in the container some time. Without oxygen, the person will not be able to survive.

36)a) Temperature(°C)



b)The air in container B gains heat from the bulb. The dear plastic sheet traps the heat thus causing the temperature rise to be higher than container A.

37)a)W: By Water      X: By Explosive Action      Y: By Wind

b)Yes, the plant could be dispersed by both methods as it is cluttered at different sports and scattered towards one direction only.

38)a)Test tubes A and C and D. Both Test tubes A and D has living things in it that respire to give out carbon dioxide. Test tube C has a plant and as it is covered with aluminium foil, it respire instead of photosynthesizing, causing solution Q to the yellow.

b)Yes. The seeds will have germinated and carbon dioxide will be released.

39)a)Liquid X evaporated more than liquid Y.

b)Put the containers in a hotter place.

40)a)Glass B. Glass B has water droplets on the outer surface of the glass, this shows that the water inside the glass causes the glass to become a cold surface for condensation to happen on the outer surface the glass.

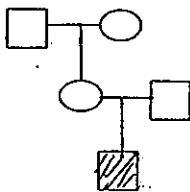
b)The warm water vapour touches the cool surface of the plastic sheet and condenses into tiny water droplets.

41)a)Flower C. Its anthers are dangling outside the flower.

b)Flower A and C. It has anthers and a stigma on the same flower.

42)a)4 generations are shown.

b)

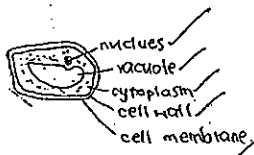


c)He has 4 children.

43)a)W: peins      X: testis      Y: ovary      Z: womb

b)Reproductive organ of a female flower has a style but the reproductive organ of a female human being does not have a style.

44)a)



b)A plant cell has a cell wall but the an animal cell does not have a cell wal.