

**SINGAPORE CHINESE GIRLS' SCHOOL
FIRST SEMESTRAL ASSESSMENT 2010
PRIMARY 4 SCIENCE**

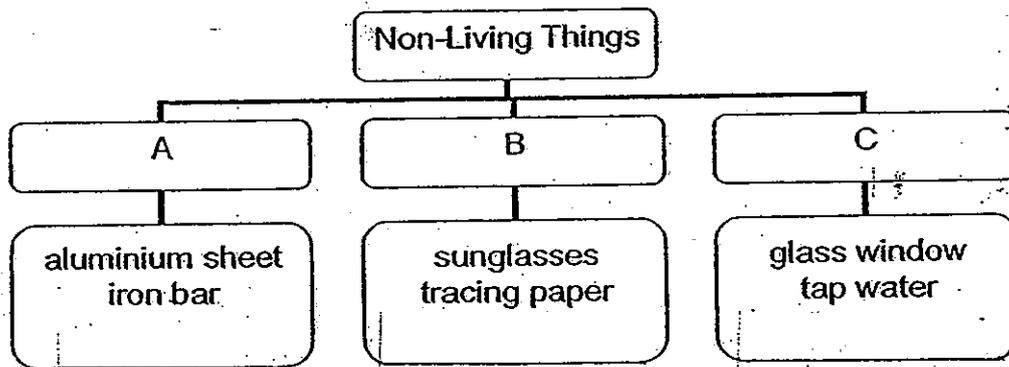
Name: _____ ()
Class: Primary 4

Date: _____
Duration: 1hr 15 mins

Part I (40 marks)

For each question from 1 to 20, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) on the Optical Answer Sheet provided.

Study the classification table below and answer Questions 1 and 2.



- 1) Which of the following would be a suitable heading for A?

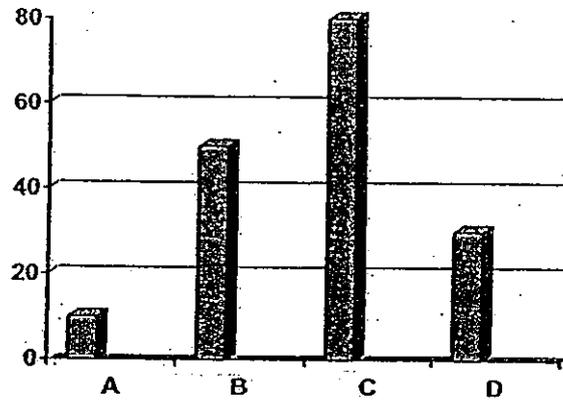
1) hard objects	3) opaque object
2) magnetic objects	4) man-made object

- 2) Under which heading would you classify a leather wallet?

1) A	3) C
2) B	4) None of the above

- 3) Which one of the following statements about digestion is true?
 - 1) Digestion takes place in the stomach and small intestines only.
 - 2) Digested food is transported by blood to other parts of the body.
 - 3) Digested food enters the small intestine before it enters the stomach.
 - 4) The large intestine is responsible for absorbing water and mineral salts.

- 4) The graph below shows the amount of digested food in the human digestive system:



The large intestine will most likely be represented by column _____.

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

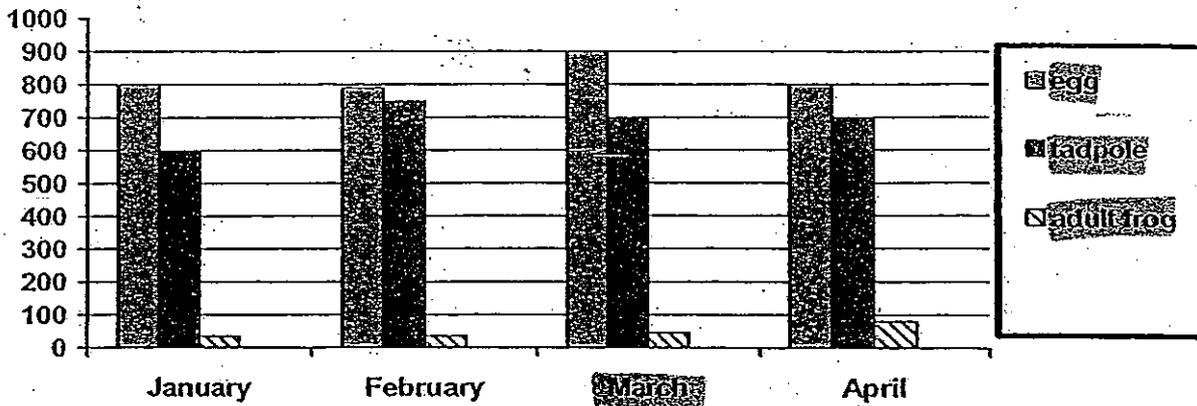
- 5) Study the table below.

Animal X	Animal Y
Lays eggs Has a 3-stage life cycle Adult has wings Spends its entire life cycle on land	Lays eggs Has a 3-stage life cycle Adult has no wings Spends part of its life cycle in water

Use the table above to identify Animal X and Y.

	Animal X	Animal Y
1)	Duck	Platypus
2)	Chicken	Guppy
3)	Butterfly	Frog
4)	Cockroach	Toad

Study the graph below and answer Questions 6 and 7.



The graph above shows the number of frog's eggs, tadpoles and adults in a garden pond.

6) Based on the graph, the frog had the highest number at which stage of its life cycle in March?

- | | |
|------------|----------|
| 1) Egg | 3) Adult |
| 2) Tadpole | 4) None |

7) Based on the graph, which of the following statements is most likely to be true?

- 1) All tadpoles survived to become adults.
- 2) Many tadpoles were eaten by other animals.
- 3) None of the adult frogs were able to lay eggs.
- 4) All the eggs were kept safe and all became tadpoles.

8) Which of the following will disrupt the mosquito's life cycle?

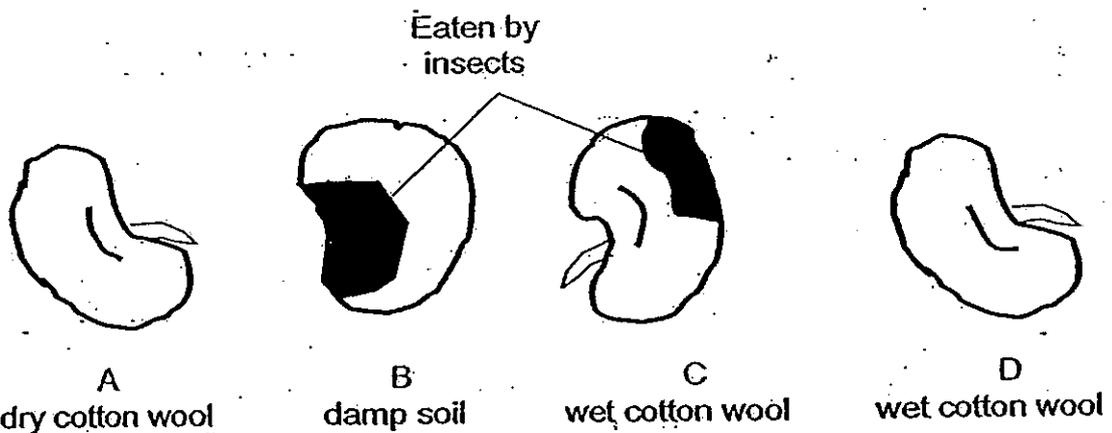
- A) The egg is not exposed to sunlight.
- B) The larva is taken out of the water.
- C) The pupa is put in water.
- D) The adult is put in water.

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

- 9) Mrs Gin asked her pupils to observe an insect with a 3-stage life cycle at home and record their observations daily. It will take approximately 10 days for the insect to complete one cycle from the egg stage. Which of the following pupil did not record her observations correctly?

	Pupils	1 day after it hatched	2 weeks after it hatched
1	Ani	It stayed motionless	It started to eat and moult
2	Bena	It only ate	It ate and moulted
3	Charlmm	It ate and moulted	It was active and eating
4	Devi	It only ate	It stopped eating but was alive

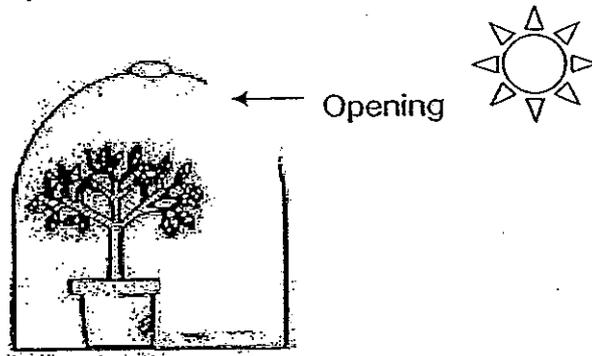
- 10) A few soaked seeds of the same type were planted as shown below. Which of the seeds will still germinate given the right conditions?



- 1) A and D
2) B and C

- 3) C and D
4) D only

- 11) A plant was placed in a black coloured jar as shown below. A few days later, Jim observed that the plant was leaning towards the opening.



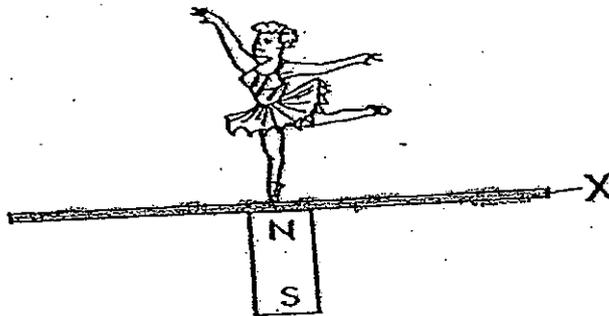
This experiment shows that the plant _____

- A) was growing bigger
- B) needs water to survive
- C) needs sunlight to survive
- D) was responding to changes

- 1) A and D only
- 2) B and C only

- 3) C and D only
- 4) A, B, C and D

- 12) Gayle put up a puppet show using her ~~magnetic~~ ballerina doll. Besides using strings, she wanted to use magnets to move her ballerina on stage. However, the ballerina ~~could not move and was stuck~~ as shown below.

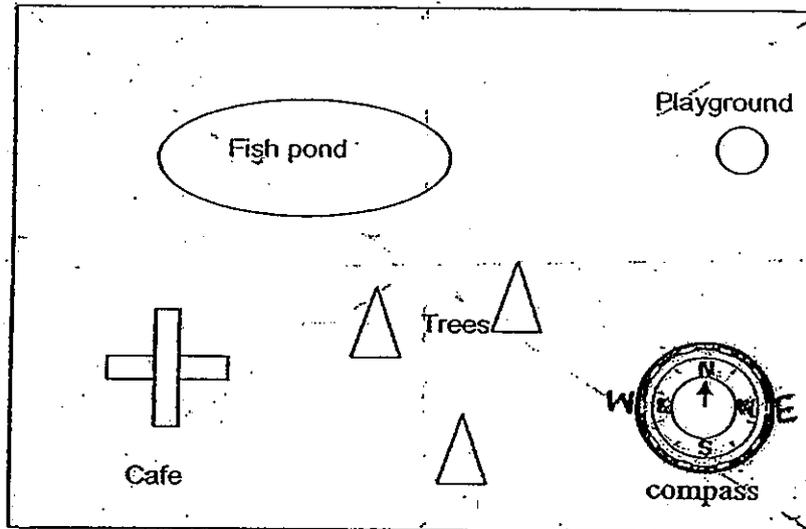


Which of the following best explains the above?

- 1) The magnet below the stage was too small.
- 2) The stage was made of a magnetic material.
- 3) The magnet below the stage lost its magnetism.
- 4) The magnetic poles under the stage are placed in the wrong direction.

- 13) Edison took part in a treasure hunt contest and was told that the clue was located at the northwest of the park. He used his compass as shown below to help him with directions. Where should Edison search for his clue?

MAP OF THE PARK



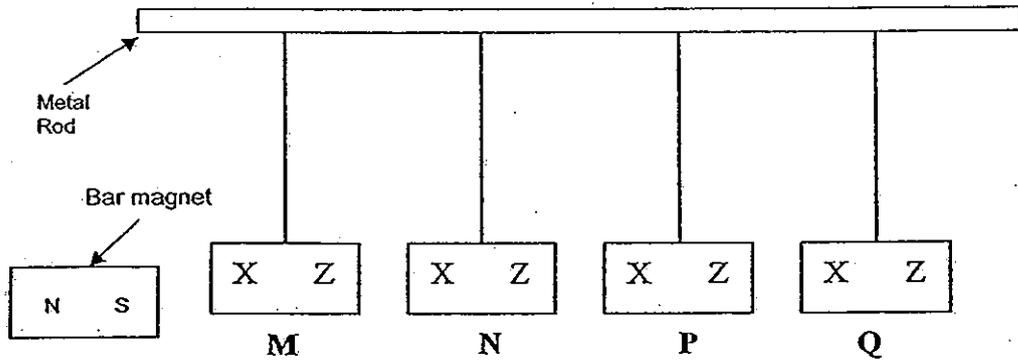
- 1) Cafe
2) Trees
3) Fish Pond
4) Playground

- 14) Which of the following objects are ~~non-matter~~ matter?

- A) lightning
B) oxygen
C) petroleum
D) shadow
E) vacuum cleaner

- 1) A and B only
2) A and D only
3) C and D only
4) All of the above

- 15) Eunice set up an experiment as shown below. She placed her bar magnet with the south pole close to each different objects at points X and Z. The table below describes her observation.

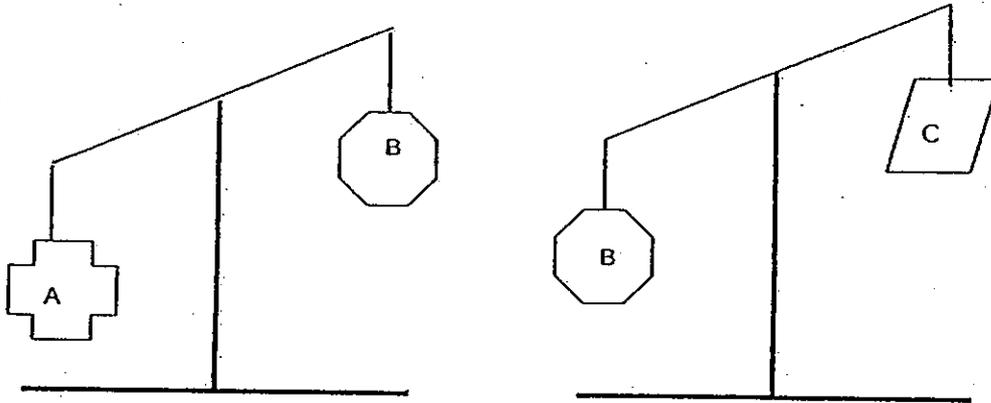


Object	Observations	
	South Pole and X	South Pole and Z
M	Attracted	Attracted
N	Not Attracted	Not Attracted
P	Repelled	Attracted
Q	Attracted	Repelled

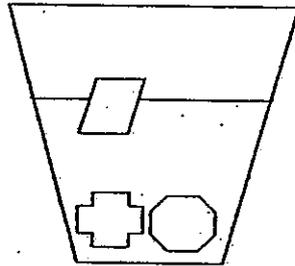
Which one of the following would correctly describe the materials that each object was made up of?

No	M	N	P	Q
1)	Plastic	Magnet	Iron	Steel
2)	Nickel	Plastic	Magnet	Magnet
3)	Iron	Wood	Magnet	Copper
4)	Magnet	Wood	Steel	Aluminium

- 16) Xiwen placed three different objects of the same volume, made out of different materials on a balance scale as shown below.



She then placed them in a container of water.



Which one of the following best describes object B?

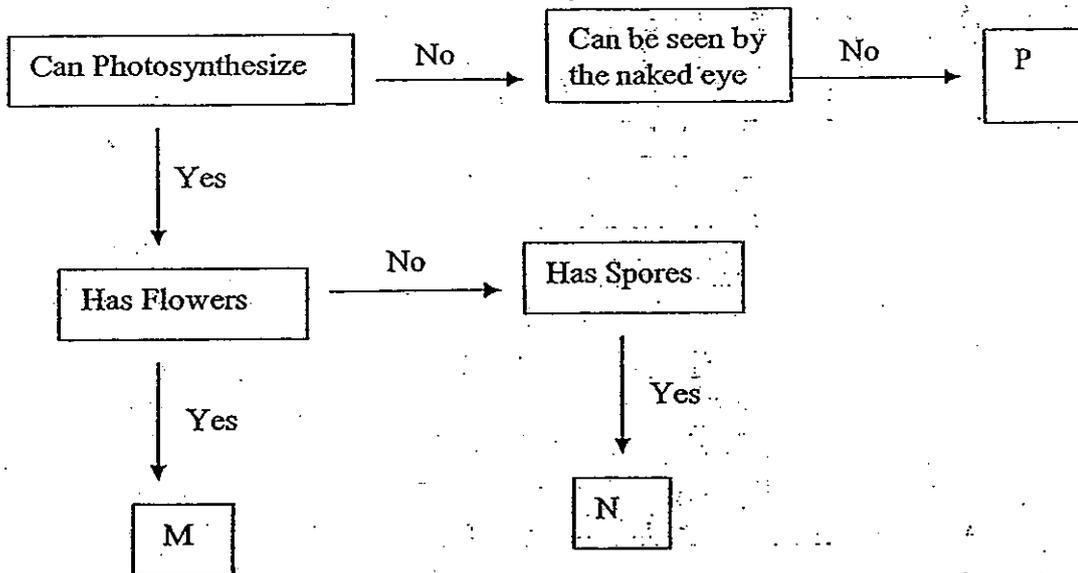
- 1) Object B is lightest and can float on water.
 - 2) Object B is heaviest and cannot float on water.
 - 3) Object B is lighter than A but heavier than C and cannot float on water.
 - 4) Object B is lighter than C but heavier than A and cannot float on water.
- 17) Sunita made some jelly by doing the following:

- First she heated some water and then added the jelly powder.
- After the powder is fully dissolved, she poured the mixture into a bowl to cool.
- 3 hours later, she removed the mixture from the bowl and found that the mixture's shape became fixed.

Which of the following correctly reflects the correct state of each substance?

	Water	Jelly Powder	Mixture before cooling	Mixture after cooling
1)	Liquid	Solid	Liquid	Liquid
2)	Liquid	Solid	Solid	Solid
3)	Liquid	Solid	Liquid	Solid
4)	Liquid	Liquid	Solid	Liquid

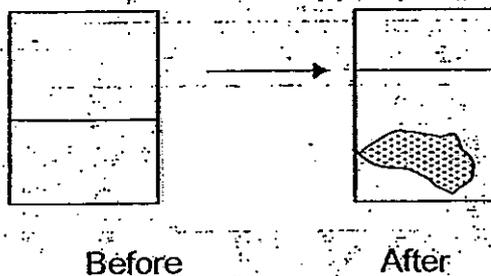
Study the diagram below and answer question 18.



18) What can object M, N and P be?

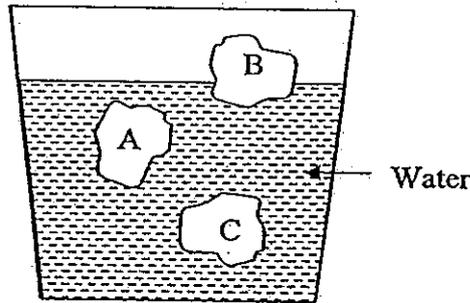
No	M	N	P
1)	Balsam	Mushroom	Fungi
2)	Balsam	Birds Nest Fern	Mushroom
3)	Hibiscus	Birds Nest Fern	Bacteria
4)	Hibiscus	Mushroom	Bacteria

19) Samantha placed a piece of rock into a beaker of water. She noticed that the water level increased. What can Samantha conclude from her experiment?

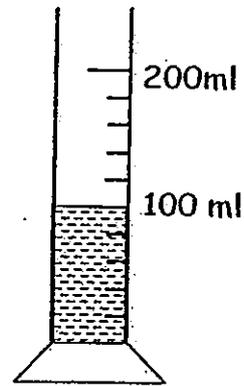


- 1) A solid has mass.
- 2) A solid has volume.
- 3) A solid has a fixed shape.
- 4) Liquids can change its state from one form to another.

- 20) Suresh's teacher told him to find out the volume of 3 irregularly-shaped objects, A, B and C. The diagram below shows the buoyancy of each object.



Suresh was given a measuring cylinder filled with 100 ml of water to help him find the volume of the objects.



Suresh carried out only 3 of the following steps and found the volume of A, B and C successfully.

- A: Lowering A alone and finding its volume.
- B: Lowering B alone and finding its volume.
- C: Lowering C alone and finding its volume.
- D: Tying B to C, lowering them together and finding the total volume.
- E: Tying A to C and lowering them together and finding the total volume.

Which 3 steps did Suresh carry out?

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

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PRIMARY 4 SCIENCE**

Name: _____ ()
Class: Primary 4

Date: _____
Duration: 1hr 15 mins

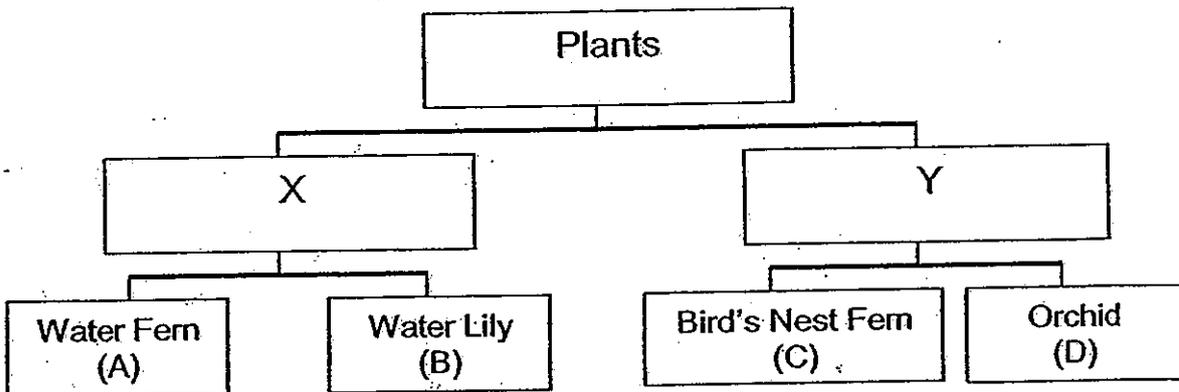
Written Paper (Part I)	40
Written Paper (Part II)	20
Total	60

Parent's Signature

Part II (20 marks)

Read and answer questions 21 to 27.

21) Study the classification table as shown below.



a) Write down a suitable heading for **box X and Y**. (1 mark)

b) Greg bought 2 plants from a **herbarium**. **Plant Q** grew from spores while **Plant R** grew from seeds. He placed **both plants** in a **pot by his window**. In which box, A, B, C, D would you classify Greg's plants? (1 mark)

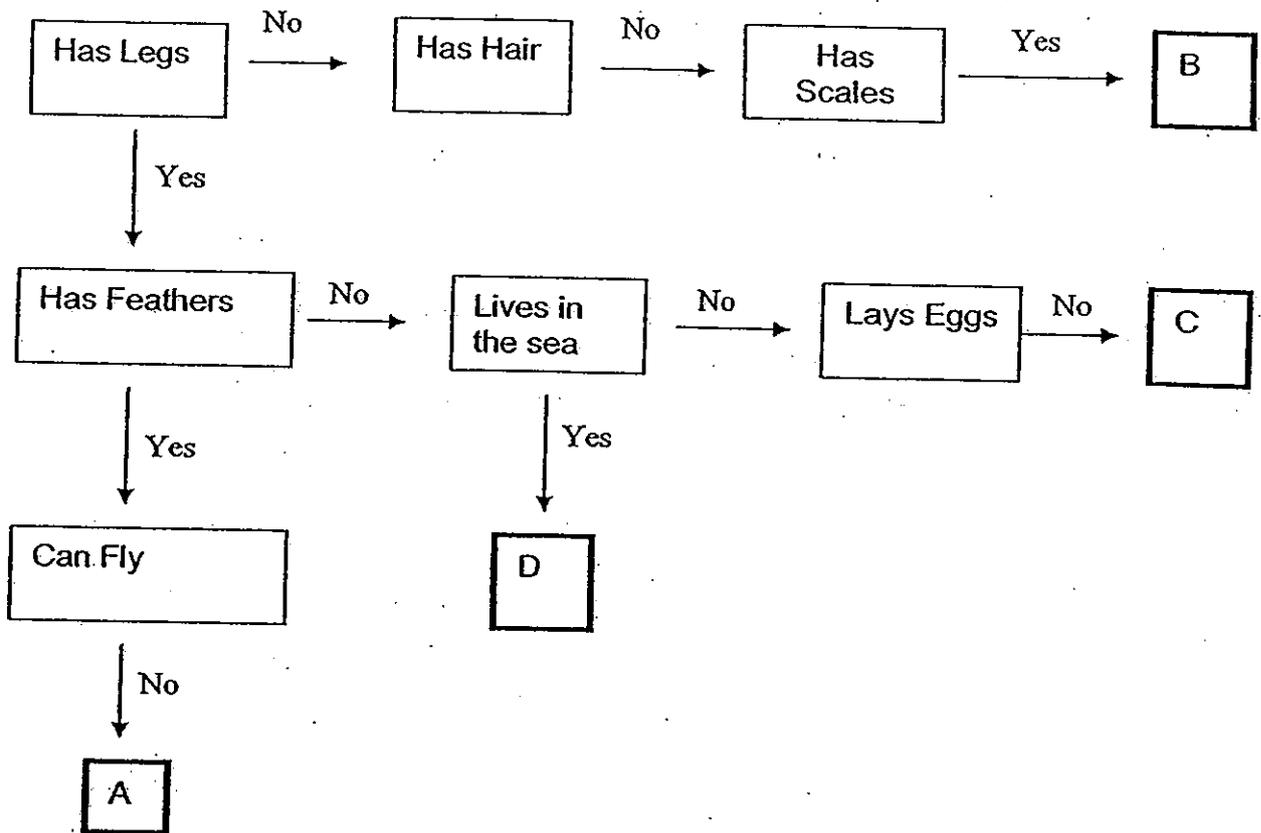
Plant Q:

Plant R:

c) Julia wanted to classify a **Rose Plant in box X**. Do you agree with her? (1 mark)

3

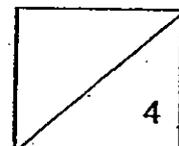
22) Study the diagram below



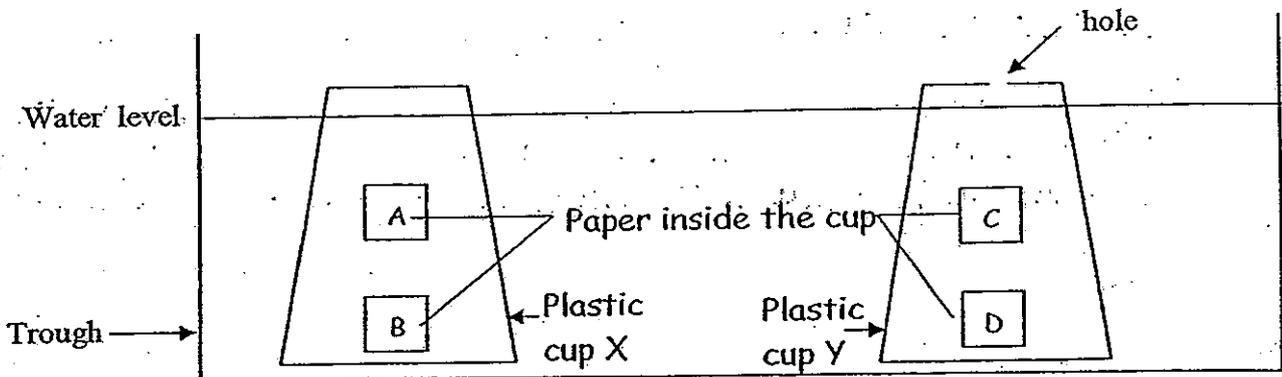
a) List ~~one~~ animal that can be placed in ~~Box B~~ (1 mark)

b) Daryl wanted to place an ostrich in Box A but Maya suggested a penguin instead. Explain why both were right. (2 marks)

c) List down the similarities between animals in Box C and Box D. (1 mark)



- 23) The diagram below shows 2 plastic cups, X and Y, placed inverted in a trough of water. Only Plastic Cup Y has a hole at its bottom. Both have 2 pieces of paper stuck on the inner wall.

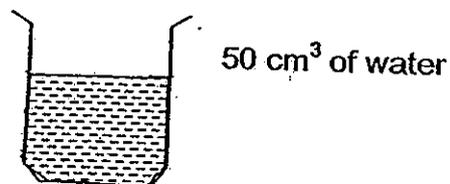
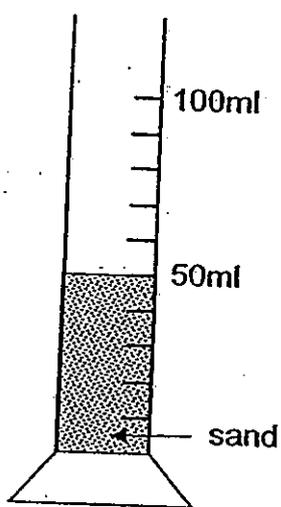


Read the following statements on what happens after water is poured in. Indicate whether they are 'True' or 'False' by ticking the correct column. (3 marks)

	Statement	True	False
a)	Both A and B will get wet .		
b)	Both C and D will get wet.		
c)	A will get wet because water occupies space.		
d)	B will get wet because air can be compressed.		
e)	C will get wet because air in the cup could escape.		
f)	The water level of the trough will go down if Plastic Cup X has a hole at the bottom too.		

24a) Jane and Mary poured some water into a pot of dry sand and saw bubbles at the surface of the sand. Give a reason for their observation. (2 marks).

Mary had 50 cm^3 of dry sand in a measuring cylinder as shown below.
($1 \text{ cm}^3 = 1 \text{ ml}$)

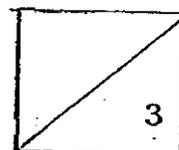


Jane had 50 cm^3 of water in a beaker.

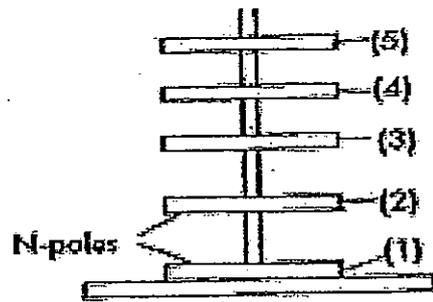
24b) Before pouring the water into the measuring cylinder holding the sand, Jane told Mary that the total volume of the sand and water would be less than 100 cm^3 .

Mary disagreed and insisted that it would be exactly 100 cm^3 .

Who was right? (1 mark)

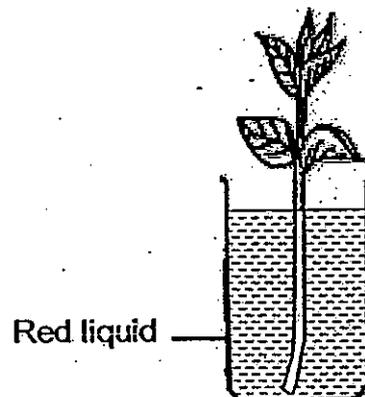


- 25) Rana placed 5 ring magnets through a metal rod as shown in the picture below. She noticed that her magnets were floating on top of each other.

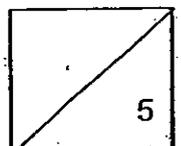


- a) Explain why the magnets floated above each other? (1 mark)
-
- b) What should Rana do to ensure that her magnets are joined together? (2 marks)
-
-

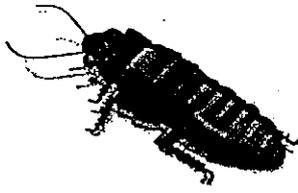
- 26) Jim placed a stalk of a plant in a beaker filled with a red-coloured liquid.



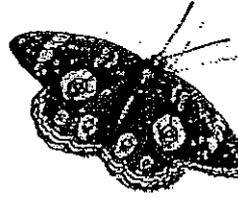
- a) What will happen to the leaves within the next 3 days? (1 mark)
-
- b) State the part of the plant that caused this to happen. (1 mark)
-



27) Compare the life cycles of the animals below.



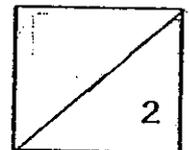
Cockroach

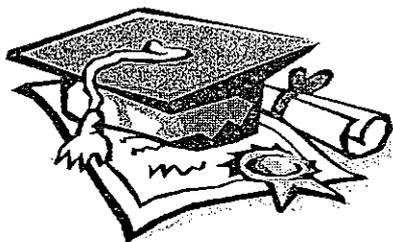


Butterfly

a) List down 1 similarity between the life cycles of the animals. (1 mark)

b) List down 1 difference between the life cycles of the animals. (1 mark)



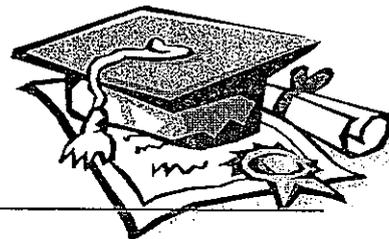


ANSWER SHEET

EXAM PAPER 2010

**SCHOOL : SCGS PRIMARY
SUBJECT : PRIMARY 4 SCIENCE**

TERM : SA1



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

Q18	Q19	Q20
3	2	2

21)a)X: Aquatic plants Y: Land plants
b)Q: C R: D
c)I do not agree with her.

22)a)Guppy.
b)Both the ostrich and penguin have legs, feathers and cannot fly.
c)They have legs and do not have feathers.

23)a)F b)T c)F d)T e)T f)T

24)a)The water is taking up the space where the air in between the sand particles occupied so when the water poured in, the air in between the sand the sand particles for bubbles and escape to make space for the water poured in.
b)Jane was right.

25)a)The like poles of the ring magnets were facing each other and repelled that is why the ring magnets seemed to be floating on top of each other.
b)She should make sure that the unlike poles of the magnets face each other to be attracted and stay joined together.

26)a)The leaves will turn red.
b)The stem.

27)a)The young of the cockroach and the larva of the butterfly eat and mouth.
b)The life cycle of the cockroach has 3 stages but the life cycle of he butterfly had 4 stages.