



RED SWASTIKA SCHOOL

RED SWASTIKA SCHOOL

2009 SEMESTRAL ASSESSMENT 1

SCIENCE

Name : _____ ()

Class : Primary 4/ ____

Date : 7 May 2009

BOOKLET A

30 Questions

60 Marks

Duration of Paper : 1 hour 30 minutes

Note:

1. Do not open this Booklet until you are told to do so.
2. Questions 1 - 30 are to be done on the OAS provided.
3. Read carefully the instructions given at the beginning of each part of the Booklet.
4. Do not waste time. If a question is difficult for you, go on to the next one.
5. Check your answers thoroughly and make sure you attempt every question.

Section A : Multiple Choice Questions (30 X 2 marks each)

Choose the correct answer and shade the appropriate oval in the OAS provided.

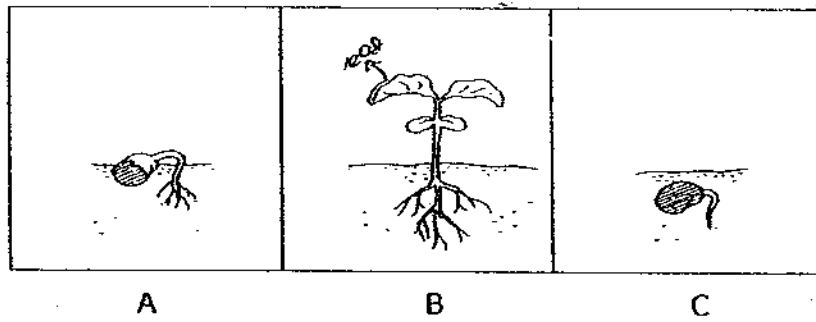
1. Somebody kicks Janet's foot accidentally. Janet yells in pain. Janet's yelling shows living things can _____.
 - (1) grow
 - (2) reproduce
 - (3) move on their own
 - (4) respond to changes

2. Which one of the following statements about a fungus is not true?
 - (1) It needs food.
 - (2) It needs water.
 - (3) It reproduces by spores.
 - (4) It moves from one place to another on its own.

3. Daniel wrote his observations in a journal. This is what he wrote,
"It eats a lot of leaves, moults several times and grows very quickly."
He was describing a _____.
 - (1) tadpole
 - (2) caterpillar
 - (3) mosquito larva
 - (4) cockroach nymph

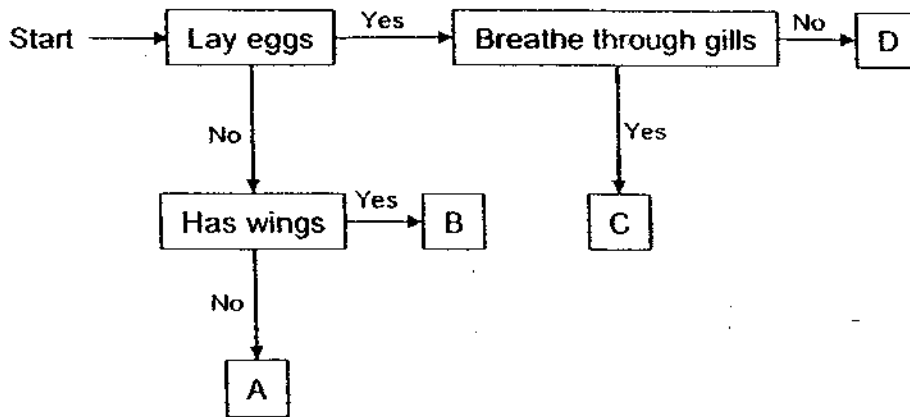
4. Which one of the following shows how food is transported in a healthy plant?
 - (1) stem → leaves → roots
 - (2) stem → roots → leaves
 - (3) leaves → stem → roots
 - (4) roots → stem → leaves

5. In Stage(s) _____ of the development of a bean plant, sunlight is needed for the plant to make food.



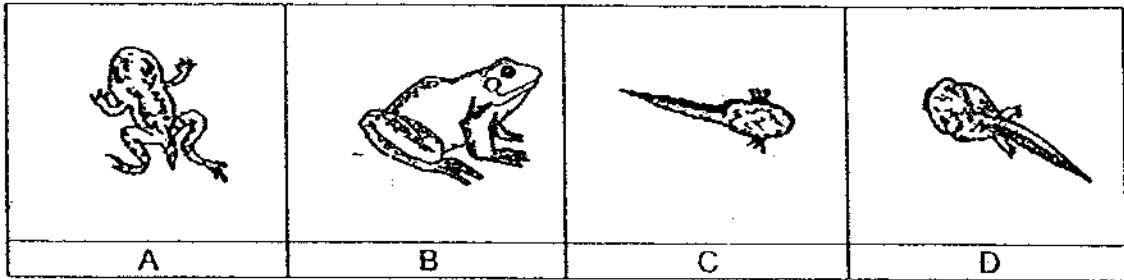
- (1) A only
- (2) B only
- (3) A and B only
- (4) A, B and C

6. Study the flowchart below. Which of the following correctly identifies animal A, B, C and D?



	A	B	C	D
(1)	Dog	Bat	Goldfish	Cockroach
(2)	Elephant	Frog	Hen	Butterfly
(3)	Hen	Eagle	Duck	Snake
(4)	Cat	Butterfly	Mosquito	Duck

7. Andy drew his observations of his pet as it changed from a tadpole to a frog. Which list has the pictures in the correct order from his first observation to the last?

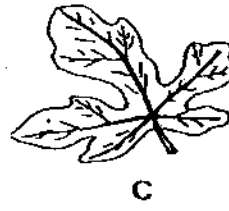
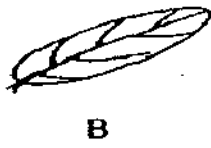
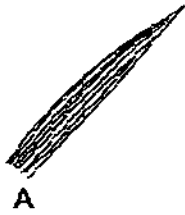


- (1) A, B, C, D
- (2) B, A, D, C
- (3) C, D, A, B
- (4) D, C, A, B

8. Look at the leaf shown below.

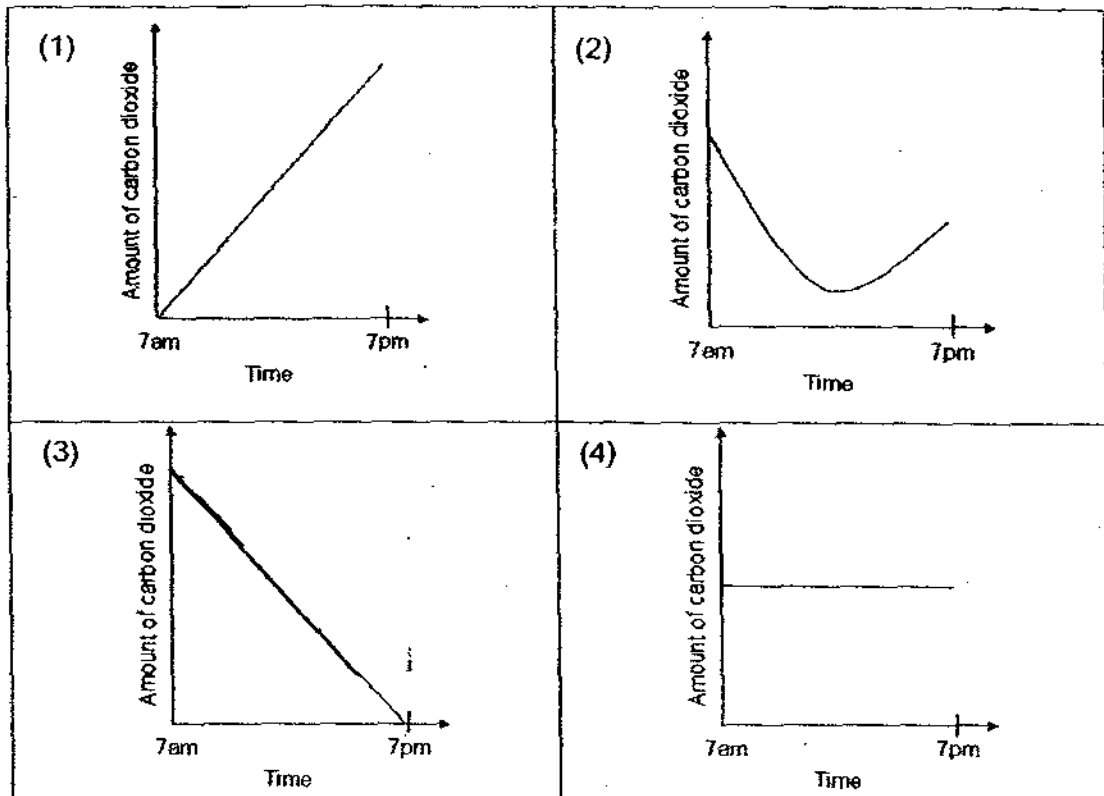


Which one of the following four leaves shown below can be classified in the same group as the leaf shown above?



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

9. Which one of the following graphs shows the most likely carbon dioxide level in our school garden from 7am to 7pm on a sunny day?



10. Which of the following parts help the plant to transport water and mineral salts?

A: flower
B: stem
C: root
D: leaf

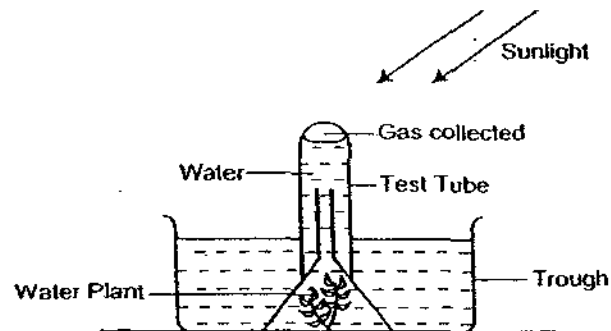
- (1) B only
(2) C only
(3) B and C only
(4) A, B, C and D

11. Which of the following characteristics can be used to classify leaves?

- A: Vein pattern
- B: Shapes
- C: Edges
- D: Colours

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

12. Riza set up the apparatus as shown below. What is the gas collected?



- (1) Oxygen
- (2) Nitrogen
- (3) Water vapour
- (4) Carbon dioxide

13. Four students, Miki, Tom, Ahmad and Rita made these comments about a potato.

Miki: The potato is formed from a flower.

Tom: Water is transported from the roots to the potato for storage.

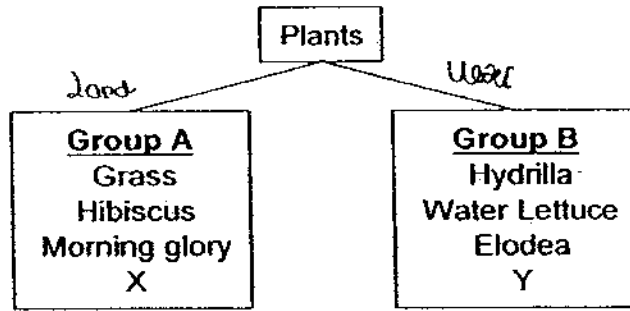
Ahmad: Water is transported from the leaves to the potato for storage.

Rita: Food is transported from the leaves to potato for storage.

Which of the following student has made a correct statement about the potato?

- (1) Miki
- (2) Tom
- (3) Ahmad
- (4) Rita

14. The plants are classified into two groups based on a characteristic.



Which one of the following best represents X and Y?

	X	Y
(1)	Bougainvillea	Arrowhead
(2)	Arrowhead	Bougainvillea
(3)	Duckweed	Frangipani
(4)	Cattail	Duckweed

15. The classification table below shows the different types of seeds.

X	Y
Rice	Pong Pong
Barley	Rambutan
Tomato	Mango

Which one of the following are suitable headings for X and Y?

	X	Y
(1)	Edible	Inedible
(2)	One seed	Many seeds
(3)	Soft	Hard
(4)	Big	Small

16. The table below shows the number of days an insect spent in the respective stages of its life cycle.

Stage	Egg	Larva	Pupa
Number of days in this stage before developing to the next stage	6	4	3

How many days does it take for the egg of this insect to develop into an adult once it is laid?

- (1) 6 days
 - (2) 7 days
 - (3) 10 days
 - (4) 13 days
17. Khalid took pictures of two plants, Fern and Grass as shown below. The fern was found on a tree and the grass was found in the garden.



Fern



Grass

Which of the following characteristics are true of the two plants?

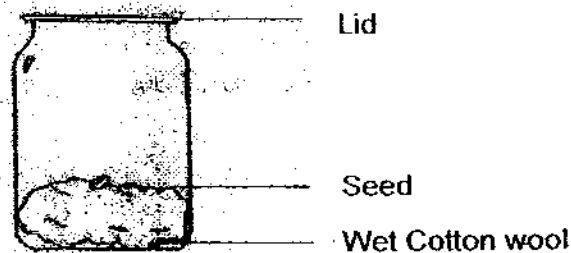
- (A) Both plants can reproduce.
 - (B) Both plants can make their own food.
 - (C) Both plants have stems, flowers and roots.
- (1) A only
 - (2) B only
 - (3) A and B only
 - (4) B and C only

18. The following four pupils each made a statement about a frog.

- Adrian : A frog lays eggs on land.
Belinda : A frog can live in water and on land.
Chris : The young of a frog lives in water.
Dorothy : A frog breathes through its skin.

Who made the **wrong** statement?

- (1) Adrian
(2) Belinda
(3) Chris
(4) Dorothy
19. Jiamin set up an experiment shown in diagram below. She left the jar in a corner of the room. After a few days, she observed that the seed has germinated into a seedling.



Which one of the following statements best explained why the seed had germinated?

- (1) There is sunlight in the room.
(2) There is enough moisture in the jar.
(3) There is too much oxygen in the room.
(4) The cotton wool has fertiliser to help it to germinate.

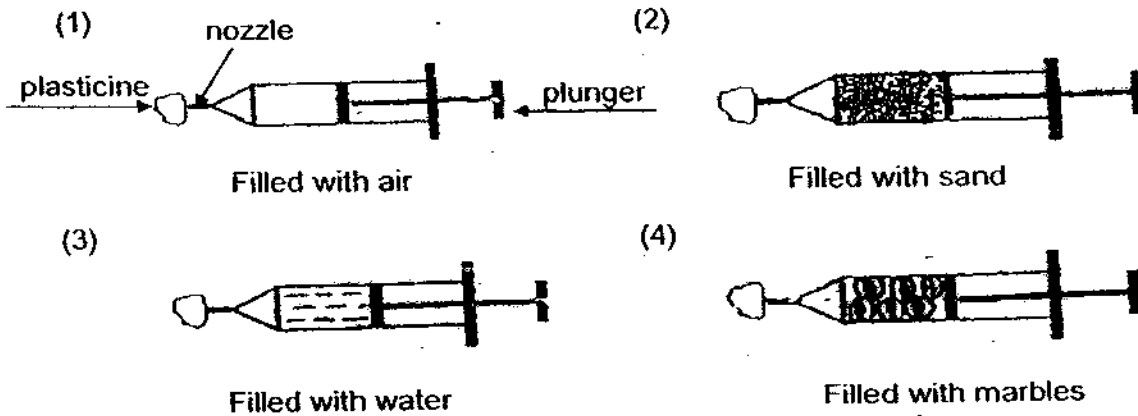
20. The table describes the properties of substance A, B and C.

Substance	Definite Volume	Definite Shape	Can be seen
A liquid	√		√
B Gas			
C Solid	√	√	√

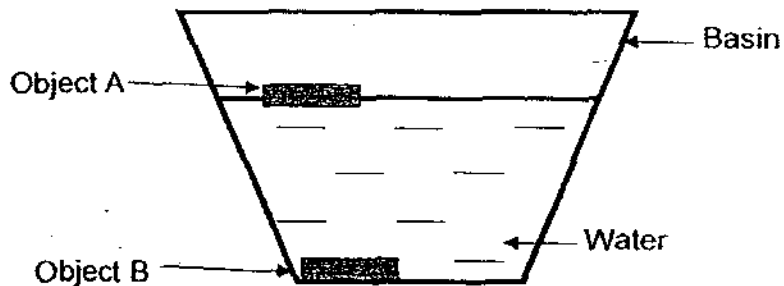
Based on the information above, which of the following list is likely to be A, B and C?

	A	B	C
(1)	honey	water vapour	flour
(2)	oxygen	sand	oil
(3)	dew	nitrogen	heat
(4)	milk	stone	carbon dioxide

21. Four identical syringes with similar volume were filled with the same volume of following items as shown below. The nozzle of each syringe was completely sealed with plasticine and the plungers were pushed inwards as far as they could go. Which of the plunger could be pushed in the furthest?



22. Two objects are placed in a basin of water.

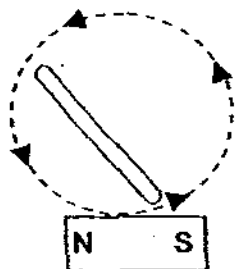


Which of the following best represents objects A and B?

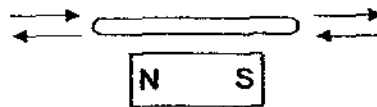
	A	B
(1)	Cotton Cloth	Marble
(2)	Plastic spoon	Needle
(3)	Marble	Plastic Spoon
(4)	Needle	Cotton Cloth

23. Which of the following iron rods will be magnetised by the magnet?

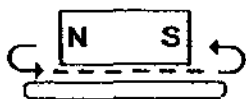
(1)



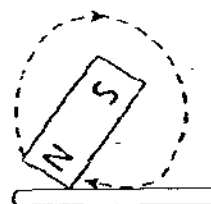
(2)



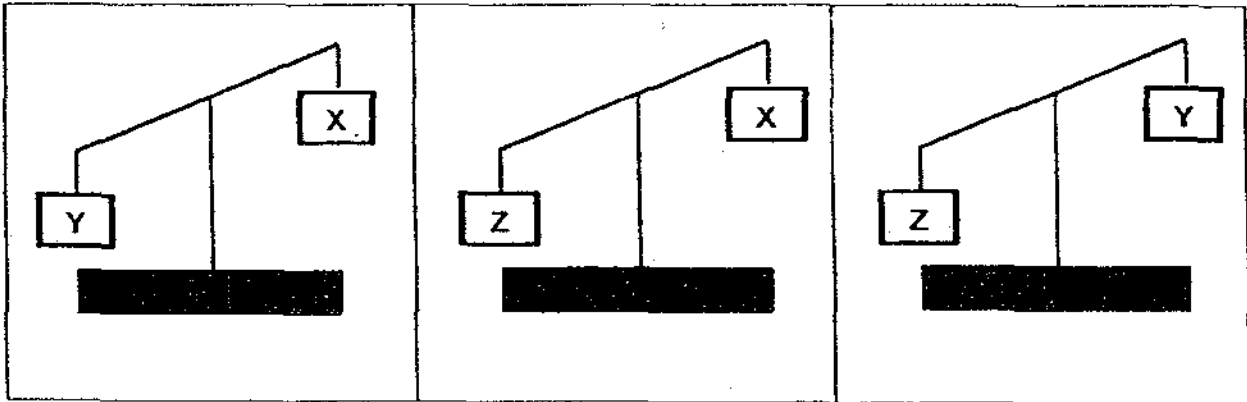
(3)



(4)



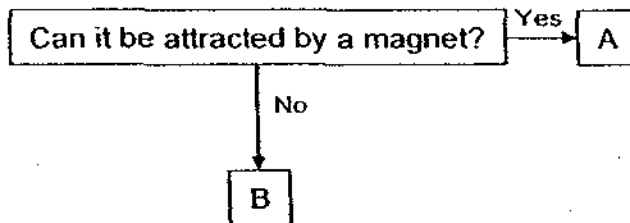
24. Study the diagrams below.



Arrange the mass of the objects, X, Y and Z, in order from the lightest to the heaviest.

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

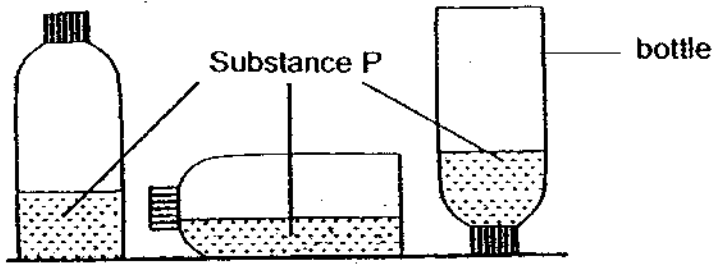
25. Study the flow chart below.



Which one of the following correctly identifies A and B?

	A	B
(1)	Steel Plate	Copper Plate
(2)	Aluminium Plate	Iron Plate
(3)	Silver Plate	Aluminium Plate
(4)	Copper Plate	Silver Plate

26. A bottle is filled with some substance P. The bottle is then placed in different positions as shown in the diagram below.

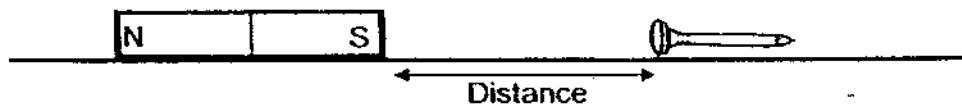


Based on your observation, which of the following statements are true?

- A: P is a gas.
- B: P is a liquid.
- C: P does not have definite shape.
- D: P does not have definite volume.

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

27. Donn did an experiment to find out the strength of four different bar magnets. He placed each magnet and a nail on the table and he slowly moved the magnet closer to the nail until it could attract the nail. As he moved the magnet closer, he observed and took down the distance between the magnet and the nail.

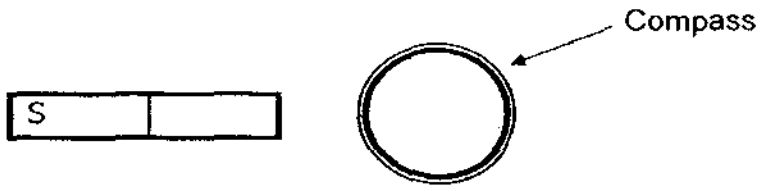


Based on the results in the table below, arrange the magnets according to its magnetic strength starting from the strongest.

Items	Magnet A	Magnet B	Magnet C	Magnet D
Distance between the magnet and the nail when the magnet could attract the nail	6 cm	8 cm	2 cm	4 cm

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

28. Catherine conducted an experiment with her magnet and compass as shown in the diagram below.

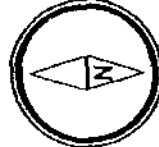


Which direction would the needle of the compass be pointing to?

(1)



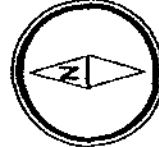
(2)



(3)



(4)



29. Which one of the following appliances is **not** an example of how a magnet is used by people?

- (1) Computer keyboard
- (2) Refrigerator door
- (3) Computer screen
- (4) Credit card



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SCIENCE

Name : _____ ()

Class : Primary 4/ _

Date : 7 May 2009

BOOKLET B

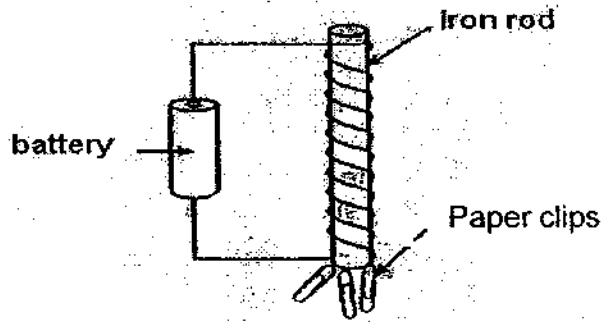
14 Questions
40 marks

MARKS

	OBTAINED	POSSIBLE
BOOKLET A		60
BOOKLET B		40
TOTAL		100

Parent's Signature : _____

30. An iron ^{rod} ~~nail~~ becomes a magnet when it is coiled with a wire that is joined to some batteries. Patrick wants to find out whether the number of batteries affects the strength of such a magnet. For each arrangement, he tests the strength of the magnet by counting the number of paper clips it can pick up.



	Set-up A	Set-up B	Set-up C	Set-up D
Number of batteries	1	2	2	3
Number of turns of the coil on the nail rod	10 turns	15 turns	20 turns	20 turns

Which two set-ups above should he use to carry out his experiment?

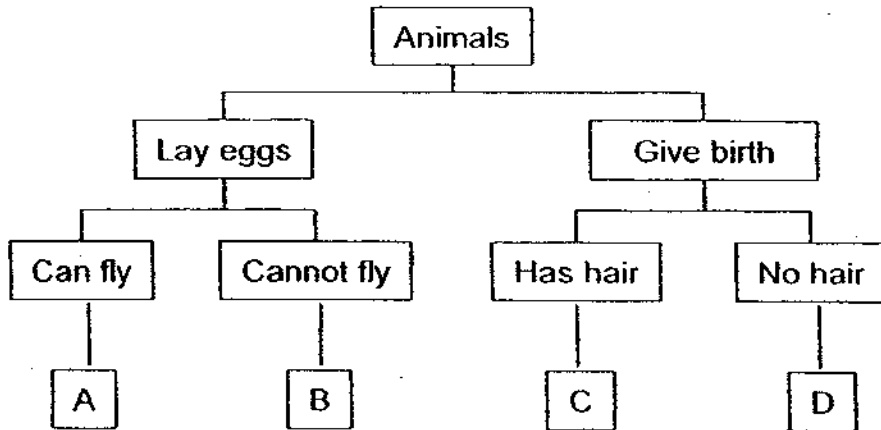
- (1) A and B
- (2) B and C
- (3) C and D
- (4) A and D

END OF PAPER

SECTION B: Open-ended Questions (14 Questions 40 marks)

Answer the following questions in the space provided

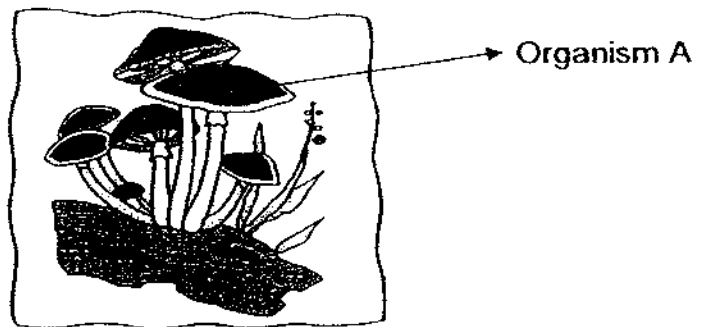
31. Study the flow chart below carefully.



Match the animals with the correct letters given in the flow chart. (2m)

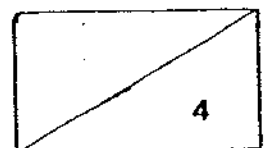
a)	Ostrich	
b)	Eagle	
c)	Giraffe	
d)	Molly	

32. Study the picture below.



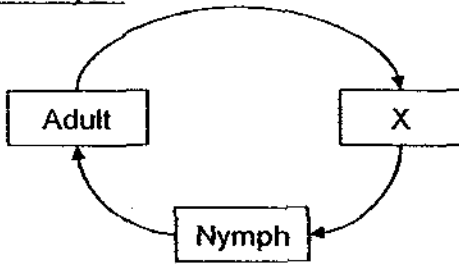
(a) Which group of living things does Organism A belong to? (1m)

(b) How does Organism A get its food? (1m)

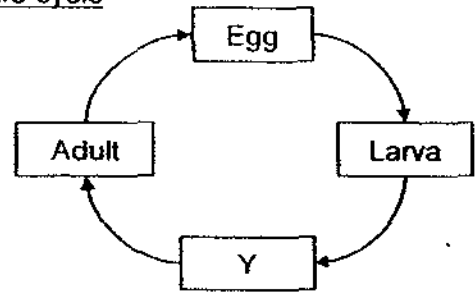


33. The diagrams below show the life cycles of two animals.

3-stage life cycle



4-stage life cycle



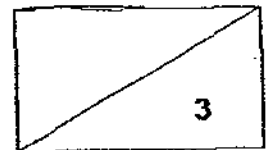
(a) Based on the diagrams above, name the stages in the blank below. (1m)

Stage X : _____

Stage Y: _____

(bi) Name one animal that has the 4-stage life cycle. (1m)

(ii) Based on your answer in (bi), state one difference between this animal in the larva stage and stage Y. (Do not compare size, shape and colour) (1m)



34. Compare the two different animals below.



Penguin



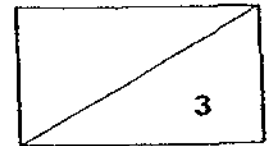
Platypus

(a) Name one similarity between the penguin and the platypus. (1m)

(b) Name the two groups of living things that these two animals belong to. (1m)

	Group
Penguin	
Platypus	

(c) Based on your answer in part (b), in which group will you place Flamingo? (1m)



35. Compare the two plants below.



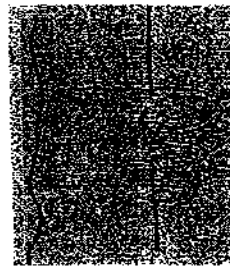
Coconut Tree



Bird's Nest fern

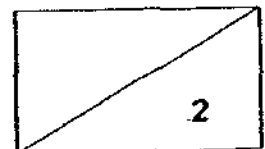
(a) How do the plants reproduce? (1m)

(b)

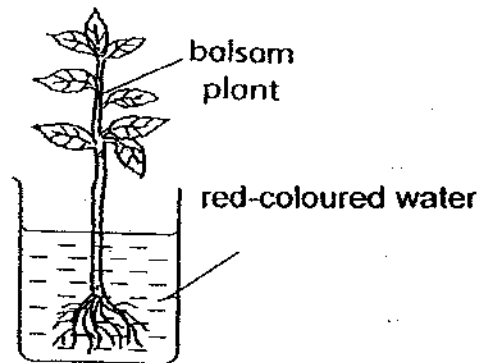


Bracket fungus

The pictures of Bracket fungus and Bird's Nest fern are shown above. How are they similar in the way they reproduce? (1m)

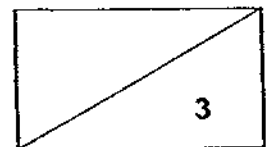


36. Lena set up an experiment as shown below. She placed a balsam plant in a container of red-coloured water.

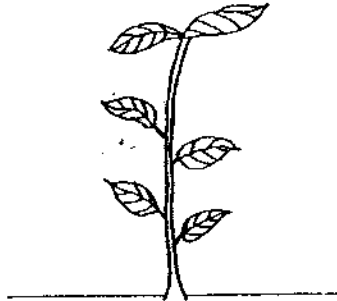


- (a) What will she observe about the plant after 3 days? (1m)

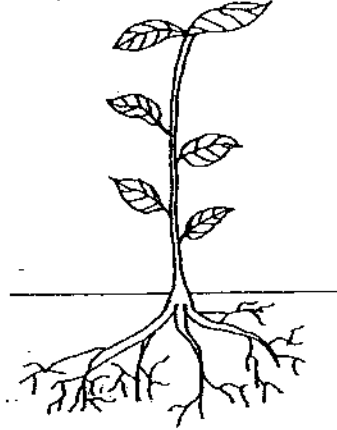
- (b) Based on your answer in part (a), what can you conclude from the experiment? (2m)



37. Kailing planted two similar plants in her school garden. She had cut off one part of Plant A and she watered both plants daily for a week. She wants to find out which plant will survive longer.



Plant A

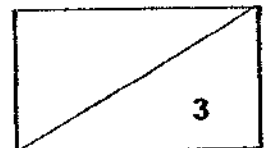


Plant B

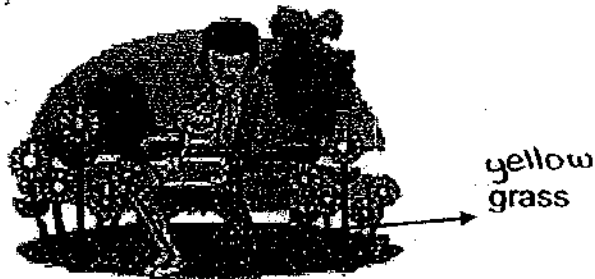
- (a) Name the part of Plant A that had been cut off. (1m)

- (b) Which plant A or B, will survive longer? (1m)

- (c) Based on your answer in part (b), explain why. (1m)

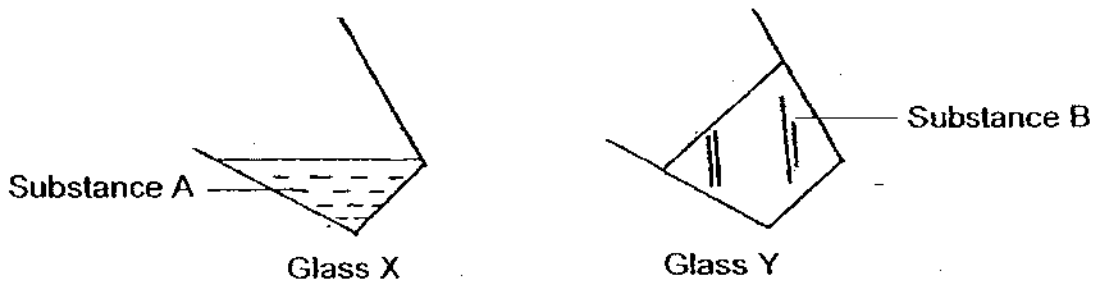


38. Jean is sitting on a bench in a park. She has noticed something about the grass underneath the bench.



- (b) ~~Explain your answer in part (a).~~ (2m) Explain why the grass is yellow. (3m)

39. The diagram below shows two glasses containing two different Substances A and B.

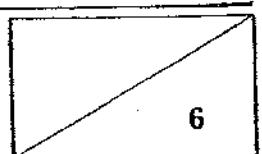


- (a) Name the state of Substances A and B. (2m)

Substance A: _____

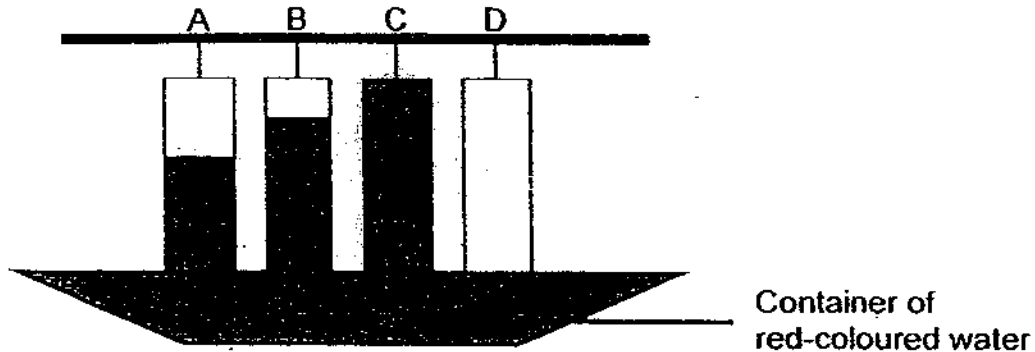
Substance B: _____

- (b) Based on your answer in part (a), write down one different property between the states of Substance A and Substance B. (1m)



2/2

40. Bala conducted an experiment as shown below. He hung four different materials A, B, C and D of equal length and dipped them into a container of red-coloured water. The shaded portion shows the amount of water absorbed by the materials.



Which one of the above materials is best suited to make a bath towel? Explain your answer. (2m)

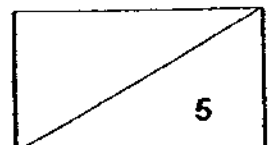
41. Karen placed a seed on some wet cotton on a dish. She observed the changes over the next two weeks. The table below shows the measurements she took as part of her observations.

Day	Length of shoot (mm)	Length of root (mm)
1	0	0
4	0	2
8	6	6
12	13	?
16	20	10

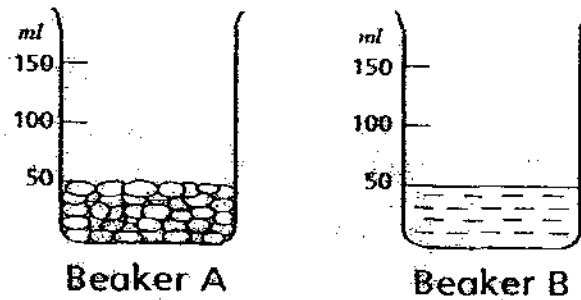
- (a) Predict the length of the root on the 12th day.

_____ mm (1m)

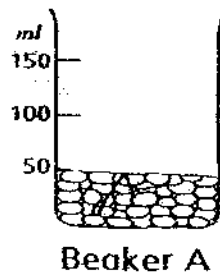
- (b) Based on the results shown above, which part of the plant grows out first? Explain your answer. (2m)



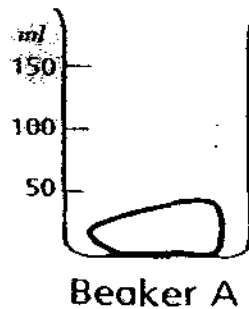
42. Betty set up 2 beakers A and B as shown below. She filled them up with small lumps of plasticine and water respectively to the 50 ml mark.



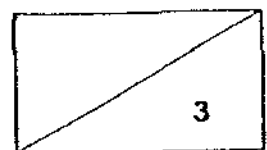
- (a) If she had poured all the water from Beaker B to Beaker A, what would the new water level be? Draw the new water level in the picture below. (1m)



- (b) Betty took out the small lumps of plasticine and rolled them into one lump. She then put it back into the beaker and observed that the water level did not change even after she had rolled it.



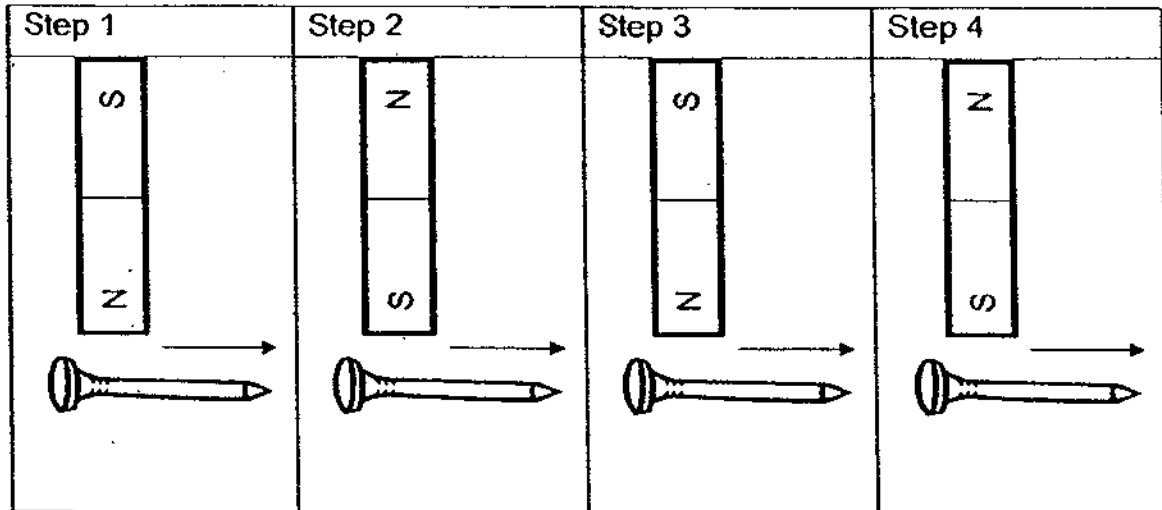
What can she conclude from this experiment? (2m)



43. Bryan wants to make a temporary magnet using only an iron nail and a magnet.

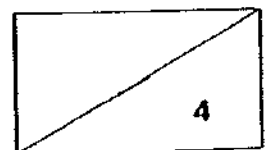
(a) Based on the materials he has, which method should he use? (1m)

(b) These are the steps that Bryan took during the experiment.

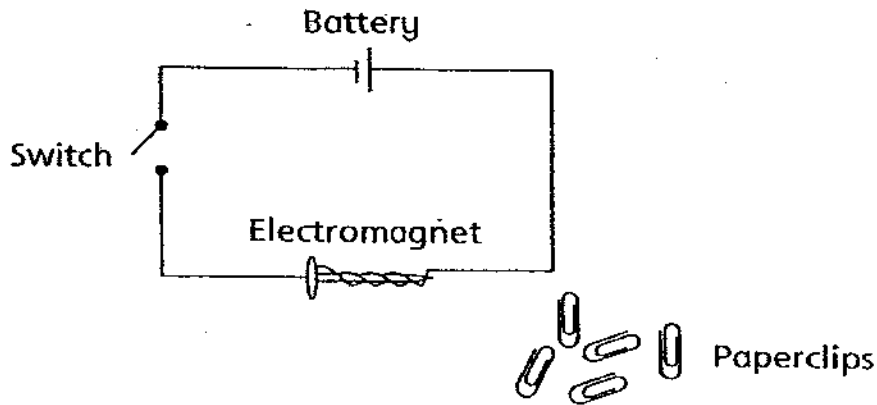


(i) After repeating the steps for 20 times, he tried using the iron nail to attract some paper clips but realised that it cannot attract any. Suggest what Bryan should do so that he can use the iron nail to attract the paper clips? (2m)

(ii) Using the method you have suggested in part (i), Bryan changed the iron nail to a copper rod. He realised that the copper rod did not get magnetised. Explain why. (1m)



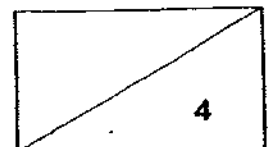
44. Tom carried out 4 experiments by applying different number of coils of wire around a nail to make an electromagnet. He recorded down the number of paper clips attracted by the nail in the table below.



Experiment	Number of coils	Number of paper clips attracted
1	5	10
2	10	15
3	15	?
4	20	25

- (a) Write down the possible number of paper clips that the electromagnet in experiment 3 can attract. (1m)
-
- (b) Based on the results in the table, what can you ~~conclude~~ from this experiment? (2m)
-
-
- (c) When electricity stops flowing through the wire, the paper clips are no longer attracted to the nail. Explain why. (1m)
-
-

END OF PAPER



ANSWER SHEET

EXAM PAPER 2009

SCHOOL : RED SWASTIKA PRIMARY

SUBJECT : PRIMARY 4 SCIENCE

TERM : SA1

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

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

31)a)B b)A c)C d)D

32)a)Fungi.

b)It gets its food from dead or decaying matter.

33)a)X: Egg Y: Pupa

b)i)Butterfly.

ii)The larva eats a lot of leaves but the pupa does not eat leaves at all.

34)a)Both of them lay eggs.

b)Penguin: Birds

Platypus: Mammals

c)Birds.

35)a)The coconut tree reproduces by seeds while the bird's nest fern reproduces by spores.

b)Both of them reproduce by spores.

36)a)The leaves and the tubes in the stem will turn red.

b)The roots of the plant absorbed the red-coloured water and the stem transported it to the leaves.

37)a)Root.

b)Plant B.

c)Plant B has roots to absorb water to make food and survive but Plant A has no roots to absorb water and make food, therefore, plant B will survive longer.

38)b)The bench has blocked the sunlight and the grass had no sunlight to make food and it dried and turned yellow.

There is not enough sunlight for the grass to make food.

39)a)A: Liquid B: Solid

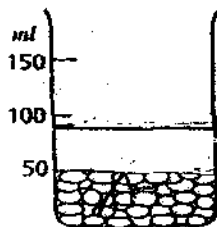
b)Substance A has no definite shape but substance B has a definite shape.

40)c. The material C is the most absorbent and after taking a bath, it can absorb all the water.

41)a)8mm

b)Root. The seedling needs water to survive.

42)a)



Beaker A

b)Plasticine has definite volume even though the shape has changed.

43)a)Stroke method.

b)i)Bryan should use the same pole and the same direction to stroke the iron nail.

ii)The copper rod is a non-magnetic material.

44)a)20 paper clips.

b)The more number of coils around the iron nail the greater the strength of the electromagnet.

c)The nail does not have magnetism.