



RED SWASTIKA SCHOOL

# RED SWASTIKA SCHOOL

## 2011 SEMESTRAL ASSESSMENT 1

### SCIENCE PRIMARY 4

Name : \_\_\_\_\_ (     )

Class : Primary 4/ \_\_\_\_\_

Date : 16 May 2011

### BOOKLET A

Total time for Booklets A & B: 1h 30 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 15
  - 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.

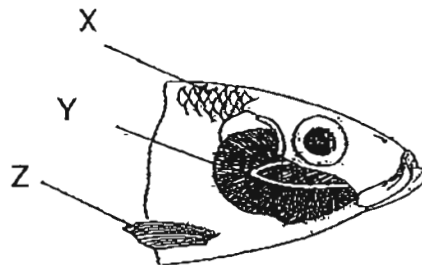
1. Which of the following statements are examples of the same characteristic of living things?

- A: An adult monkey eats plants and meat.
- B: A seedling becomes an adult plant.
- C: A snail withdraws into its shell when it is touched.
- D: The leaf of an insect-eating plant closes when a fly lands on it.

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

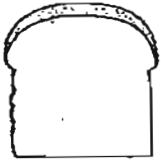

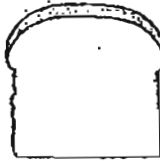
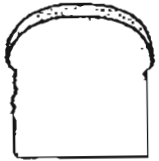
2. The diagram below shows the head of a fish.

Which of the following correctly states the functions of Parts X, Y and Z?



	Part X	Part Y	Part Z
(1)	Hides it from danger	Takes in food	Helps it to float
(2)	Protects the body	Takes in dissolved air	Helps it to swim
(3)	Helps it to swim	Protects the body	Takes in dissolved air
(4)	Helps it to balance	Helps it to lay eggs	Hides it from danger

3. Peiwen took four slices of bread from the same loaf of bread and placed them under the following conditions in the table below.

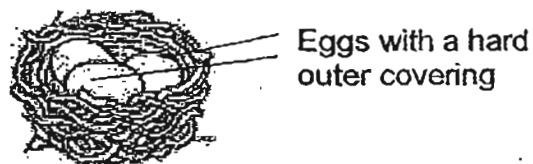
Set-up A	Set-up B	Set-up C	Set-up D
			
Toasted bread left in a bright room	Toasted bread left in a dark room	Moist bread left in a bright room	Moist bread left in a dark room

After one week, she observed mould on some of the bread.

Which of the set-up(s) would she observe mould?

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

4. The picture below shows some chicken eggs in a nest.



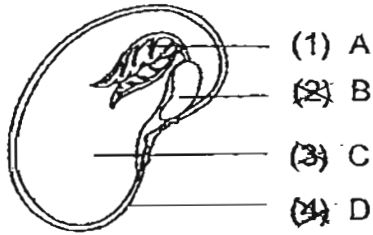
Which of the following statement(s) is incorrect?

- A: The covering allows the egg to take on a definite shape.
- B: The covering allows the egg to stay waterproof.
- C: The covering allows the egg to be carried by the parent when it is looking for food.

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

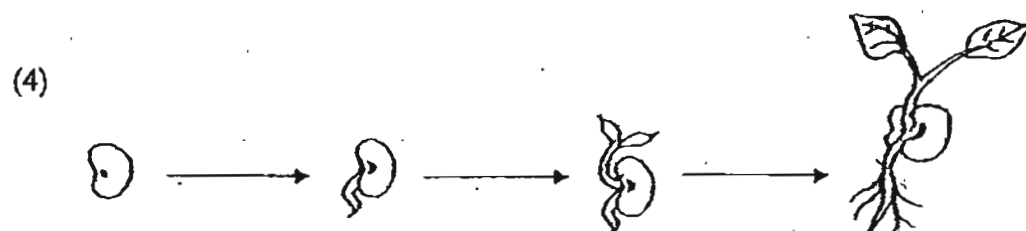
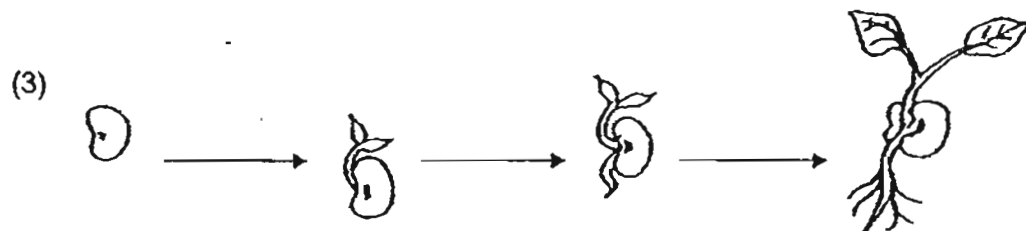
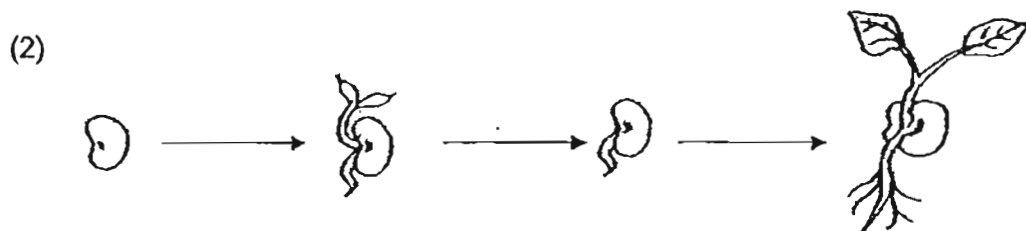
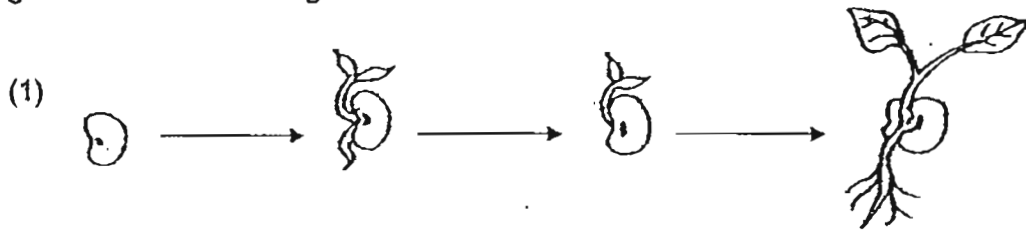
5. The diagram below shows the different parts of a seed.

Which part of the seed provides food for the growth of the baby plant?



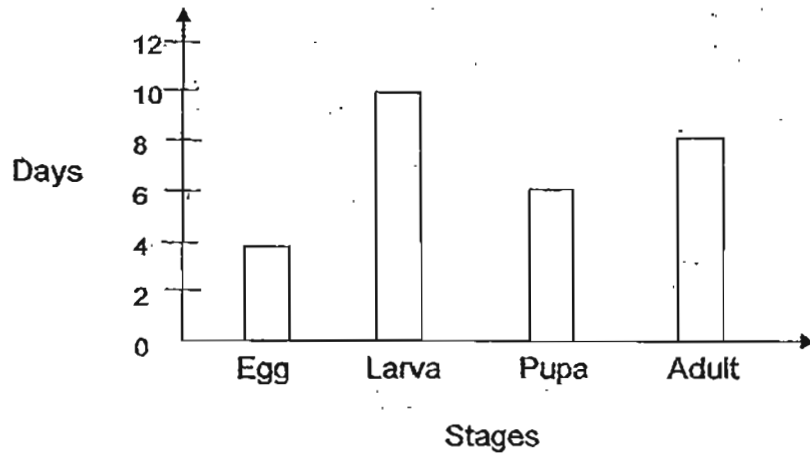
6. Joni planted some seeds and observed their germination over one week.

Which one of the following shows the correct order of stages when the seeds germinate into seedlings?



**Study the graph and answer Questions 7 & 8.**

The graph below shows the number of days in each stage of the life cycle of an insect.



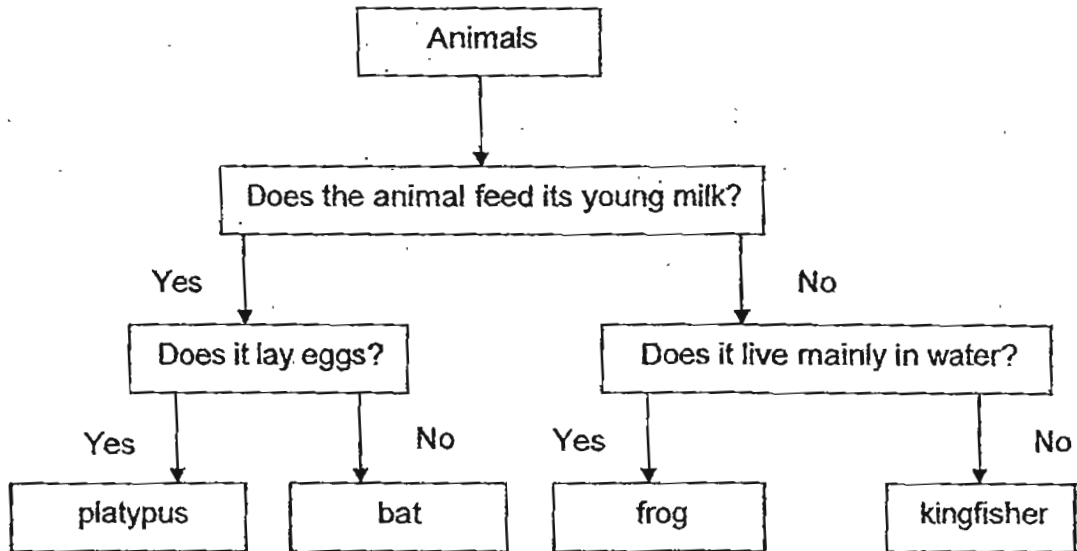
7. How long does it take for the eggs of the insect to hatch?

- (1) 2 days
- (2) 4 days
- (3) 8 days
- (4) 10 days

8. Which of the following statements about the graph is incorrect?

- (1) The insect stops feeding for 6 days.
- (2) The insect's lifespan is less than 3 weeks.
- (3) The insect has 8 days to look for a mate to reproduce before it dies.
- (4) It takes 16 days to become an adult after the egg is hatched.

9. Study the flowchart below carefully.

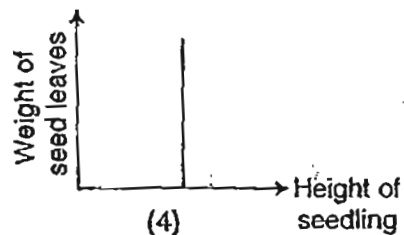
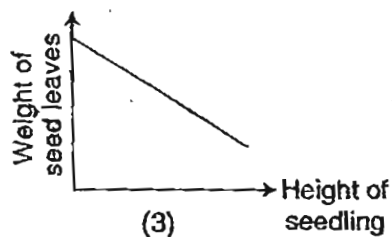
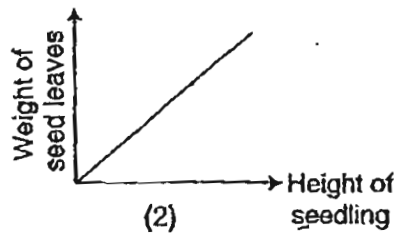
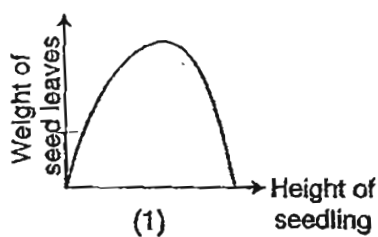


According to the flowchart above, how are a platypus and a bat similar?

- (1) Both animals suckle their young.
- (2) Both animals are not mammals.
- (3) Both animals do not live on land.
- (4) Both animals give birth to young alive.

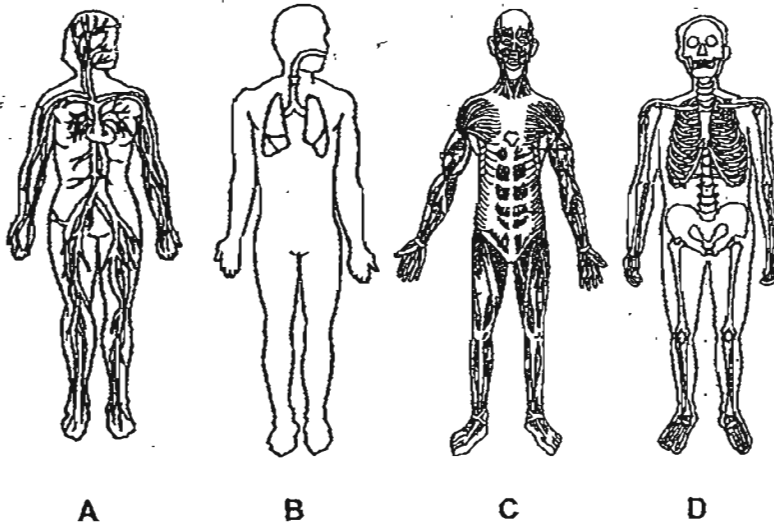
10. Siti had grown some beans. She found out that as the height of the seedlings increases, the weight of the seed leaves decreases.

Which graph below illustrates Siti's findings?



11. The diagram below shows four human body systems.

Which of the body systems work together when a person is swimming?



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

12. The diagram below shows the stomach in the digestive system.



The churning and squeezing movements of the stomach are important in digestion as it helps to \_\_\_\_\_.

- (1) store the digested food
- (2) digest the food completely
- (3) absorb water from the undigested food
- (4) mix the food with the digestive juices

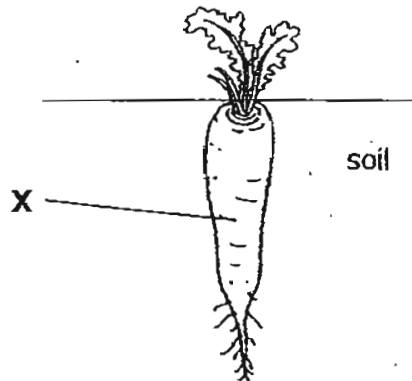
13. A python kills its prey by wrapping itself around the chest area of the animal tightly until the animal dies. It then swallows its prey whole.



Which organ system of its prey is the python trying to paralyse?

- (1) Respiratory system
  - ~~(2)~~ Digestive system
  - (3) Circulatory system
  - ~~(4)~~ Muscular system
14. The diagram below shows a plant.

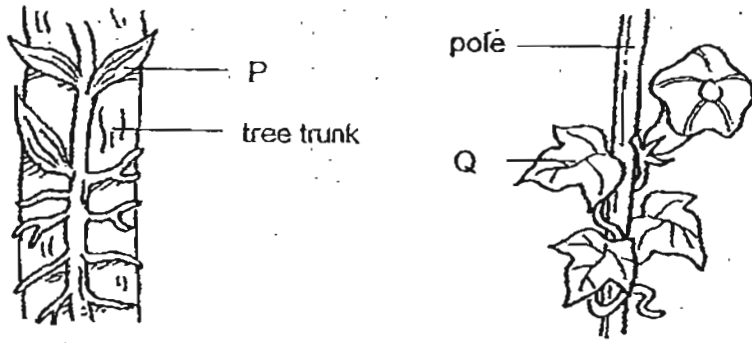
How is the part 'X' useful to the plant?



- A: It stores food.
  - B: It keeps the plant upright.
  - C: It anchors the plant to the ground.
  - D: It absorbs water and mineral salts.
- ~~(1)~~ A and C only
  - (2) B and D only
  - (3) A, C and D only
  - (4) A, B, C and D



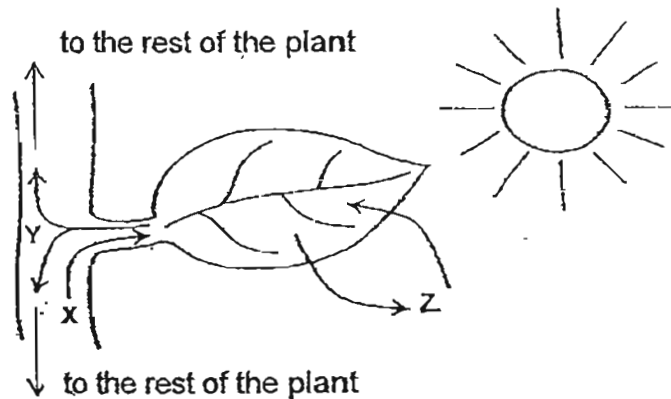
15. The diagram below shows two plants, P and Q, growing in a garden.



Which one of the following statements about both plants is correct?

- (1) The plants do not make food.
- (2) The plants have strong stems.
- (3) The plants need support to grow.
- (4) The plants reproduce by spores.

16. The diagram below shows a leaf during the process of making food. The arrows show the movement of substances X, Y and Z.

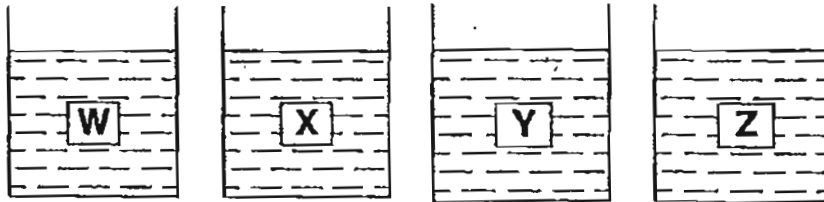


Which one of the following correctly represents Substance X, Y and Z?

	Substance X	Substance Y	Substance Z
(1)	gases	food	water
(2)	water	gases	food
(3)	food	water	gases
(4)	water	food	gases

Study the following table and use it to answer Questions 17 & 18.

Kumar has 4 materials, W, X, Y and Z of similar sizes. He weighed them individually and then he put them into 4 beakers containing equal amounts of water. After 20 minutes, he weighed the materials again. He recorded their masses in the table below:



Material	Mass at the beginning (g)	Mass after 20 minutes (g)
W	14	18
X	9	19
Y	16	17
Z	12	20

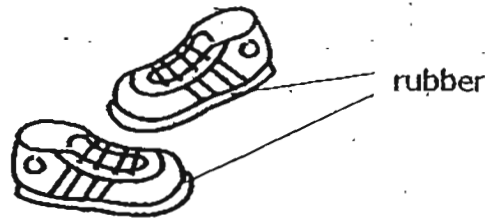
17. Which material absorbs the least amount of water?

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

18. Based on Kumar's observation, which material is most suitable for making a bath towel?

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

19. The shoemakers in factories use rubber to make the soles of shoes instead of using metal.



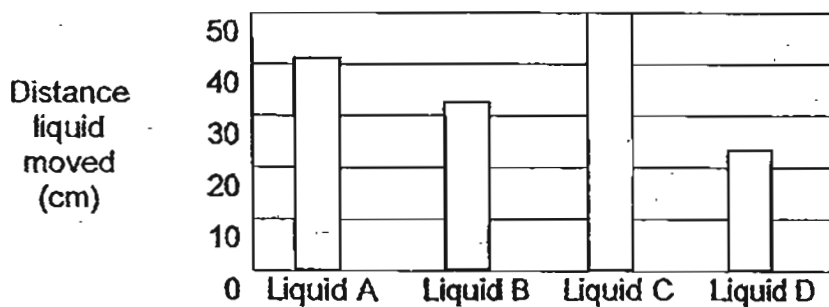
Which of the following statements explain the reason?

- A: Metal soles are less durable than rubber soles.
- B: Metals are less flexible than rubber.
- C: Rubber is not waterproof.
- D: Rubber can be easily cut into different shapes.

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

20. Some liquids are thick and sticky. The thicker the liquid, the slower it will move down a slope.

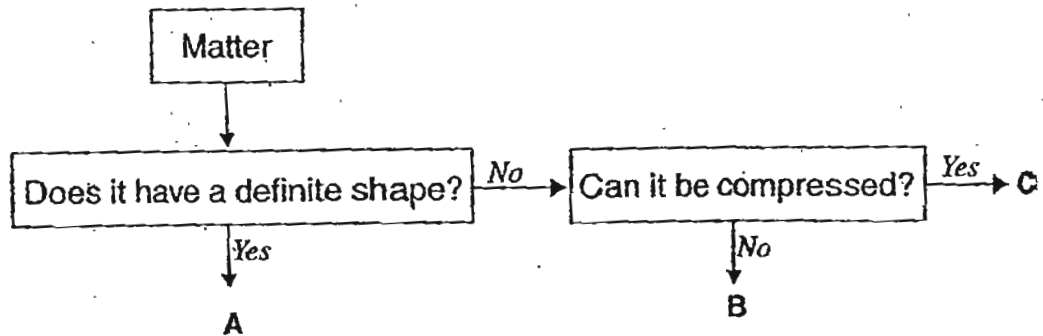
The graph below shows the distance moved down a slope in one minute by 4 different liquids of the same volume.



Which liquid is the thickest?

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

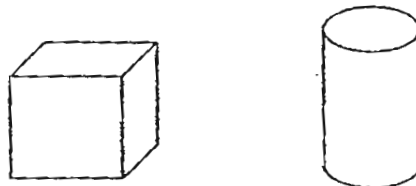
21. Study the flow chart below.



Which one of the following correctly represents A, B and C?

	A	B	C
(1)	oil	dough	oxygen
(2)	cotton bud	orange juice	carbon dioxide
(3)	carbon dioxide	honey	sand
(4)	flour	air	glue

22. Weikai made the two solid objects below using the same amount of plasticine.



Which of the following statements correctly describe the objects?

- A: Both of the objects have the same volume.
- B: Both of the objects have the same amount of matter.
- C: Both of the objects have different masses.
- D: Both of the objects do not have a definite volume.

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

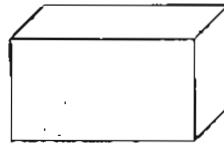
23. Which of the following groups in the table below is wrongly classified?

	<b>Solid</b>	<b>Liquid</b>	<b>Gas</b>
(1)	ice cream	syrup	oxygen
(2)	powder	milk	nitrogen
(3)	plasticine	shower foam	wind
(4)	ice	sauce	dust

24. A factory worker was packing some plastic balls into a wooden box. He noticed that the box can only fit ten balls. He found that an eleventh ball would not be able to fit into the box even though he tried to rearrange the ten balls inside the wooden box.



plastic ball



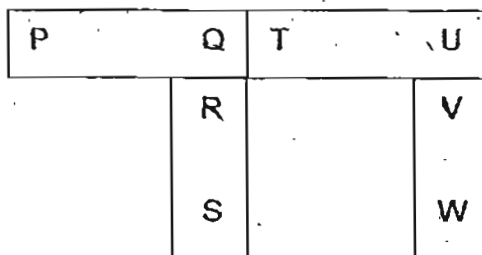
wooden box

Which of the following statements explain why this occurs?

- A: The wooden box has a definite mass.
- B: The wooden box has a definite volume.
- C: The plastic balls have a definite mass.
- D: The plastic balls have a definite volume.

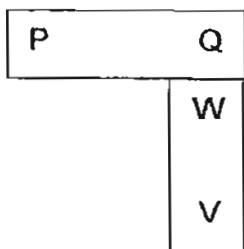
- (1) A and B only
- (2) A and C only
- (3) B and C only
- (4) B and D only

25. Four bar magnets with their ends marked as shown below can be arranged in the following manner.

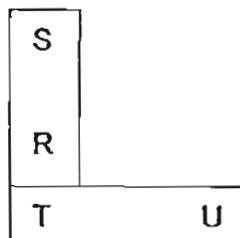


Which of the following diagrams shows a possible arrangement of two of the magnets?

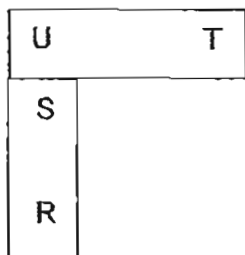
(1)



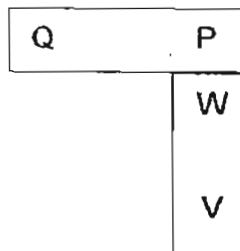
(2)



(3)



(4)



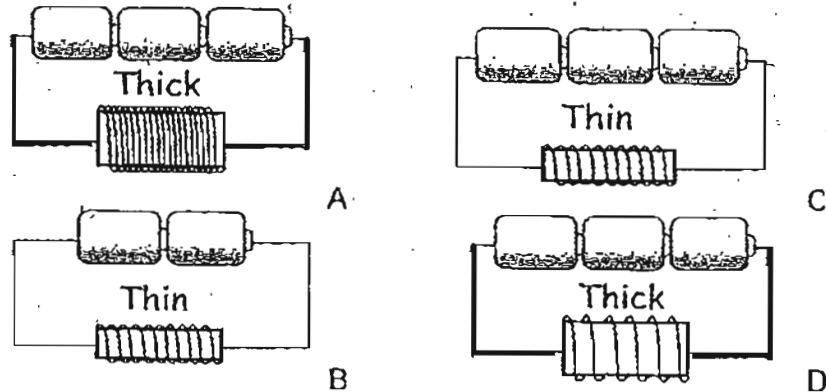
26. Timothy used a strong magnet to pick up several steel nails from his table. When the magnet was removed, he observed that some of the nails remained stuck to one another as shown below.



Which of the following statements best explains Timothy's observation?

- (1) The steel nails were held together by the remaining magnetism of the strong magnet.
- (2) The steel used to make the nail was not a magnetic material but was magnetised by the strong magnet.
- (3) The steel used to make the nails was a magnetic material and so the steel nails could attract one another.
- (4) The steel nails were held together because magnetic force can act from a distance.

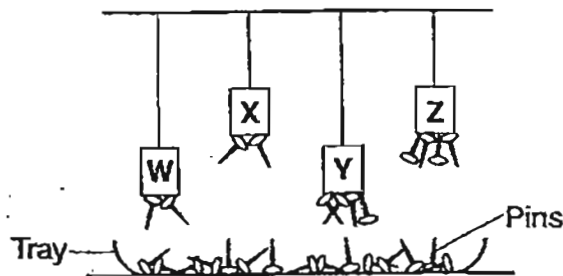
27. Junhao set up a few experiments using similar batteries, two sizes of bar magnets and some thick and thin wires. He wanted to find out if the number of coils of the wire would affect the strength of electromagnets.



Which two set-ups should he choose?

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

28. Fatimah hung four magnets, W, X, Y and Z from strings of two different lengths and placed a tray of pins below the magnets as shown in the diagram below. She noticed that different number of pins were attracted to the magnets.



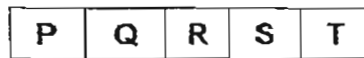
Which order should she choose if Fatimah wanted to arrange the magnets from the strongest to the weakest?

- (1) WXYZ
- (2) WYXZ
- (3) ZXYW
- (4) ZXYW

29. Xiaoli has a box of coloured paper clips. She discovered that a magnet can also attract these paper clips which are coated with a layer of coloured plastic. What does this show?



- (1) The coloured plastic is magnetised.
  - (2) Plastic is a magnetic substance.
  - (3) Magnetism can pass through plastic.
  - (4) Plastic is a good protection against magnetism.
30. Five sections, P, Q, R, S and T on Magnet A were marked as shown in the diagram below. The magnet was then placed in a level tray of iron filings. The mass of iron filings attracted by each of the five sections was measured.

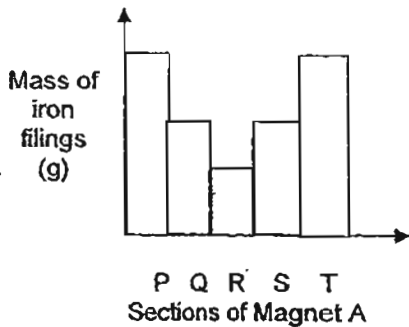


Magnet A

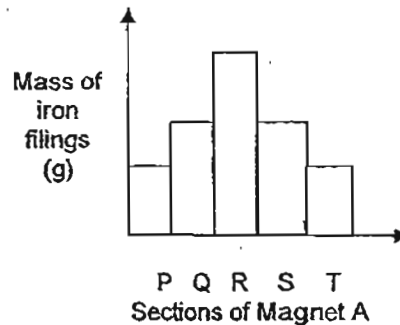


Which one of the graphs below shows the correct amount of iron filings attracted by the five sections of Magnet A?

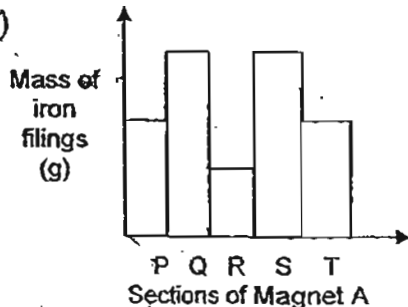
(1)



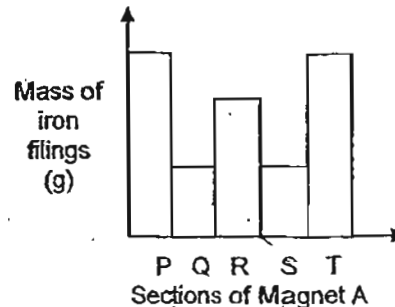
(2)



(3)



(4)



\*\*\* End of Booklet A \*\*\*





RED SWASTIKA SCHOOL

# RED SWASTIKA SCHOOL

## 2011 SEMESTRAL ASSESSMENT 1 SCIENCE PRIMARY 4

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

Class : Primary 4/ \_\_\_\_\_

Date : 16 May 2011

### BOOKLET B

14 Questions  
40 Marks

In this booklet, you should have the following:

- Page 16 to Page 26
- Questions 31 to 44

### MARKS

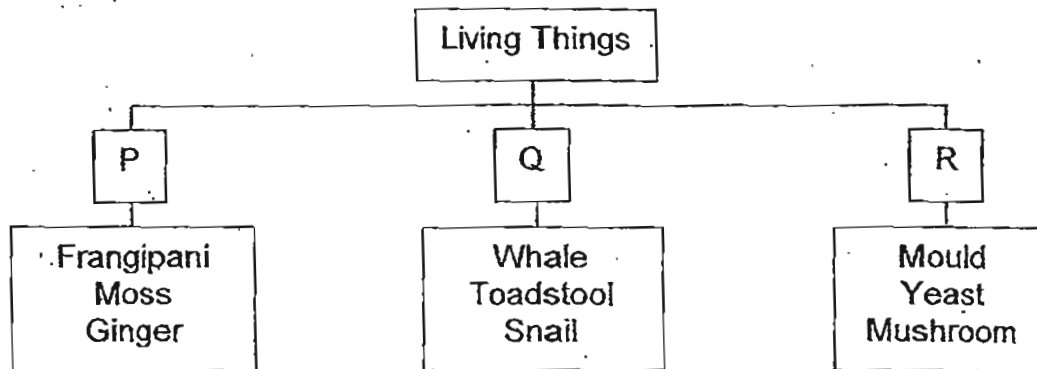
	OBTAINED	POSSIBLE
BOOKLET A		60
BOOKLET B		40
TOTAL		100

Parent's Signature : \_\_\_\_\_

**Section B**

Answer all the questions in the spaces provided.

31. Study the classification table below.



a) Name the groups of living things represented by P and R. (1 m)

P	R

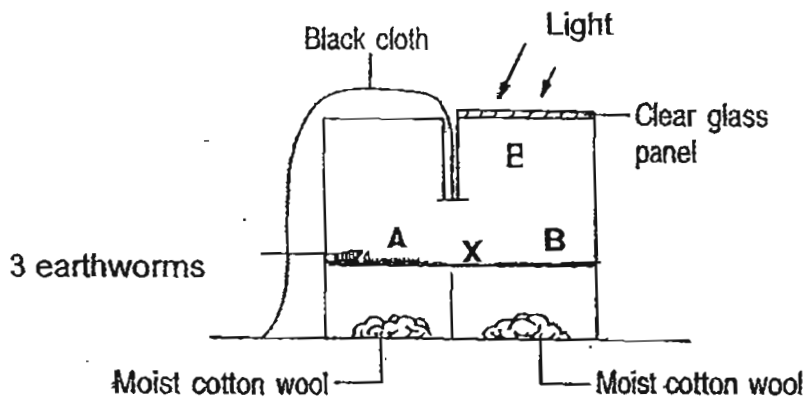
b) Is it correct to classify toadstool in Q? Explain your answer. (1 m)

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32. Leon placed three earthworms at Location 'X' of the set-up below. He then shone a torch through the glass panel. After a while, he found out that all three earthworms were at Location A and none of the earthworms was found in Location B of the set-up. Based on his observations, Leon concluded that the earthworms are living things that have certain characteristics.



Name two characteristics of living things Leon had learnt from his experiment. (2m)

(i)

(ii)

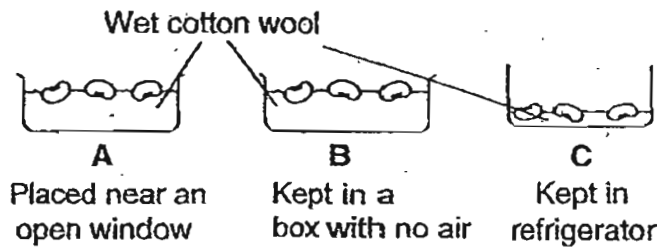
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4

33. Karen set up the experiments, A, B and C as shown below. She wanted to find out the conditions needed for seeds to grow well.



(a) Which set-up would the seeds germinate best? Why? (2m)

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(b) Karen's classmate, Mike, commented that the experiment was not a fair one. Do you agree with him? Explain your answer. (2m)

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34. A cricket has a life cycle which is similar to a grasshopper.

(a) Using words and arrows, draw the life cycle of a cricket in the space below. (1m)

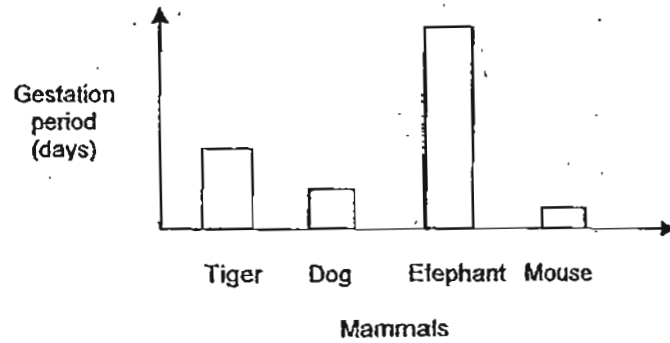
(b) Name two characteristics of the young of a cricket. (1m)

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

(c) Lili saw a cricket with wings in her house one night. Which stage of its life cycle was the cricket at? Explain why. (1m)

35. Gestation period of animals refers to the amount of time the young animal takes to develop inside the female parent's body before birth. The graph below shows the gestation periods of four mammals.



- (a) Based on the graph, which mammal has the shortest gestation period? (1m)

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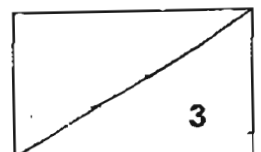
- (b) What is the relationship between the mass of the mammal and the gestation period? (1m)

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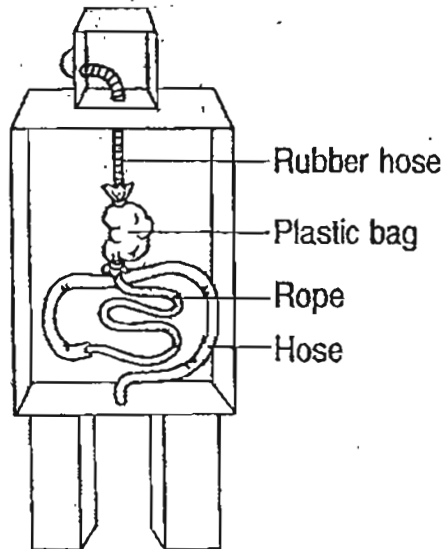
- (c) Based on the information shown in the graph, which mammal in the box below most likely has the same gestation period as the tiger? (1m)

whale	hamster	zebra
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36. Fangfang made a model of one of the body systems of a human using scrap materials as shown below.



(a) Which body system do you think she has made? (1m)

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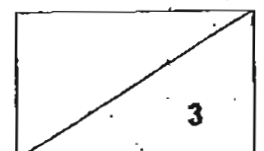
(b) Based on the diagram, which organ of the human system does the rope represent? (1m)

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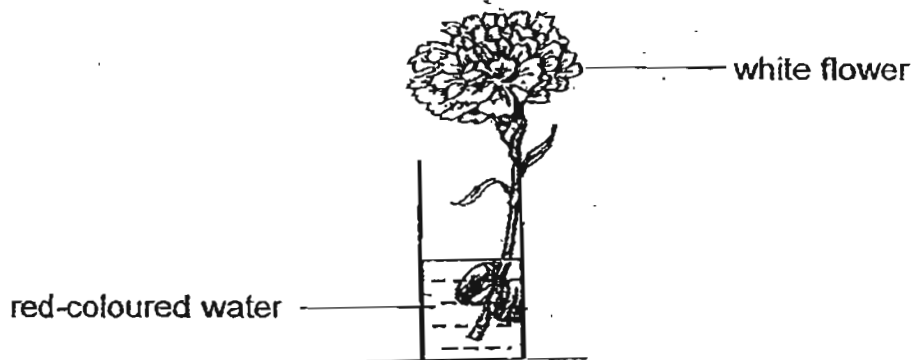
(c) Describe what takes place in the organ mentioned in (b). (1m)

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37. Tania placed a stalk of white flower in a beaker of red-coloured water as shown in the diagram below.



After one day, she observed that the whole stalk of white flower has turned red in colour.

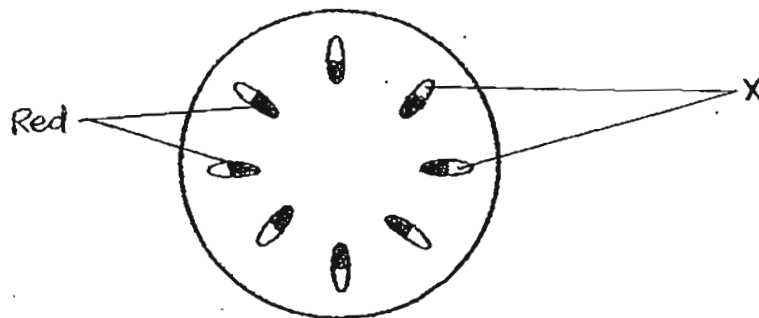
(a) Explain why the stalk of white flower turned red. (1m)

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After that, Tania cut a cross-section of the stem of the flower and examined the tubes under the microscope. She noticed that some parts of the tubes are red but other parts are not, as indicated by the parts marked 'X' below.

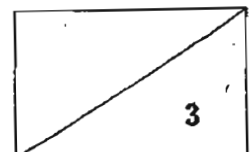


(b) What does part 'X' carry? (1m)

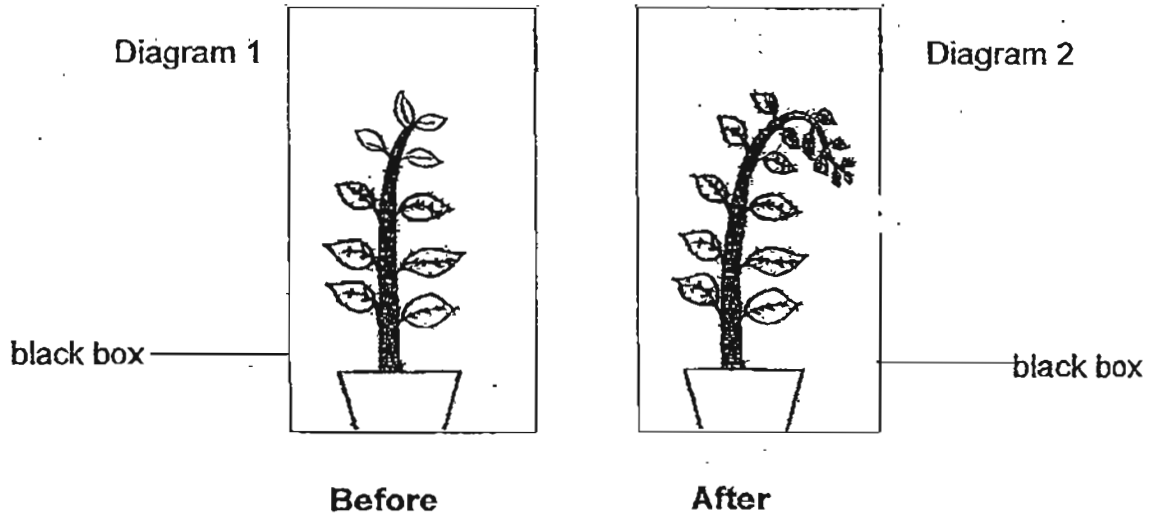
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(c) Which human system has the same function as the tubes found in the stem of the flower? (1m)

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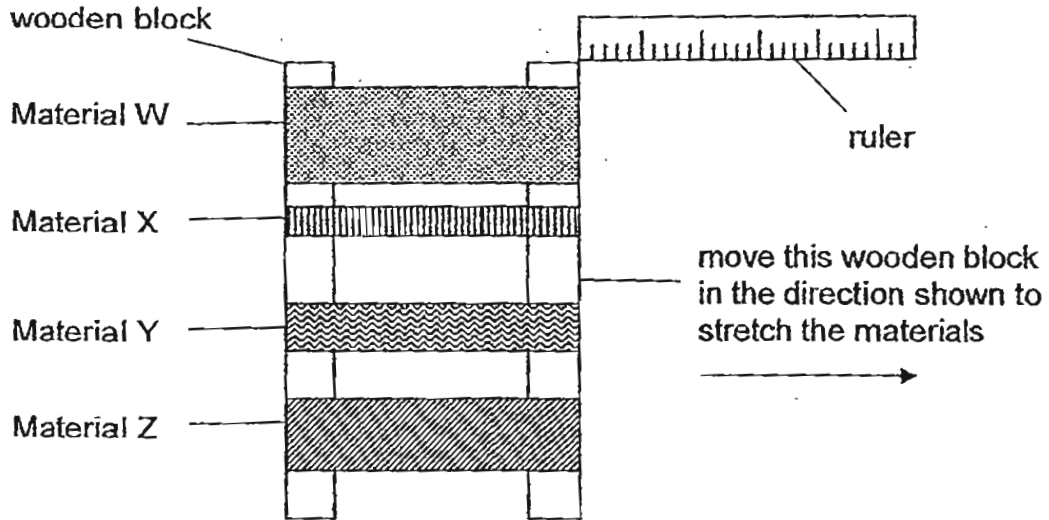


38. Jieming conducted an experiment with a potted plant as shown below in Diagram 1. This plant is placed in a black box which has an opening on one side of the box. He placed the whole box in a well-lit place and watered the plant daily. Diagram 2 below shows what happened to the plant one week later.



- (a) Indicate, with a cross, 'X' on the black box, to show where the opening could be in Diagram 2. (1m)
- (b) Jieming's brother, Kangming, concluded that the plant grew this way as there was no room for it to grow upwards. Was his conclusion correct? Explain your answer. (1m)
- 
- 
- (c) Why is it important for Jieming to use the black box in his experiment? (1m)
-

39. Eddy investigated the elasticity of four different materials to see which material would stretch the furthest. He nailed the materials onto two wooden blocks and set up his experiment as shown below.



(a) Eddy's teacher told him that his experiment is not a fair one. Why did the teacher say so? (1m)

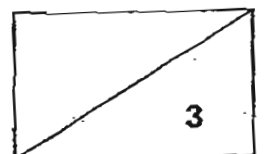
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(b) What should Eddy do to make his experiment a fair one? (1m)

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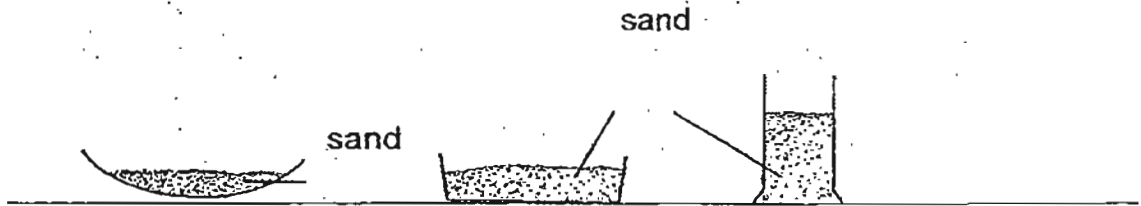
(c) Name a material that is stretchable. (1m)

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40. Huiling poured the same amount of sand into each of the containers below.



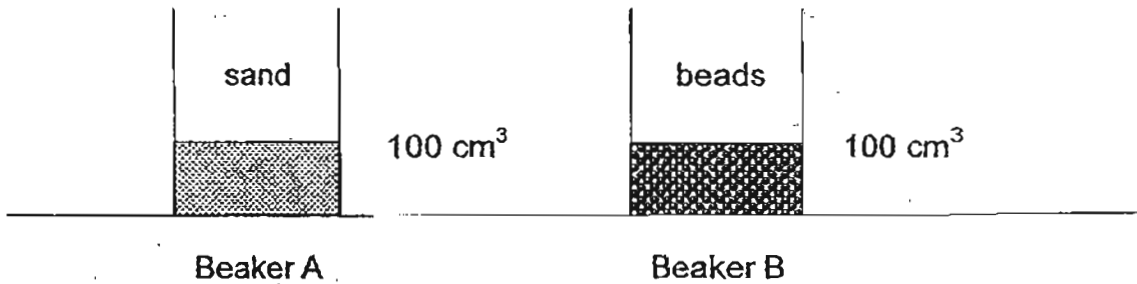
(a) From the activity above, what can Huiling observe about sand? (1m)

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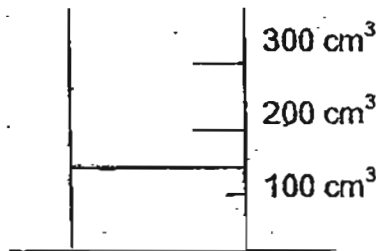


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(b) Next, Huiling poured the sand into Beaker A and some beads into Beaker B. Both the sand and the beads reached the 100 cm<sup>3</sup> mark as shown below. Then she poured all the sand from Beaker A into Beaker B.



(b) Using a pencil and a ruler, draw a line in the diagram below to show the total volume of the sand and the beads. (1m)

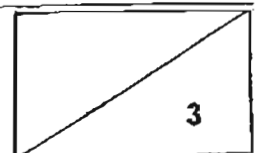


(c) Explain your answer in (b). (1m)

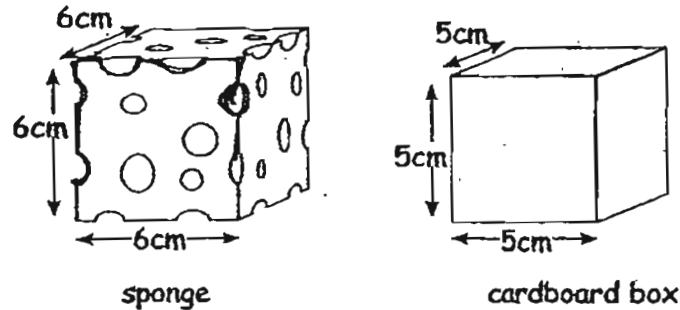
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41. Raju and Shu Ting have a sponge and a cardboard box as shown below. They measured the sides of the sponge and cardboard. They recorded the measurements in the diagram below.



- (a) Raju says that the sponge is a solid just like the box. Why do you think he says that? (1m)

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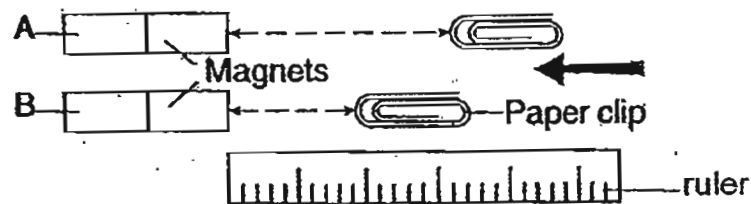
- (b) Shu Ting says that it is impossible to squeeze the sponge into the box. Do you agree with her? Why? (2m)

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42. Erica set up an experiment as shown below to find out about Magnets A and B. She pushed the paper clips towards the two magnets which are of similar size and thickness along the ruler. She measured the distance at which the paper clips were attracted to the magnets.



- (a) What was the aim of Erica's experiment? (1m)

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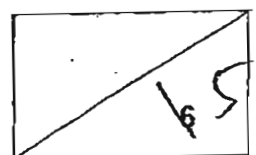
- (b) Name two properties of magnets demonstrated in Erica's experiment. (2m)

(i) 

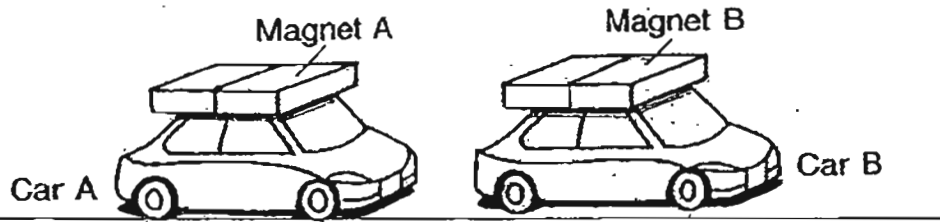
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(ii) 

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43. Xiao Hua tied two magnets, A and B, on two of his toy cars as shown below.



- (a) When Xiao Hua placed the two toy cars close together, he noticed that they moved away from each other. Why do you think this happened? (1m)

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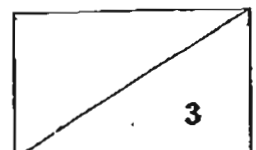
- (b) Xiao Hua removed Magnet B and replaced it with Object X. He noticed that Car B moved towards Car A. What material could Object X be made of? (1m)

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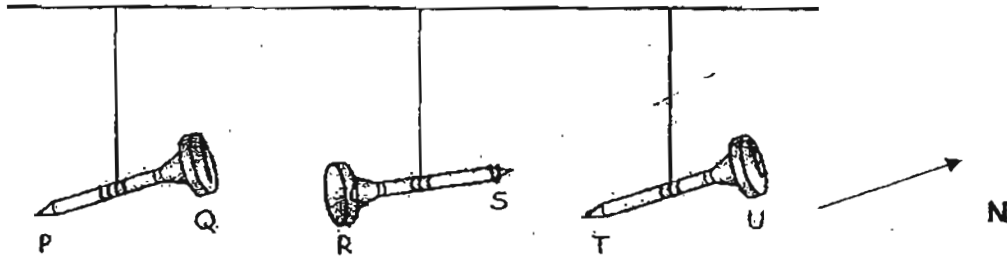
- (c) Explain your answer in (b). (1m)

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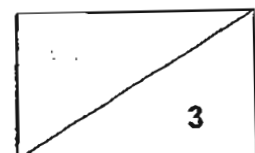
44. Meena magnetised three nails using the stroking method and suspended them using strings. The nails did not lose their magnetism during the experiment. She noticed that the three nails came to rest in the positions as shown in the diagram below:

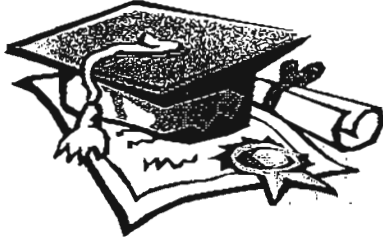


Meena brought a magnet close to each nail as shown below and observed if the nail was attracted or repelled. Fill in the table below with ticks to indicate whether each nail was attracted or repelled. (3m)

Situation		Attracted	Repelled
a)			
b)			
c)			

\*\*\* End of Paper \*\*\*



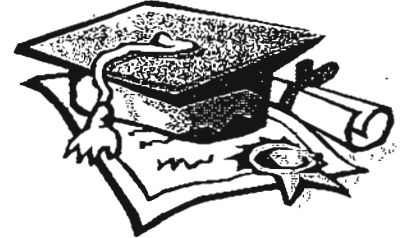


# ANSWER SHEET

**EXAM PAPER 2011**

**SCHOOL : RED SWASTIKA  
SUBJECT : PRIMARY 4 SCIENCE**

**TERM : SA1**



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

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

- 31)a)P: plants      R: fungi  
b)No. Toadstool is a fungi not animals. Group Q belongs to animals.

- 32)i)Living things respond to changes.  
ii)Living things can move from place to place themselves.

- 33)a)Set-up A. The seeds in set-up air has warmth air, water to grow.  
b)Yes. Different amount of wet cotton wool was used.



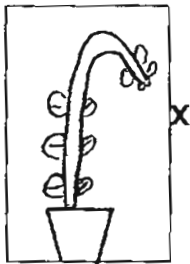
- b)i)The young of the cricket does not have wings.  
ii)The young of the cricket moults several times.  
c)Adult stage. The adult can fly.

- 35)a)Mouse.  
b)The greater the mass, the longer the gestation period.  
c)Zebra.

- 36)a)Digestive system.  
b)Small intestine.  
c)Digestion is completed and the digested food is absorbed.

- 37)a)The tubes in the stem absorb water and carry water up to the flower.  
b)foods.  
c)Circulatory system.

38)a) **Diagram 2**



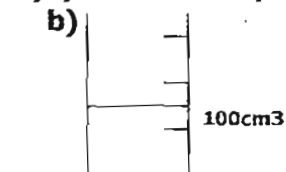
**After**

- b) **No. Plants move towards light to make food.**
- c) **Reach out for maximum sunlight on to ensure that the plant receives only light from the opening.**

39)a) **The material of four different material does not have a same thickness.**

- b) **Eddy should make the materials the same thickness.**
- c) **Rubber.**

40)a) **Sand takes up the shape of the container.**



- c) **The sand fills up the spaces between the beads.**

41)a) **The sponge has mass, occupy space has definite shape and volume.**

- b) **No. Air can be compressed.**

42)a) **To find out if magnet A or magnet B is stronger.**

- b) **i) Magnets can be attracted to magnetic.**
- ii) **Magnetism can act at a distance.**

43)a) **They are like poles repel.**

- b) **Iron.**

c) **Iron is a magnetic materials. Magnet attract magnetic materials.**

44)a) **Attracted**

- b) **Repelled**

c) **Repelled**