

**NANYANG PRIMARY SCHOOL**

**PRIMARY 3 SCIENCE**

**SEMESTRAL ASSESSMENT 2  
2013**

**BOOKLET A**

**Date : 28 October 2013  
Duration : 1 h 45 min**

**Name : \_\_\_\_\_ (     )**

**Class: Primary 3 (     )**

**Parent's signature: .....**

**DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.  
FOLLOW ALL INSTRUCTIONS CAREFULLY.**

**Booklet A consists of 17 printed pages including this cover page.**

**Section A (30 x 2 marks = 60 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 provided.

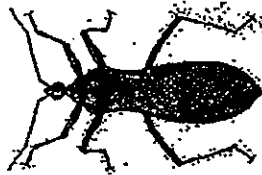
1. Which one of the statements about fungi is true?

- (1) Fungi are all poisonous and cannot be eaten.
- (2) Fungi do not need food and water for growth.
- (3) Fungi are able to move freely from place to place
- (4) Fungi take in food from living or dead organisms around them.

2. Which one of the following correctly shows the difference between a bird's nest fern and a lion?

	bird's nest fern	lion
(1)	It is a micro-organism.	It is not a micro-organism.
(2)	It makes its own food.	It hunts for its food.
(3)	It cannot respond to changes in its surroundings.	It can respond to changes in its surroundings.
(4)	It reproduces by seeds	It gives birth to its young alive.

3. Marie found an unknown organism X in her garden.



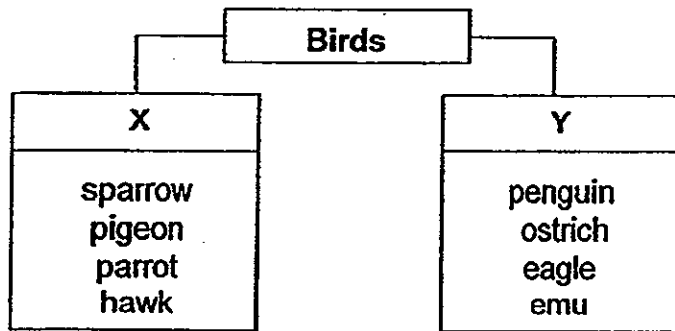
Organism X

In order to find out if the organism is an insect, which of the following should she carry out?

- A Measure its length and width
- B Look for the presence of wings
- C Count the number of legs it has
- D Count the number of body parts it has

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

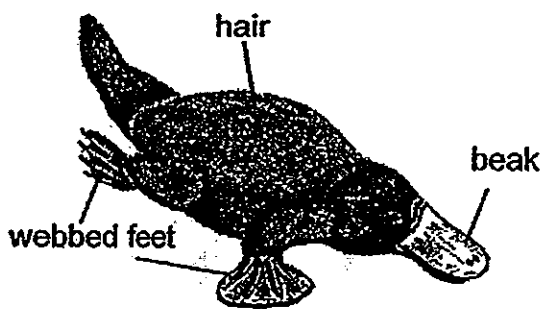
4. Some birds have been classified into two groups as shown in the table below.



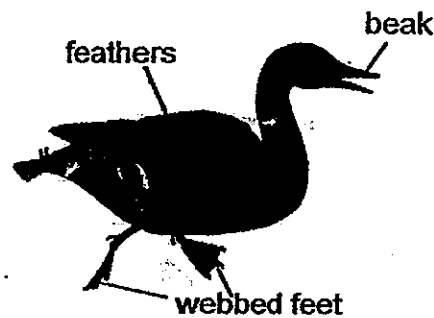
Which bird has been wrongly classified?

- (1) hawk
- (2) eagle
- (3) parrot
- (4) ostrich

5. Jenny visited the newly opened River Safari and made some observations about the platypus and the duck.



Platypus



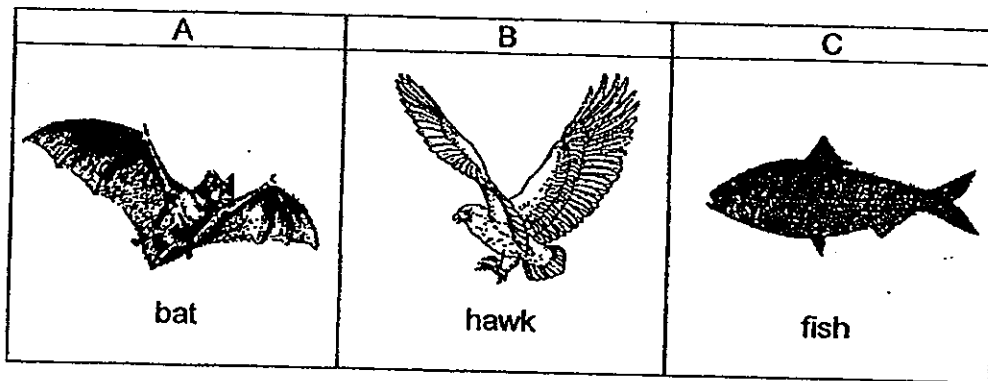
Duck

Which of the following conclusions are correct based on the observations that she had made?

- A Both species are birds because they have beaks.
- B Both species can swim because they have webbed feet.
- C The platypus is a mammal because it has hair but the duck is a bird as it has feathers.
- D The platypus is a mammal because it has four legs but the duck is a bird as it has two legs.

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

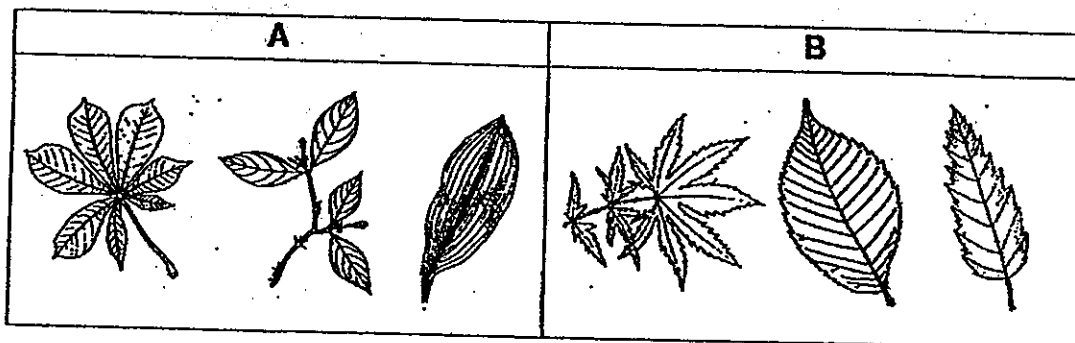
6. There are three animals shown in the boxes below.



Which of the following correctly describes their outer body covering?

	A	B	C
(1)	feather	hair	scales
(2)	scales	feathers	hair
(3)	hair	scales	feather
(4)	hair	feathers	scales

7. Study the classification table below.



Which of the following are suitable headings for A and B?

	A	B
(1)	Leaves with lobed edges	Leaves with entire edges
(2)	Leaves with entire edges	Leaves with jagged edges
(3)	Leaves with parallel veins	Leaves with network veins
(4)	Leaves that are oval shaped	Leaves that are lance shaped

8. Sheila found an arrowhead leaf as shown.

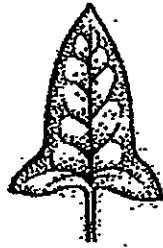


She wanted to identify its shape based on the leaf chart below.

**Leaf Shape Chart**



A



B



C

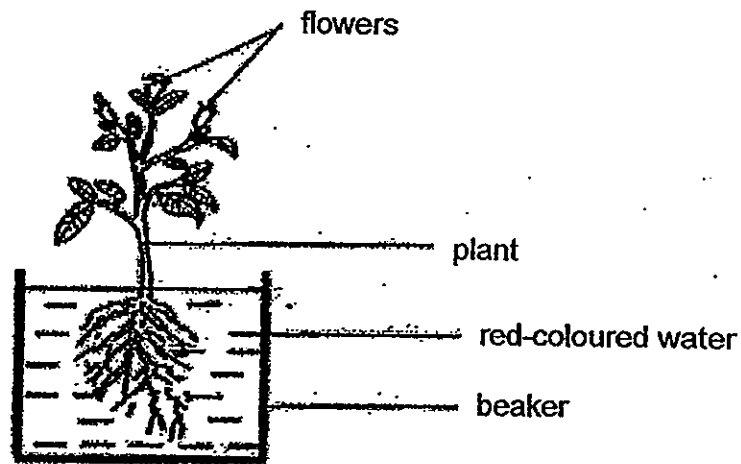


D

Based on the leaf chart above, which leaf shape can the arrowhead be classified as?

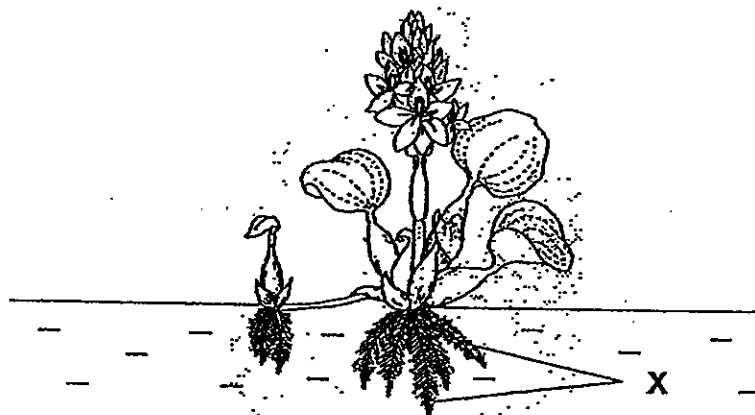
- (1) A
- (2) B
- (3) C
- (4) D

9. Shanti put a plant with white flowers in a beaker of red-coloured water. Two days later, she observed that the flowers of the plant had turned red.



What can Shanti conclude through her experiment?

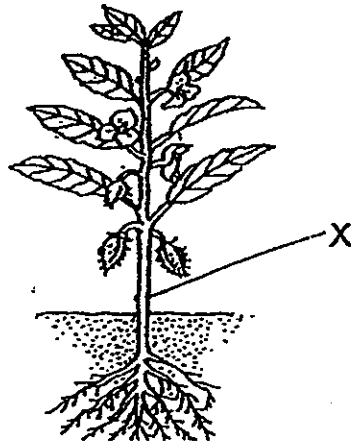
- (1) Plants need roots to live.
  - (2) Plants need sunlight to make food.
  - (3) Plants make food through the roots.
  - (4) Plants absorb water through the roots.
10. The picture below shows a floating water plant.



What is the function of the parts labeled X?

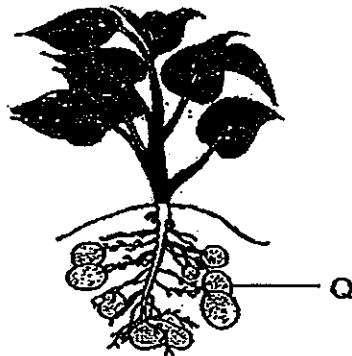
- (1) To store food
- (2) To take in air
- (3) To enable the plant to float
- (4) To absorb water and mineral salts

11. Study the diagram below.



Which of the following functions do part X of the plant above perform?

- A It holds the plant upright.
  - B It makes food for the plant.
  - C It holds the plant firmly to the ground.
  - D It absorbs water from the ground to the leaves.
  - E It carries food and water to all parts of the plant.
- (1) A and E only  
(2) C and D only  
(3) A, D and E only  
(4) B, C, D and E only
12. Michelle noticed that as the plant continued to make more food, part Q grew larger. However, when the plant could not make any food, part Q started to shrink.



What can be concluded about the function of part Q based on Michelle's observation?

- (1) Part Q makes food for the plant.
- (2) Part Q helps the plant grow upwards.
- (3) Part Q stores excess food for the plant.
- (4) Part Q carries food to other parts of the p

13. Three children made the following statements about ferns.

Khatiq: Ferns are not plants as they do not reproduce by seeds.

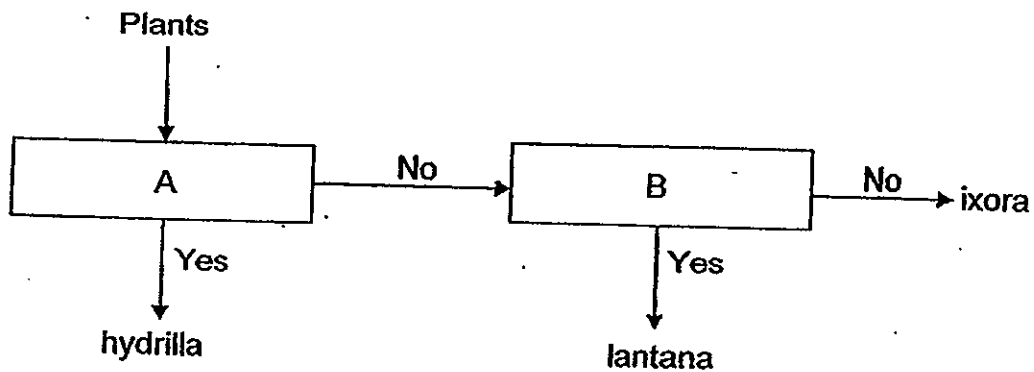
Liming: The spores found on the underside of ferns allow them to reproduce.

May : Ferns obtain their food from the living or non-living things that they grow on.

Which of the children had made **incorrect** statements?

- (1) Khatiq  
 (2) Liming  
 (3) Khatiq and May  
 (4) Liming and May

14. Study the flow chart below.



Based on the flowchart, which one of the following set of questions represents A and B correctly?

	A	B
(1)	Does it grow in water?	Does it have any poisonous parts?
(2)	Does it grow in water?	Do the flowers grow in clusters?
(3)	Does it float in water?	Does it have any poisonous parts?
(4)	Does it float in water?	Do the flowers grow in clusters?



15. Which of the following statements **correctly** describe the human digestive system?

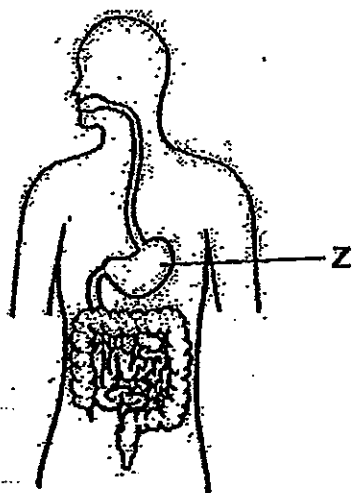
- A It works together with other organ systems in the body.
- B It breaks down food into simpler forms to be absorbed by the body.
- C It is made up of the mouth, gullet, small and large intestines only.

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

16. Which one of the following describes the main function of the large intestine in our body?

- (1) It breaks down food into simpler forms.
- (2) It passes the digested food to the blood.
- (3) It absorbs water from the undigested food.
- (4) It passes the undigested food out of the body.

7. Study the diagram below.



Which one of the following correctly identifies part Z?

- (1) Gullet
- (2) Stomach
- (3) Small intestine
- (4) Large intestine

18. Children are usually given plastic bowls rather than ceramic bowls when eating.

Which of the following properties of plastic make it a more suitable material for children to use than ceramic?

- A It floats on water.
- B It is lighter in weight.
- C It does not break as easily.

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

19. The table below shows how some objects are classified based on a common property. P, Q and R represent the headings of the table.

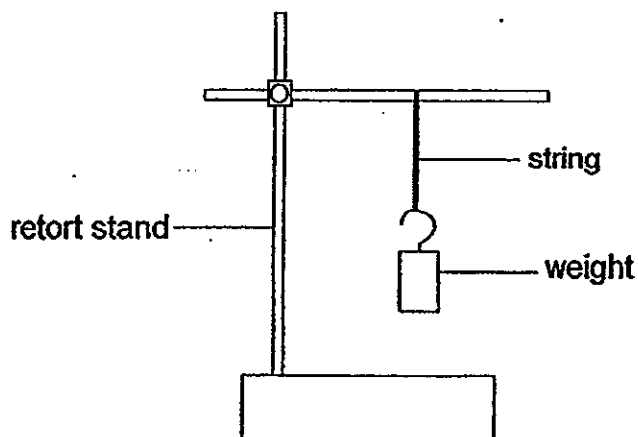
Objects		
P	Q	R
shirt	cardboard	key
handkerchief	tissue paper	pin

The objects in each group are classified according to \_\_\_\_\_.

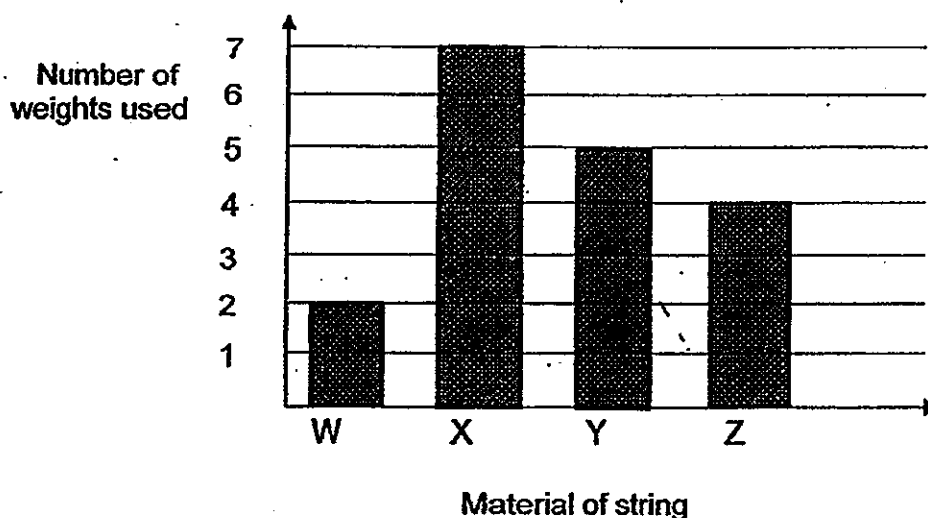
- (1) how heavy they are
- (2) what they are made of
- (3) what they are used for
- (4) whether they can absorb water

20. Donghan conducted an experiment to test the strength of different materials, W, X, Y and Z used for making strings. He used strings of the same thickness and length.

He took each string and hung it from a retort stand as shown in the diagram below. Weights of similar mass were added to the string until the string broke. Then he recorded the number of weights used. The experiment was repeated for the different materials.



The graph below shows the result he obtained.



Based on Donghan's results, which one of the following statements is true?

- (1) X is the heaviest material.
- (2) W is the strongest material.
- (3) Y is a stronger material than Z.
- (4) Z could support more weight than X before it broke.

23. Four children observed four specimens and recorded their observations in a table.

The table below shows the characteristics displayed by the four specimens, W, X, Y and Z. Study the table below.

Specimen	Needs water	Needs food	Needs sunlight	Can move from place to place	Needs air
W	✓	✓		✓	✓
X					
Y				✓	
Z	✓	✓	✓		✓

The children then made statements based on their observations.

- Jane: Z is an animal  
Peter: Y is a non-living thing.  
Li Ling: W and Z are living things.  
Hassan: W, X, Y and Z are living things.

Who made the correct statements?

- (1) Jane and Peter only  
(2) Peter and Li Ling only  
(3) Li Ling and Hassan only  
(4) Jane and Hassan only

24. Mary brought both ends of a magnet close to Object A. It was not attracted to the magnet. Mary then made the following statements about object A.

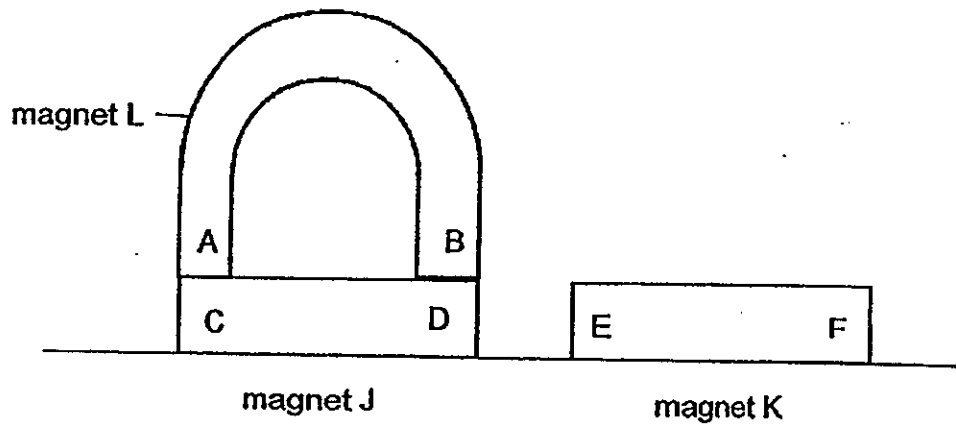
- A It is a magnetic material.  
B It could be made of steel.  
C It could be made of aluminium.  
D It is made of a non-magnetic material.

Which of the above statements are correct?

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



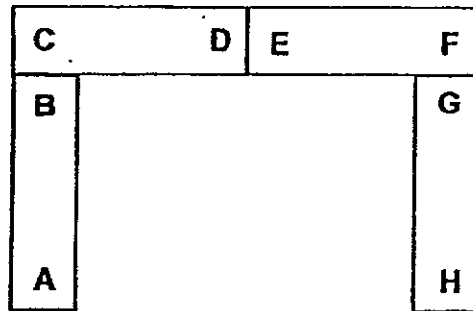
28. Three magnets, J, K and L, were brought near to each other. When they were brought near to each other, magnet J moved away from magnet K but magnet J moved closer to magnet L.



Based on the diagram above, which of the following statements **incorrectly** describes the poles of the magnets?

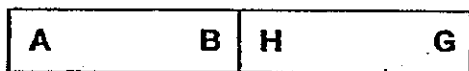
- (1) Poles B and F are like poles.
- (2) Poles C and E are like poles.
- (3) Poles A and C are unlike poles.
- (4) Poles D and F are unlike poles.

29. Four bar magnets AB, CD, EF and GH can be arranged as shown below.

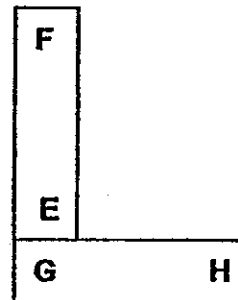


Which one of the following arrangements of the magnets is possible?

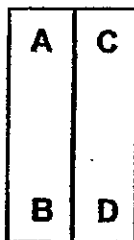
(1)



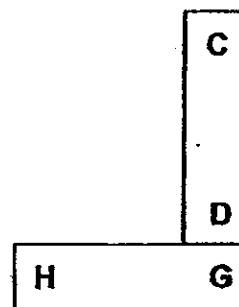
(2)



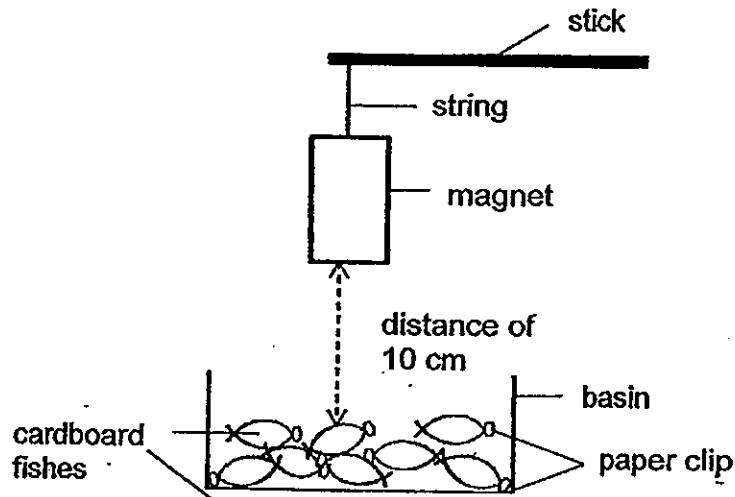
(3)



(4)

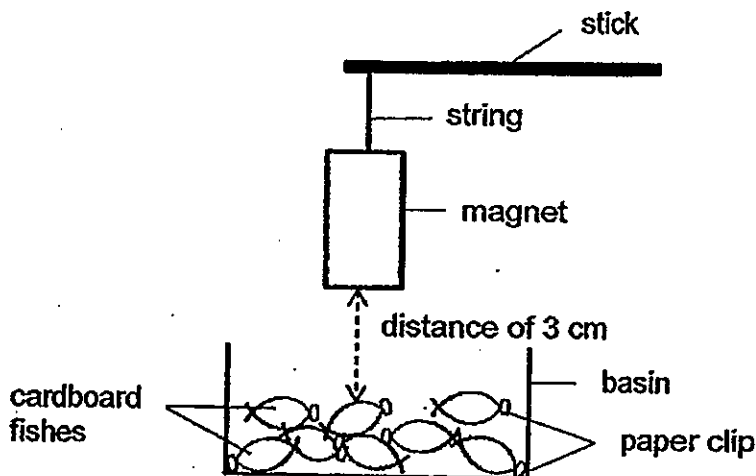


30. Tommy played with a fishing set as shown below. A magnet was tied to the end of a string, attached to a stick. Paper clips were attached to each of the cardboard fishes. The bar magnet was placed at a distance of 10 cm away from the fishes.



Tommy observed that he did not pick up any toy fishes from the basin using the bar magnet.

He then brought the magnet closer to a distance of 3 cm as shown in the diagram below. He managed to pick up a few fishes.



Which of the following statements are possible reasons to explain his observation?

- A The magnet has a weak magnetic force.
- B The paper clip is made of a non-magnetic material.
- C The magnet need not touch the fishes in order to attract them.

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



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2013**

**BOOKLET B**

**Date : 28 October 2013**

**Duration : 1 h 45 min**

**Name : \_\_\_\_\_ (     )**

**Class: Primary 3 (     )**

**Marks Scored:**

<b>Booklet A:</b>		<b>60</b>
<b>Booklet B :</b>		<b>40</b>
<b>Total :</b>		<b>100</b>

**Any query on marks awarded should be raised by \_\_\_\_\_. We seek your understanding in this matter as any delay in the confirmation of marks will lead to delays in the generation of results.**

**Parent's signature: .....**

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**Booklet B consists of 14 printed pages including this cover page.**

**Section B (40 marks)**

Write your answers to questions 31 to 44 in the spaces provided.  
Marks will be deducted for misspelt key words.

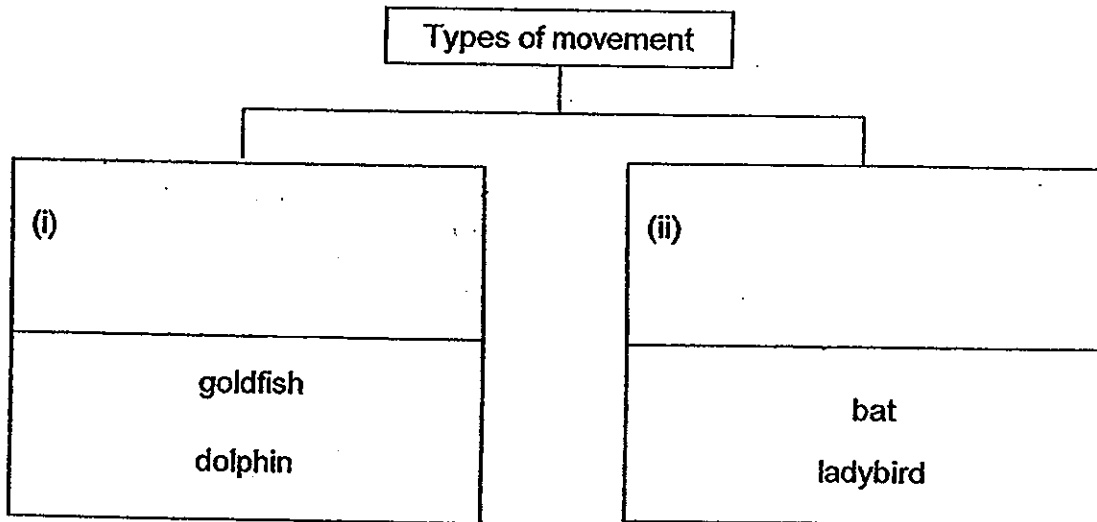
*Eight*

31. Four living things are classified into two groups as shown below.

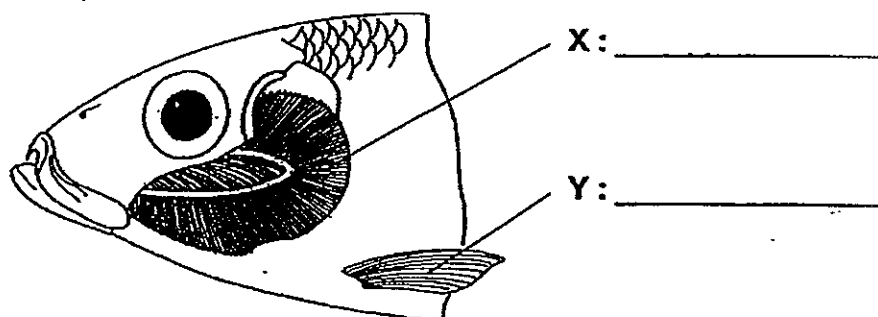
A	B
bat	orchid
goldfish	hydrilla
dolphin	mimosa
ladybird	sunflower

(a) State the difference between living things in group A and B in the way they move. [1]

(b) Living things in group A can be further classified based on their type of movement. Suggest headings to classify them. [1]



32. (a) Name the part labelled X and Y in the diagram below. [1]



- (b) What is the function of part X in helping the fish to live in water? [1]

\_\_\_\_\_

33. Mei Li classified some animals into two groups, X and Y, as shown below.

Animals in the sea	
X	Y
eel	seal
seahorse	dolphin

- (a) Give suitable headings for group X and group Y. [2]

X: \_\_\_\_\_

Y: \_\_\_\_\_

- (b) Mei Li was able to state 2 characteristics of the animals in Group-Y. Name these characteristics. [2]

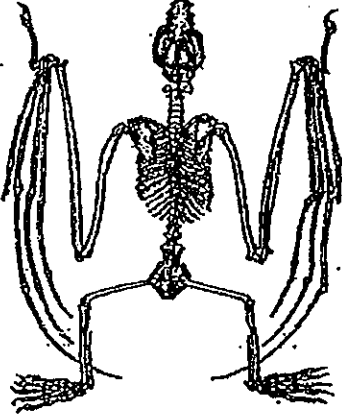
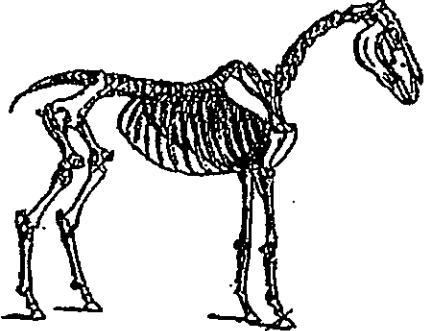
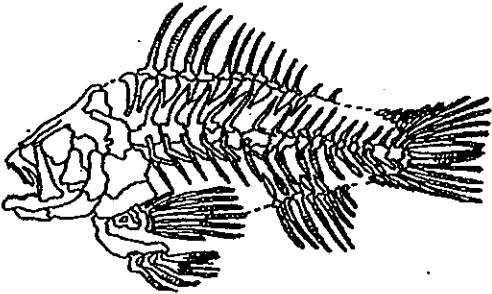
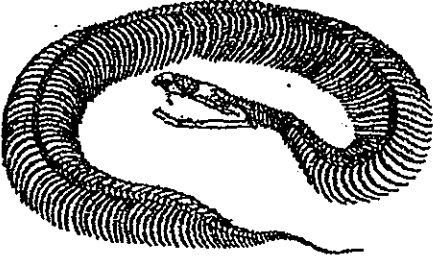
i) \_\_\_\_\_

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

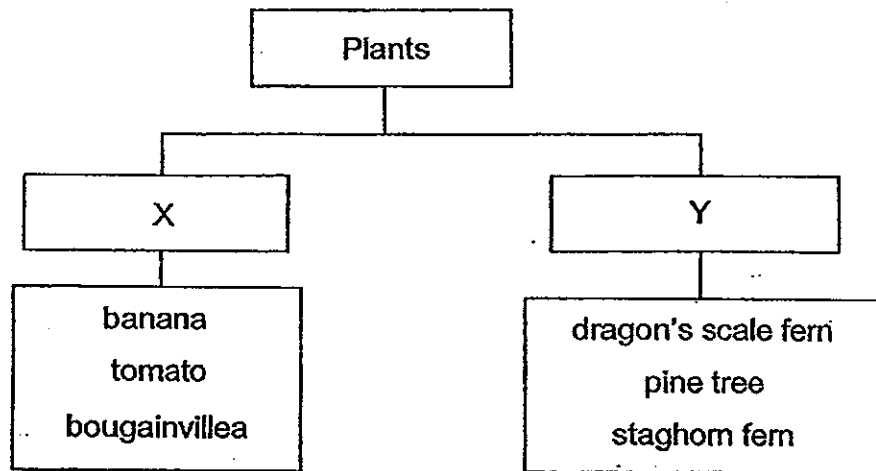
34. Study the skeletal structure of these 4 organisms and match them according to the way they move. Fill in the blanks with a word from the box using each word only once. [2]

swim      fly      walk      slither

All the bones of an animal make up the skeleton as shown.

<p>(a)</p>  <p><input type="text"/></p>	<p>(b)</p>  <p><input type="text"/></p>
<p>(c)</p>  <p><input type="text"/></p>	<p>(d)</p>  <p><input type="text"/></p>

35. The chart below shows how some plants can be classified.



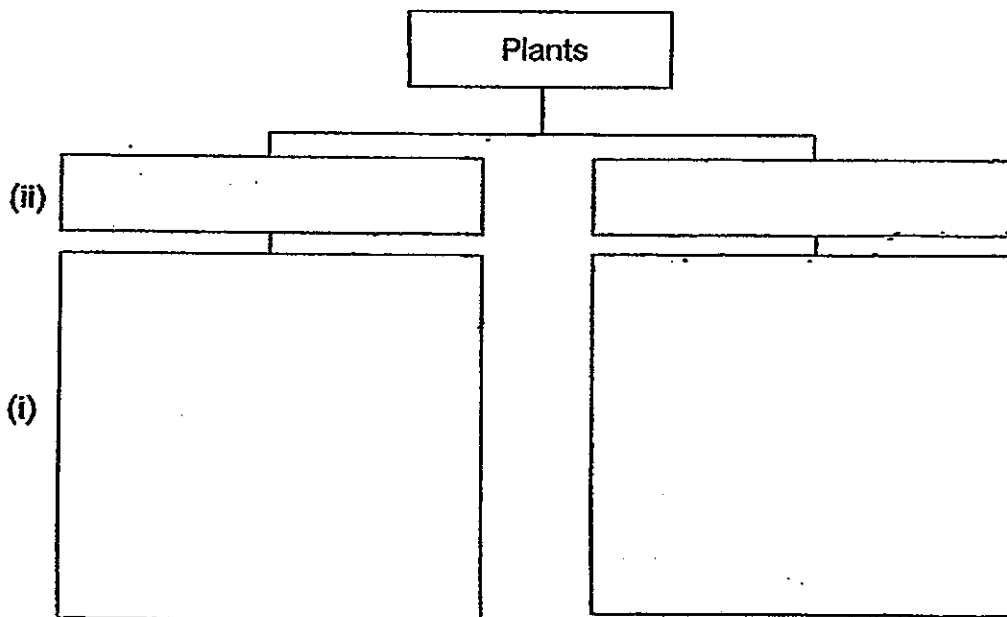
(a) Give a suitable heading for X and Y. [1]

(i) X: \_\_\_\_\_

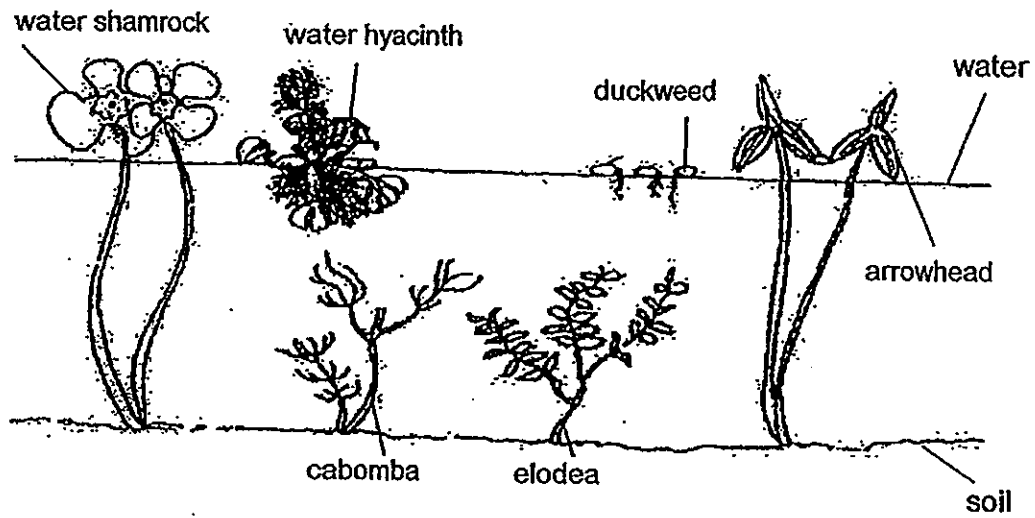
(ii) Y: \_\_\_\_\_

(b) <sup>Six</sup> (i) Classify the ~~five~~ plants from the chart above into 2 groups based on a different characteristic. [1]

(ii) Give a suitable heading for each group. [1]

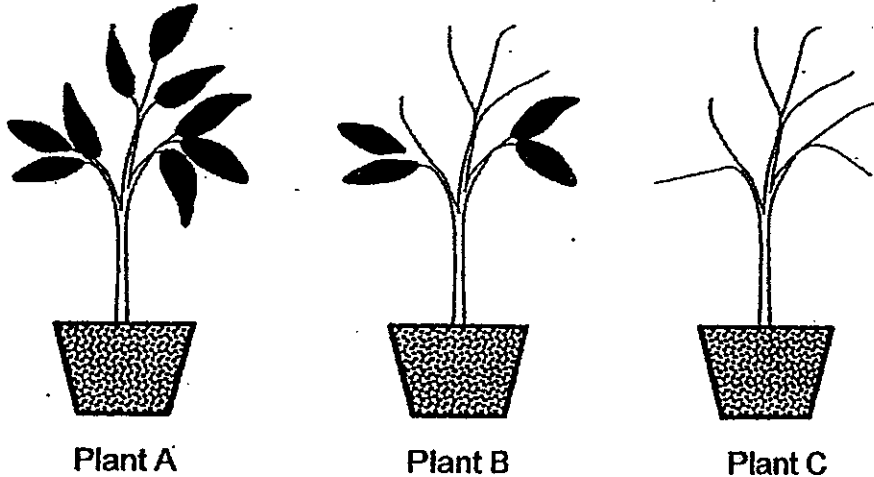


36. Water plants can be classified in many ways.



Based on observations from the above diagram, classify the plants into three groups according to how they grow in the water. Give a heading for each group. [3]


37. Melissa set up an experiment with three similar plants of the same height. She planted them in pots of the same size and with the same amount of soil. She watered them daily and placed them in a garden outdoors. She did not remove any leaves from Plant A. She removed half the leaves from Plant B and all the leaves from Plant C.

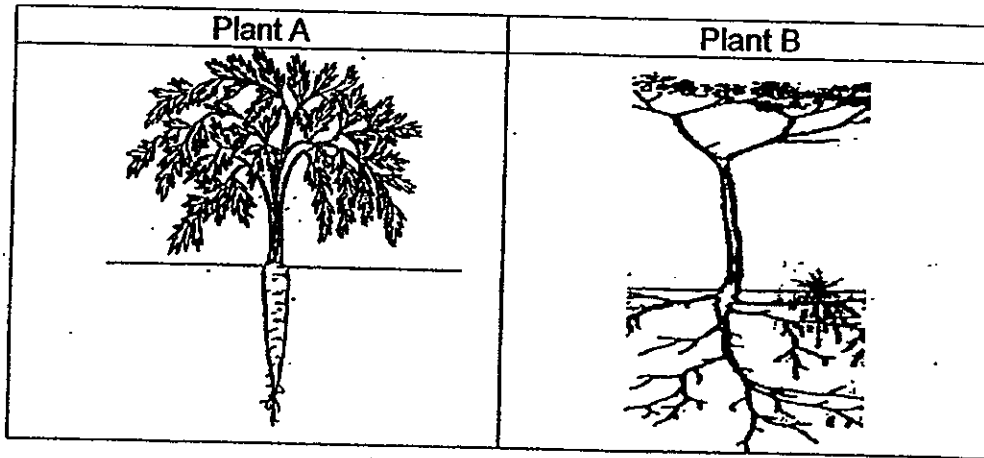


She measured the heights of the 3 plants for 3 weeks and obtained the following results.

Plant	Height in Week 1	Height in Week 2	Height in Week 3
A	30 cm	33 cm	35 cm
B	30 cm	31 cm	31 cm
C	30 cm	29 cm	28 cm

- (a) Based on her results, what can Mei Li conclude about the relationship between the height of the plants and the number of leaves. [1]
- (b) What will happen to Plant C after 3 weeks? [1]
- (c) Explain your answer in part (b). [2]

38. Study the diagram below of two plants with two different types of roots.



(a) Which plant would be more firmly planted to the ground? [1]

\_\_\_\_\_

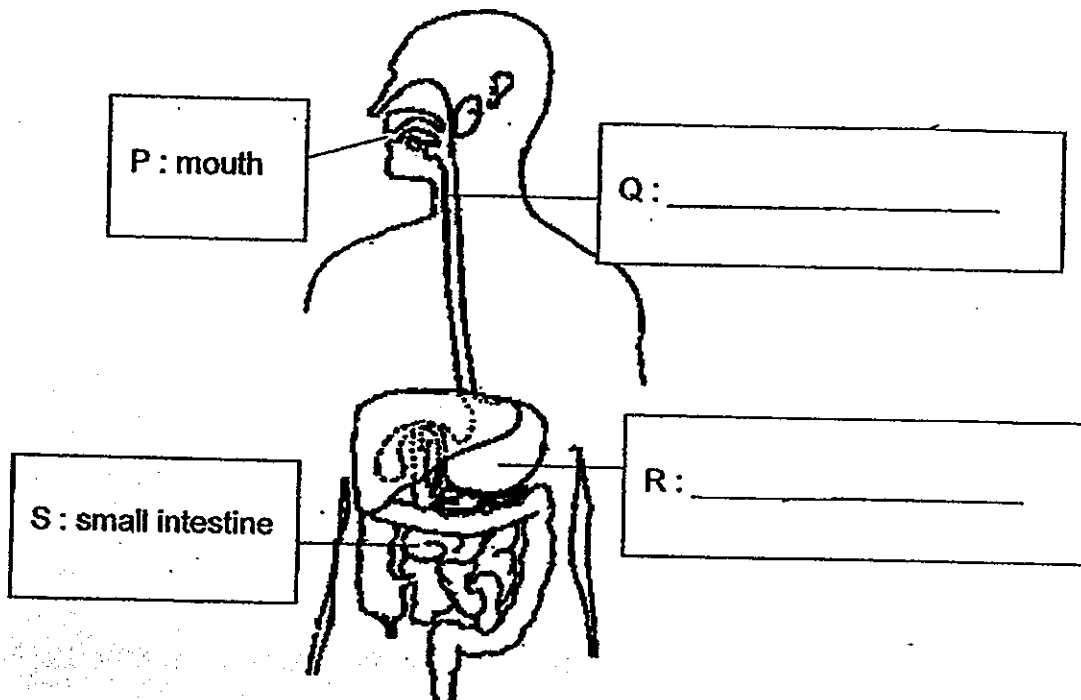
(b) Explain your answer in (a). [1]

\_\_\_\_\_

\_\_\_\_\_

39. The diagram below shows parts P, Q, R and S of the human digestive system.

(a) Name parts Q and R in the diagram below.





- (b) How would the amount of undigested food change from the time it enters till it leaves the parts of the body?  
Tick the appropriate box. [2]

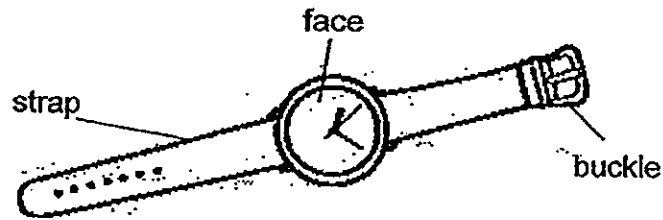
Part	Change in the amount of undigested food		
	Decrease	No change	Increase
P			
Q			
R			
S			

- (c) Explain how food is digested in the body. [1]

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40. The diagram below shows a watch with its parts labelled.



(a) Based on the properties of the materials given for each part of the watch, fill in the blanks (i) and (ii) in the table below. [1]

Part of the watch	Material it is made of	Properties of the material
strap	(i)	<ul style="list-style-type: none"><li>• flexible</li><li>• made from a living thing</li></ul>
buckle	(ii)	<ul style="list-style-type: none"><li>• strong</li><li>• not flexible</li></ul>

(b) The face of the watch is made of plastic that is transparent. State another property of plastic that makes it suitable as the face of a watch and give a reason for your choice. [2]

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41. Bertha placed the four items below in a basin of water. She then classified these four items into two groups based on her observation for the objects.

P	Q
wooden toothpick	metal coin
rubber duck	glass marble

- (a) Write a suitable heading for each group. [1]

P: \_\_\_\_\_

Q: \_\_\_\_\_

- (b) (i) Bertha wanted to classify an iron rod in the table above.

Based on the headings provided in (a), in which group, P or Q, would Bertha classify the iron rod?

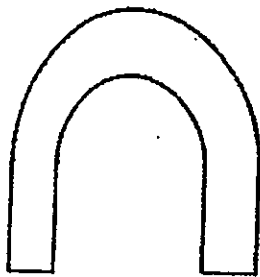
Explain your answer.

[1]

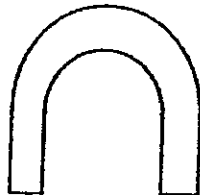
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42. Mabel has three U-shaped magnets labelled X, Y and Z.



Magnet X



Magnet Y



Magnet Z

She wanted to find out the strength of each magnet by counting the number of paper clips that could be attracted to it. She then recorded her results in the table below.

	Magnets		
	X	Y	Z
Number of paper clips attracted	15	8	25

- (a) Based on the results which magnet is the strongest? [1]

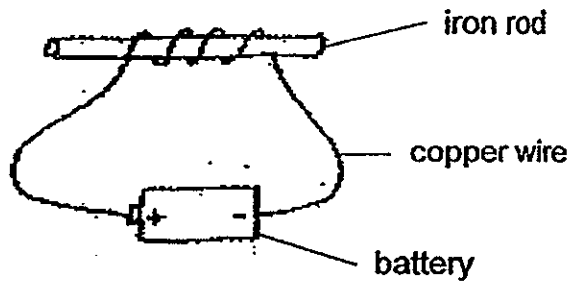
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- (b) Based on this experiment, what can she conclude about the size of the magnet and its strength? [1]

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43. Mrs Ang and her pupils made a temporary magnet using the electrical method. They coiled a length of wire around an iron rod and connected it to a battery. They wanted to find out how the number of coils of wire around the iron rod will affect the number of staples attracted.



- (a) Fill in the table with the possible answer for each blank. [2]

Number of coils	10	(i)	20	25	30
Number of staples attracted	10	12	14	(ii)	14

An electromagnet is created. However, Mrs Ang and her pupils found that it can only attract some staples.

- (b) What is the least number of coils needed to attract the most number of paper clips? [1]

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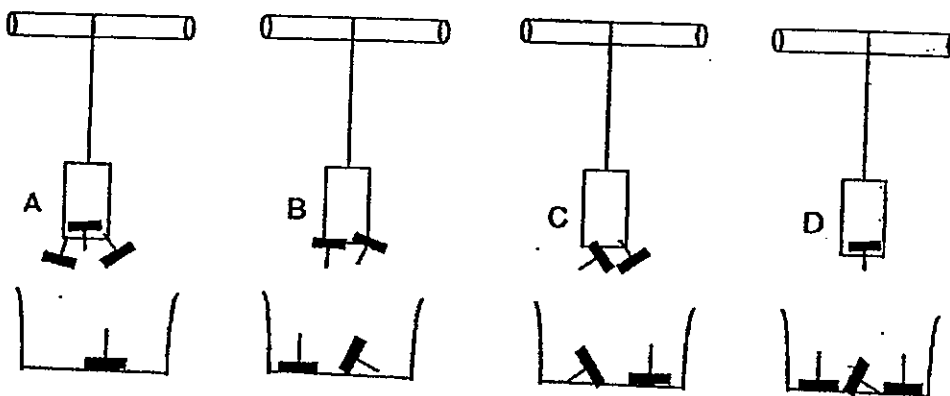
- (c) What is the relationship between the number of coils around the rod and the number of staples attracted? [1]

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44. Jonathan wanted to find out the strength of four different bar magnets. He suspended each magnet from a string tied to a rod and placed a tray of thumbtacks below each of them. He then made a few statements about the magnets.



- (a) For each of the following statements below, put a tick [✓] in the correct box to indicate if the statements are True or False. [2]

Statement	True	False
Magnet D is stronger than C.		
Magnet B is the weakest magnet.		
Magnet A is weaker than C.		
Magnet B is stronger than D but weaker than A.		

- (b) State one way he could do to make magnet D lose its magnetism. [1]

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# ANSWER SHEET

EXAM PAPER 2013

SCHOOL : NANYANG PRIMARY SCHOOL

SUBJECT : PRIMARY 3 SCIENCE

TERM : SA2

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

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

Section B

Q31

- a) Living things in Group A move freely from place to place while the living things in Group B cannot.
- b) i) Living things that swims  
ii) Living things that flies

Q32

- a) X: Gills; Y: Fin
- b) It takes in dissolved oxygen from the water

Q33

- a) X: Fish; Y: Mammals
- b) i) Have hair  
ii) Reproduce by giving birth to young alive

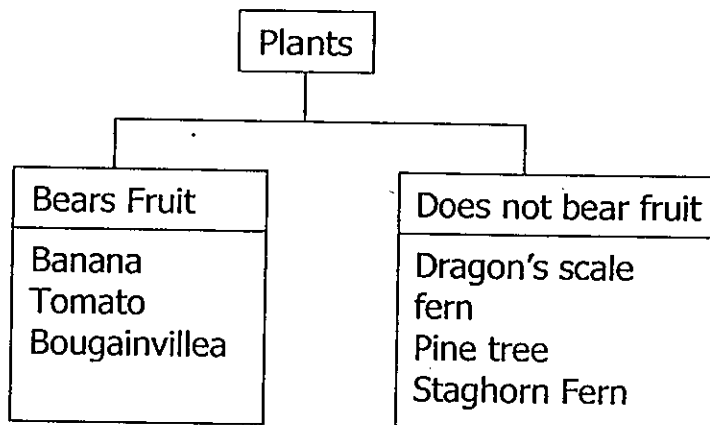
Q34

- a) Fly
- b) Walk

- c) Swim
- d) Slither

Q35

- a) i) X: Flowering
- ii) Y: Non-flowering
- b)



Q36)

Floats on water	Partially submerged	Fully submerged
Water hyacinth Duckweed	Water shamrock Arrowhead	Cabomba Elodea

Q37

- a) The greater number of leaves the greater the height of the plants.
- b) It will die
- c) Plants need leaves to make food

Q38

- a) Plant B
- b) Its roots spread out widely and anchor the plant firmly to the ground while Plant A's root does not spread out widely, therefore it also does not anchor the plant firmly to the ground

Q39

- a) Q: Gullet; R: Stomach
- b)

Part	Change in the amount of undigested food		
	Decrease	No change	Increase
P	√		
Q		√	



R	√		
S	√		

c) The teeth help to chew the food into smaller pieces. Digestive juice is produced to break down the food into simpler substances.

Q40.

- a) i) Leather
- ii) Metal
- b) It is strong and will not break easily when dropped.

Q41

- a) P: Float in water
- Q: Sink in Water
- b) Group Q. It is heavy and will sink when placed in water

Q42

- a) Magnet Z
- b) It does not matter whether the magnet is big or strong to find out the strength of the magnet

Q43

- a) i) 15
- ii) 14
- b) 20
- c) The more the number of coils around the rod, the more the number of staples attracted

Q44

a)

Statements	True	False
Magnet D is stronger than C		√
Magnet B is the weakest magnet		√
Magnet A is weaker than C		√
Magnet B is stronger than D but weaker than A	√	

- b) He could drop it many times

