METHODIST GIRLS' SCHOOL (PRIMARY)
SEMESTRAL ASSESSMENT 2 – 2007
PRIMARY 3
SCIENCE

BOOKLET A

Name : _____ ( )

Class : Primary 3. _____

Date : 8th October 2007

Section A : (30 x 2 marks)

For each question, four options are given. Choose the most suitable option and shade your answer in the Optical Answer Sheet (OAS) provided.

1. John is a newborn baby. His length is monitored for a period of 4 months. The table below shows his length within the period.

Month	Length (cm)
1st	51.0
2nd	54.2
3rd	59.5
4th	63.0

Based on the information given above, which of the following statements can be concluded?

(1) John's height increases as he grows.
(2) John's height decreases as he grows.
(3) John needs air, water and food to grow.
(4) John needs air, water and sunlight to grow.

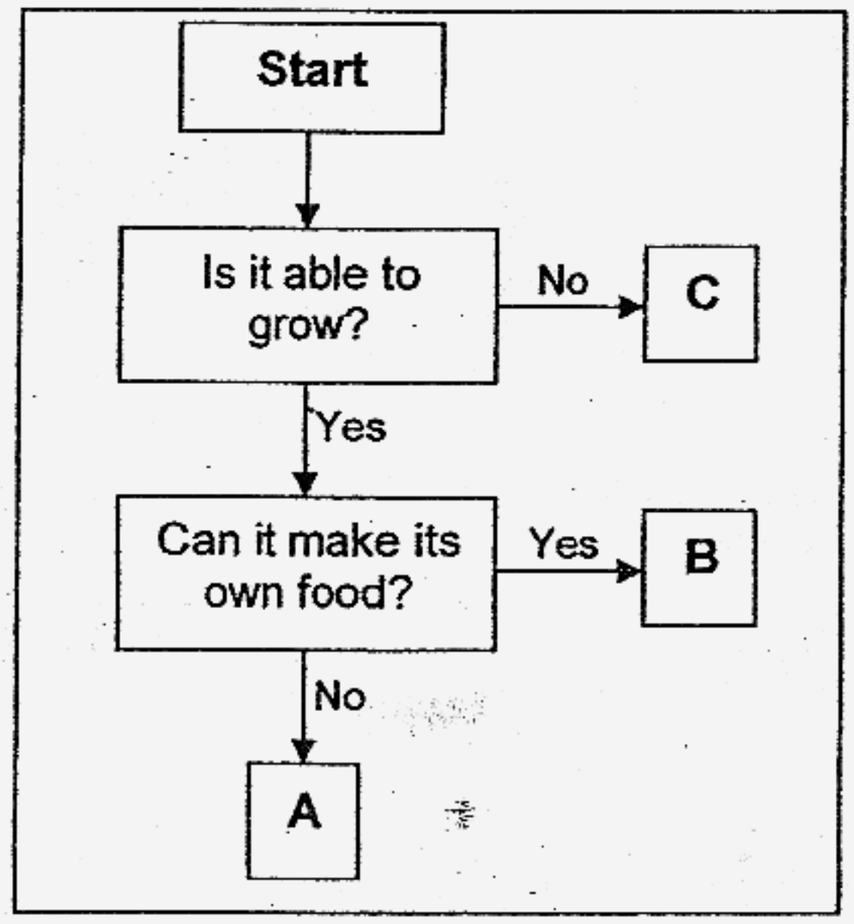
2. Suzie made some observations on two things, Y and Z. Then, she recorded her observations in the table below.

	Y	Z
Will it die?	No	Yes
Can it reproduce?	No	Yes
Can it move on its own?	No	Yes
Does it respond to touch?	Yes	Yes

From the table above, what can you conclude about Y and Z?

(1) Both Y and Z are living things.
(2) Both Y and Z are non-living things.
(3) Y is a living thing but Z is a non-living thing.
(4) Z is a living thing but Y is a non-living thing.

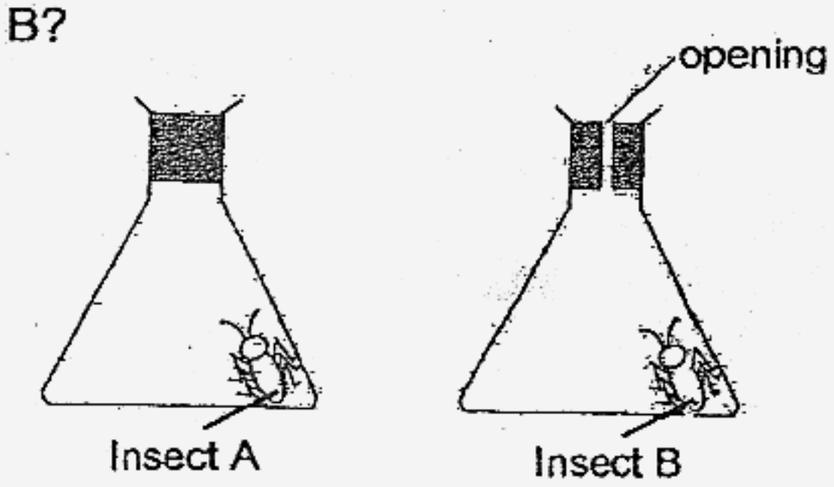
3. Study the flow chart below.



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

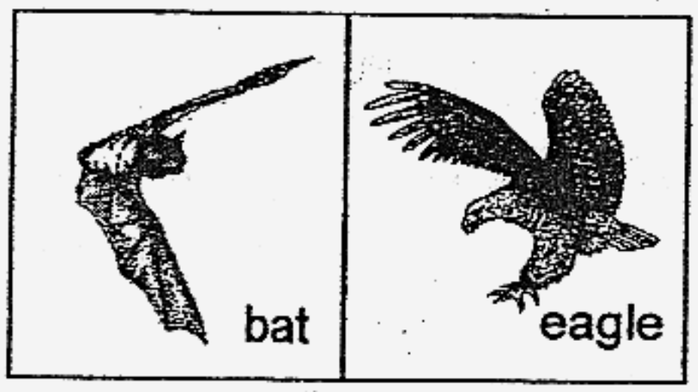
	A	B	C
(1)	Lorry	Mushroom	Bird's nest fern
(2)	Bird's nest fern	Lorry	Mushroom
(3)	Mushroom	Bird's nest fern	Lorry
(4)	Mushroom	Lorry	Bird's nest fern

4. In the diagram below, what is the most likely reason for Insect A to die before Insect B?



(1) It did not have enough air.
(2) It did not have enough food.
(3) It did not have enough water.
(4) It did not have enough sunlight.

5. Some comparisons between a bat and an eagle were recorded in the table below.



Which of the following pairs shows the correct comparison between the bat and the eagle?

	Similarity	Difference
(1)	Both have a pair of wings.	The bat gives birth to its young alive but the eagle lays eggs.
(2)	Both have feathers as their outer body coverings.	The bat breathes through its lungs but the eagle breathes through its gills.
(3)	Both have a beak each.	The bat lives in water but the eagle lives on land.
(4)	Both are birds.	The bat is covered with hair but the eagle is covered with feathers.

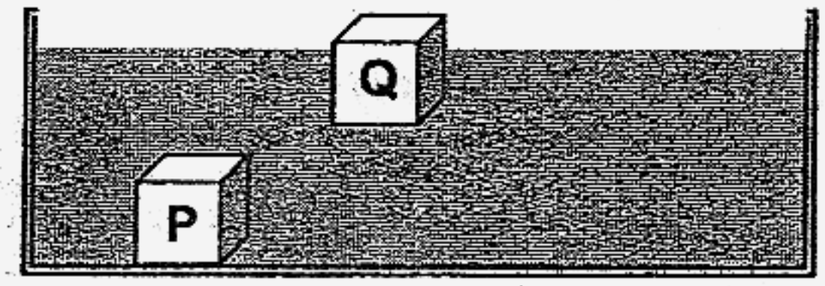
6. Which of the following statement/s concerning photosynthesis is/are true?

A : Oxygen is needed.
B : Water must be present.
C : Sunlight must be present.
D : Carbon dioxide is needed.

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

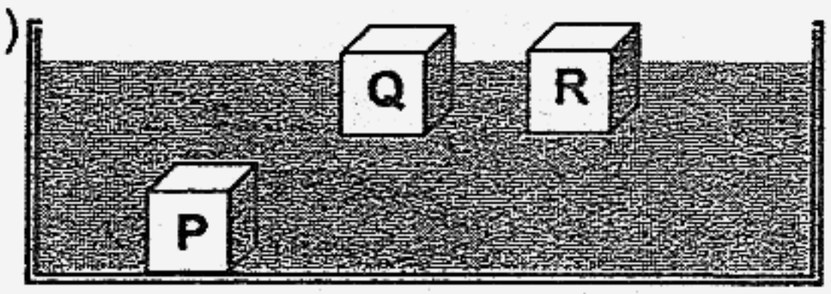
For questions 7 and 8, refer to the following:

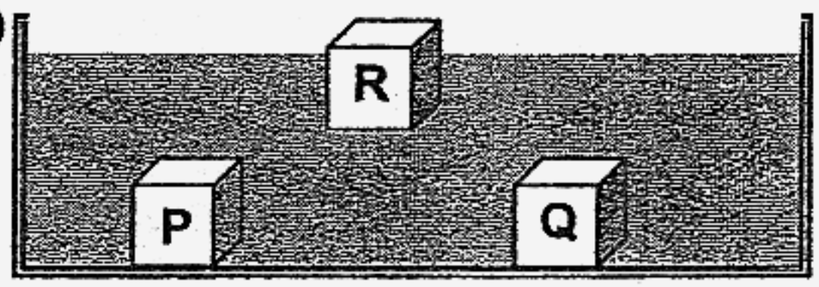
Jane placed 2 objects, P and Q, of similar shape and size in a basin of water. The diagram below shows what she observed a few minutes after placing the objects in the water.

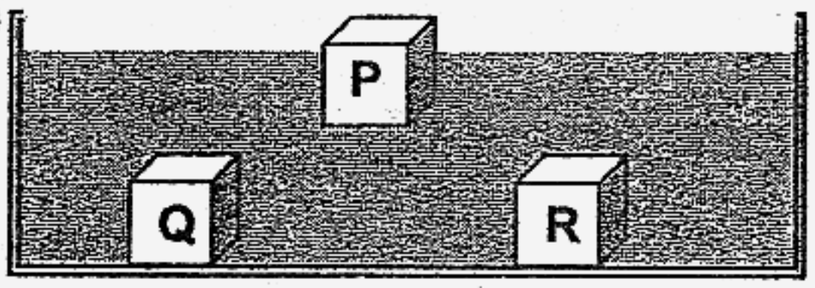


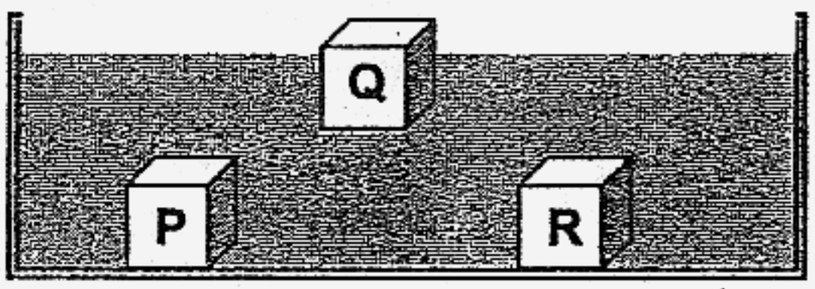
Then, Jane placed another object, R, of similar shape and size but is **heavier than object P** into the basin of water.

7. Which of the following diagrams shows the position of the three objects correctly?

(1)


(2)


(3)


(4)


8. Based on Jane's observation, which of the following combinations is most likely to be correct?

	P	Q	R
(1)	Iron	Cork	Glass
(2)	Glass	Cork	Iron
(3)	Cork	Iron	Glass
(4)	Cork	Glass	Iron

9. Susan observed Animal X and made the following observations:

- It has scales.
- It has a backbone.
- It does not have hair.
- It does not have legs.

What can Animal X most likely be?

(1) Fish
(2) Bird
(3) Insect
(4) Mammal

10. Mary collected some data on the growth of a string bean plant. She recorded the data in the table below.

Date	Observation
1.8.07	Seed planted in soil
6.8.07	'A' appeared
11.8.07	Leaves appeared
27.8.07	'B' appeared
20.9.07	Fruit appeared

Based on the data recorded in the table, on which date did the flowers appear?

(1) 6.8.07
(2) 11.8.07
(3) 27.8.07
(4) 20.9.07

11. The table below shows properties which some materials possess.

Material	Is it cheap?	Is it waterproof?
A	Yes	Yes
B	No	Yes
C	No	No

Mr Raymon owns a factory which manufactures plastic bags.
Which of the above materials would Mr Raymon most probably use to make the plastic bags?

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

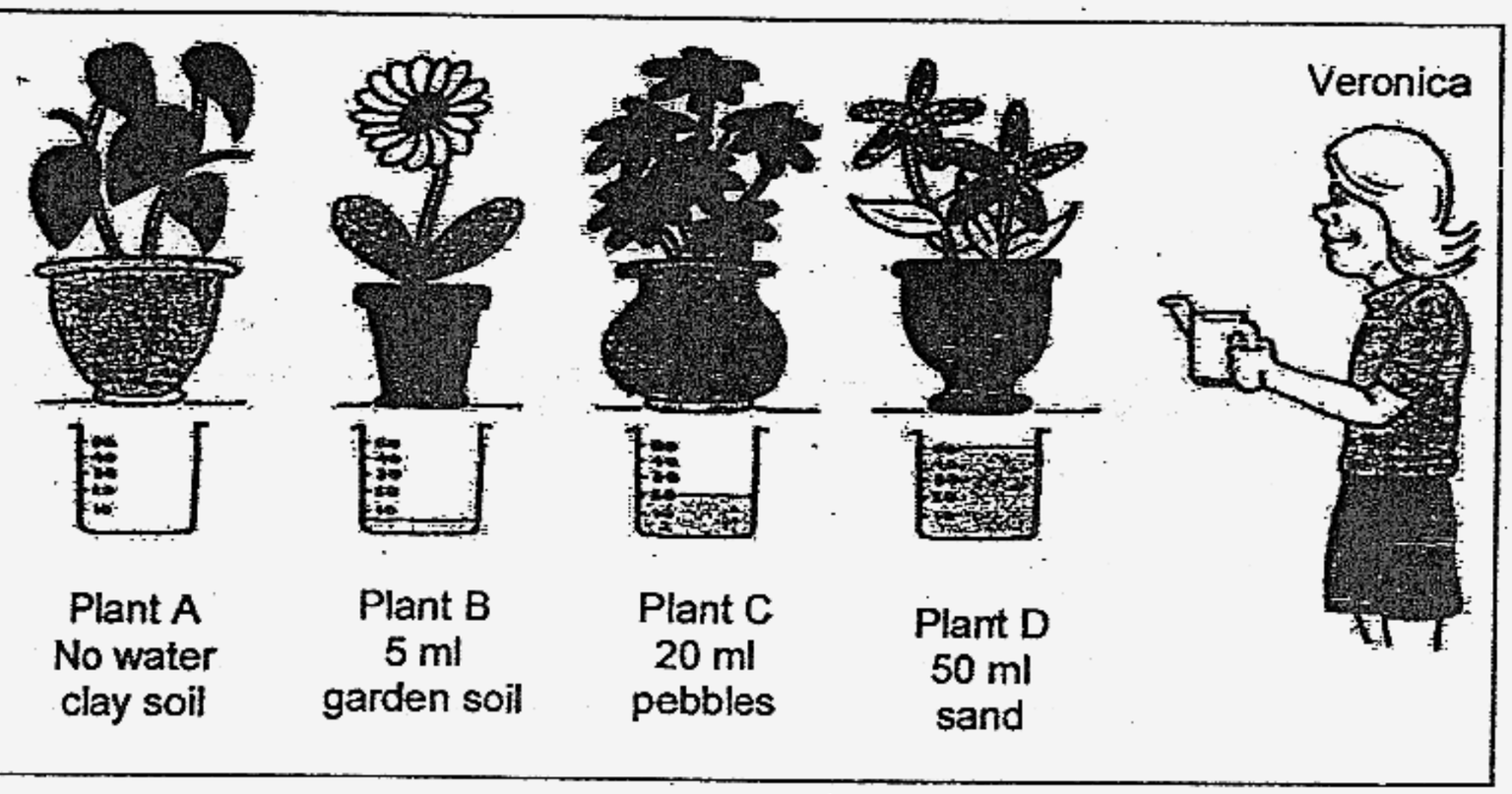
12. The table below shows the description of four girls.

Name	Description
Alice	Has long hair
Betty	Has long fingernails
Claire	Has large brown eyes
Denise	Has free-hanging ear lobes

Who have characteristics inherited from their parents?

(1) Alice and Betty
(2) Betty and Claire
(3) Denise and Alice
(4) Claire and Denise

13. Veronica carried out an experiment to find out what type of soil was suitable for growing plants. She planted four different types of plants in different types of soil and pots. She added different amount of water to Plant B, C and D but none to Plant A.



Which of the following reasons best explain why the above experiment was <u>not</u> a fair test?

A : The type of soil used was different.
B : The type of pot used was different.
C : The type of plant used was different.
D : The amount of water given to each plant was different.

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

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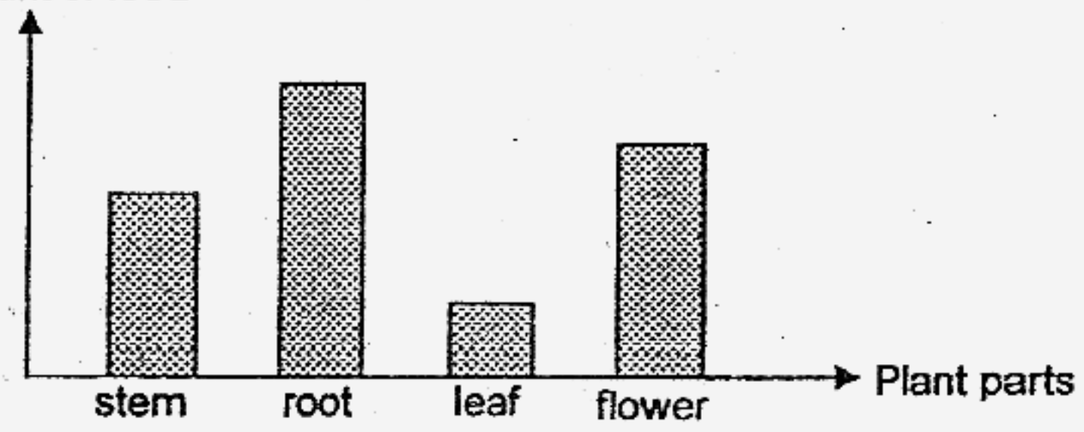
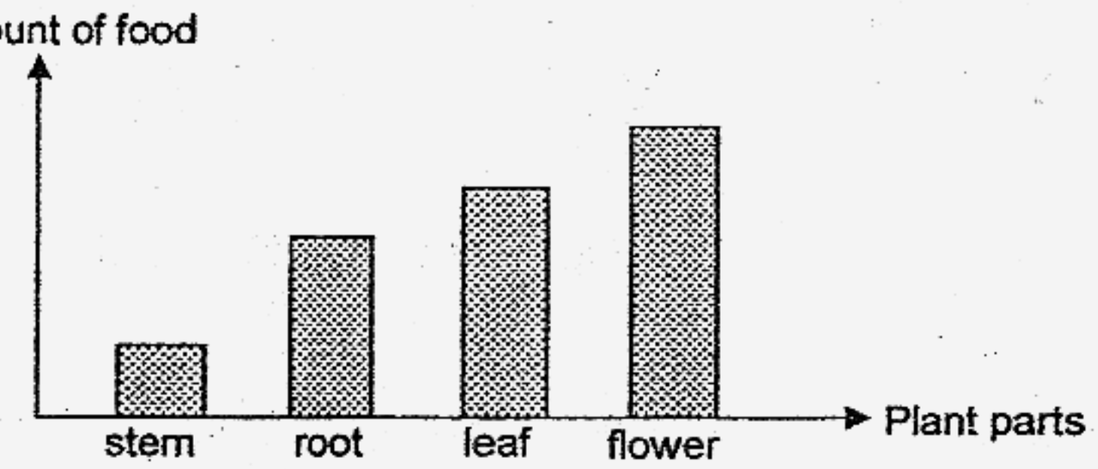
14. Food is made when a rose plant carries out photosynthesis. Which of the graphs below represents the correct amount of food in the different parts of the rose plant on a **sunny** day?

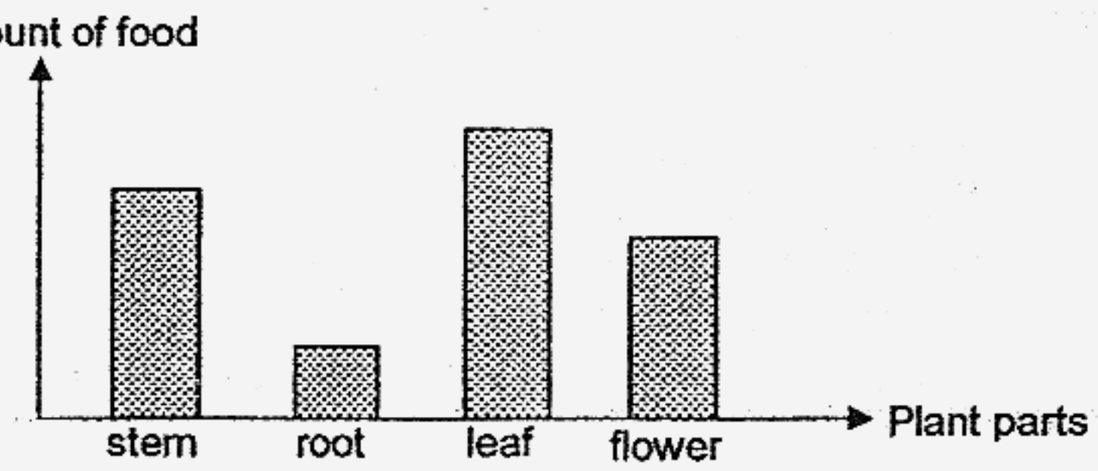
(1)



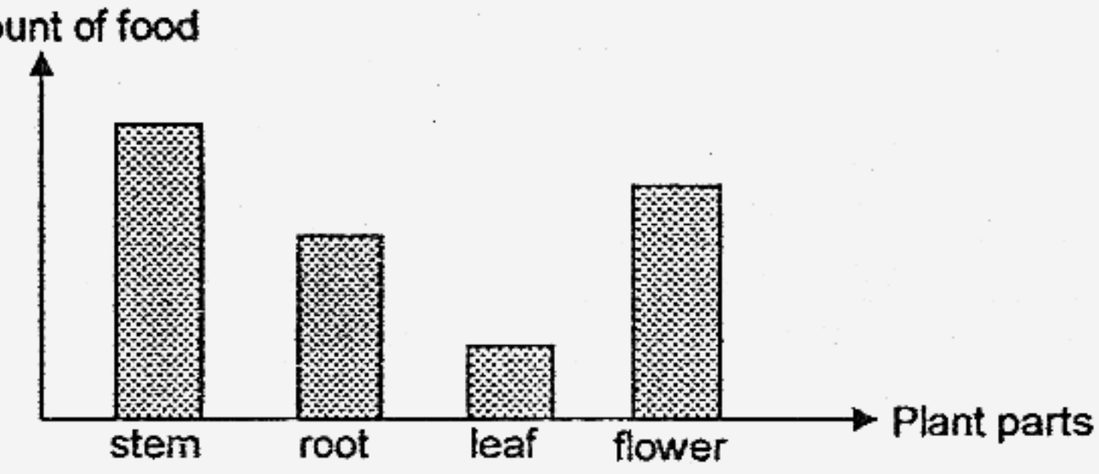
(2)



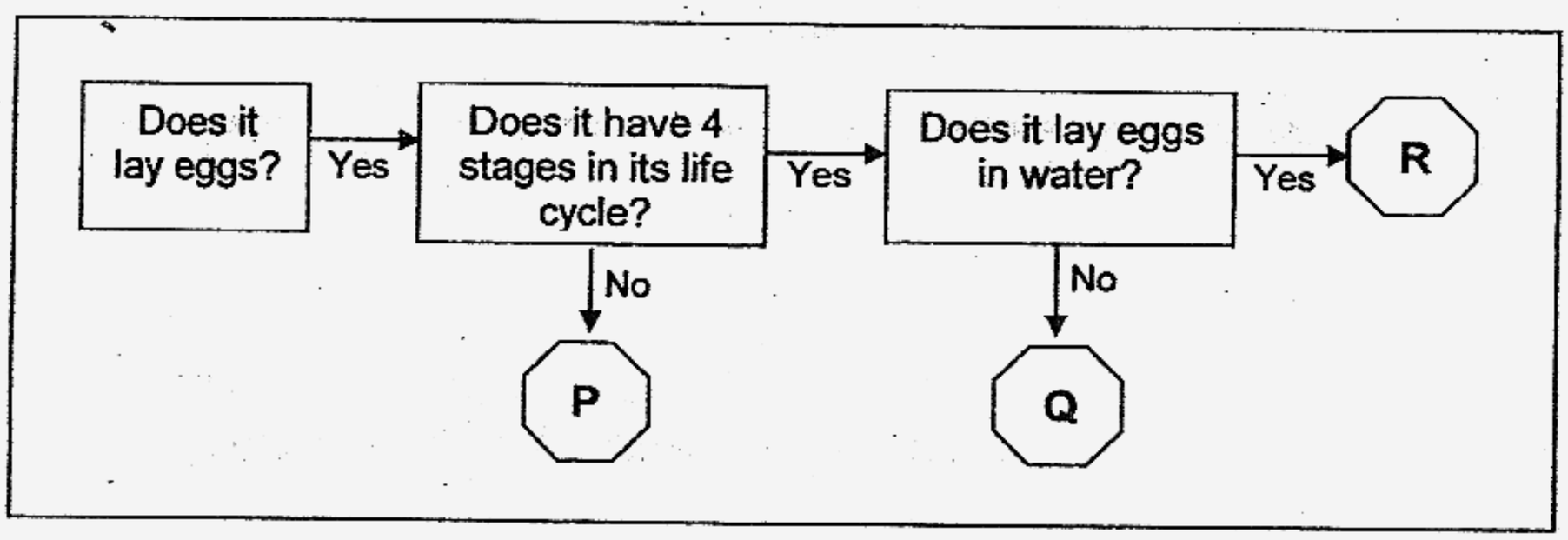
(3)



(4)



Study the flow chart below and answer questions 15 and 16.



Three pupils made some statements based on the flow chart above.

Ahmad : Animal P has 4 stages in its life cycle but Animal Q does not.

Nora : Animals P,Q and R do not give birth to their young live.

Bala : Animal R lays its eggs in the water but Animal Q does not lay its eggs in the water.

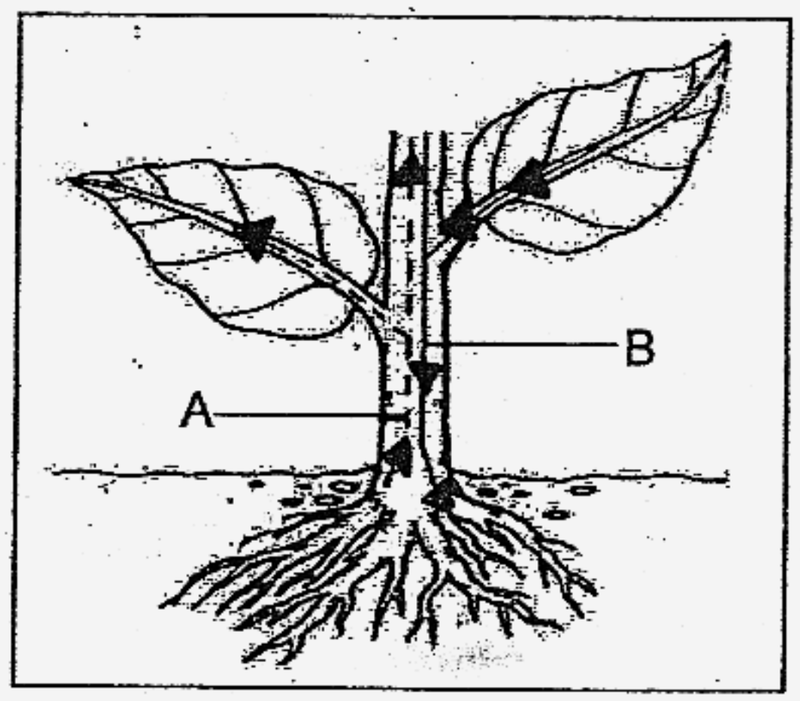
15. Who made the corect statement/s?

(1) Nora and Bala
(2) Bala and Ahmad
(3) Nora and Ahmad
(4) Ahmad, Nora and Bala

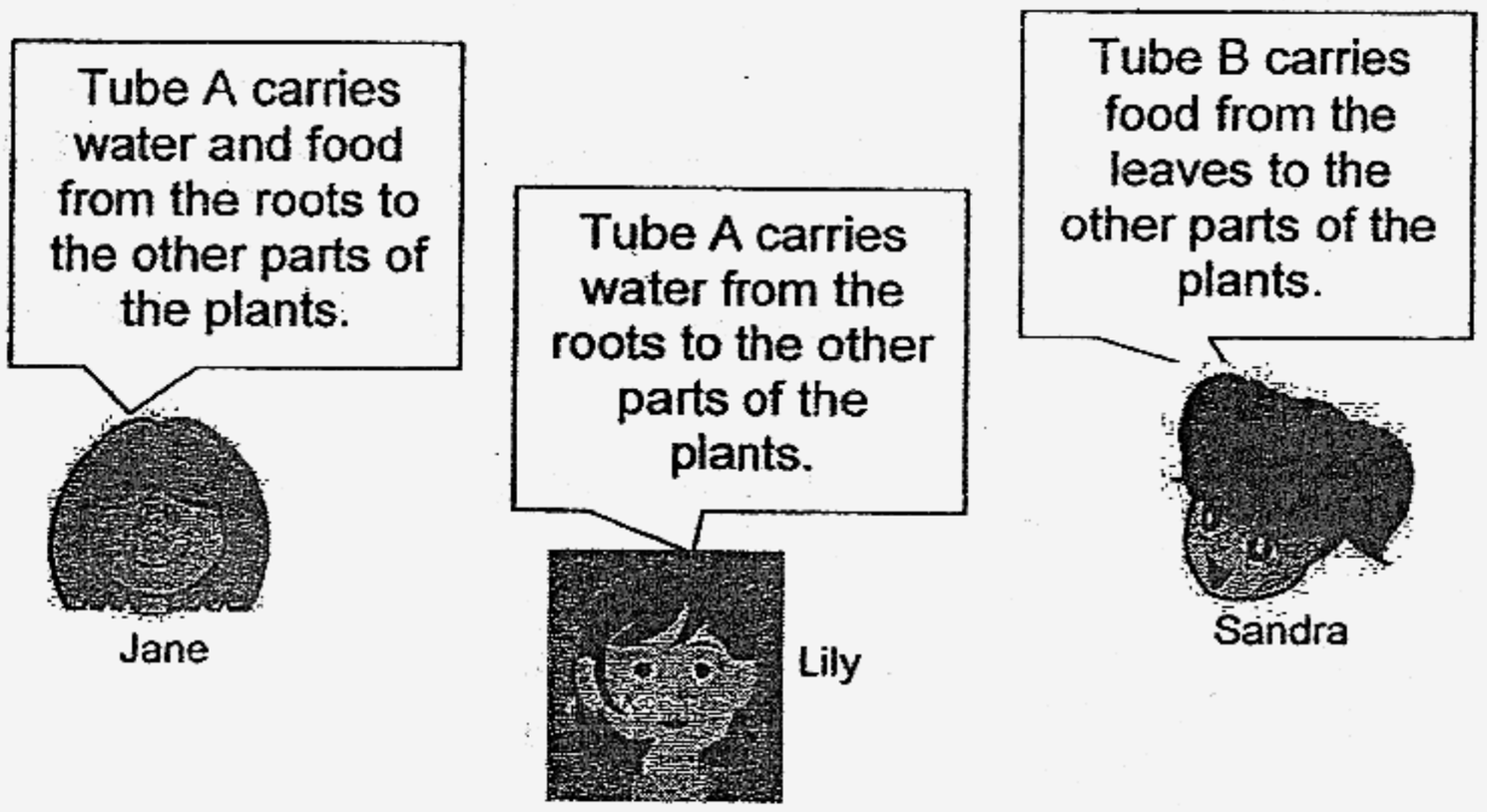
16. Based on the flow chart above, what could Animal P, Q and R be?

	P	Q	R
(1)	Chicken	Butterfly	Mosquito
(2)	Butterfly	Chicken	Mosquito
(3)	Mosquito	Chicken	Butterfly
(4)	Mosquito	Butterfly	Chicken

17. Tiny tubes A and B are found in the stem of a plant. The arrows in the diagram below show the movement of substances in the plant.



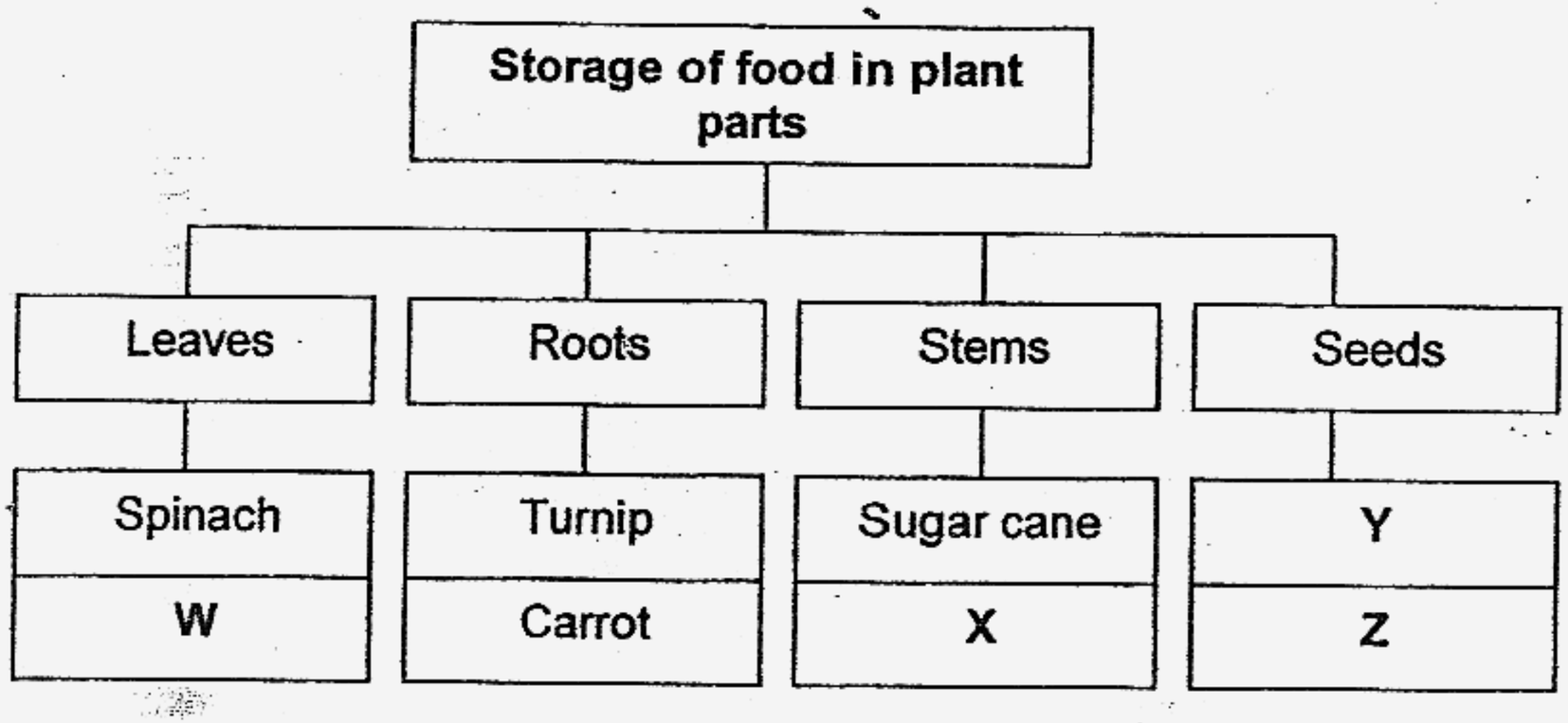
The following statements are made by three pupils.



Who made the correct statement/s?

(1) Jane and Lily
(2) Lily and Sandra
(3) Sandra and Jane
(4) Jane, Lily and Sandra

18. Study the classification chart below.



Which of the information below can be obtained from the chart above?

A : W and X are different because they store food in different parts.

B : Some plants such as the turnip and carrot store food in their roots.

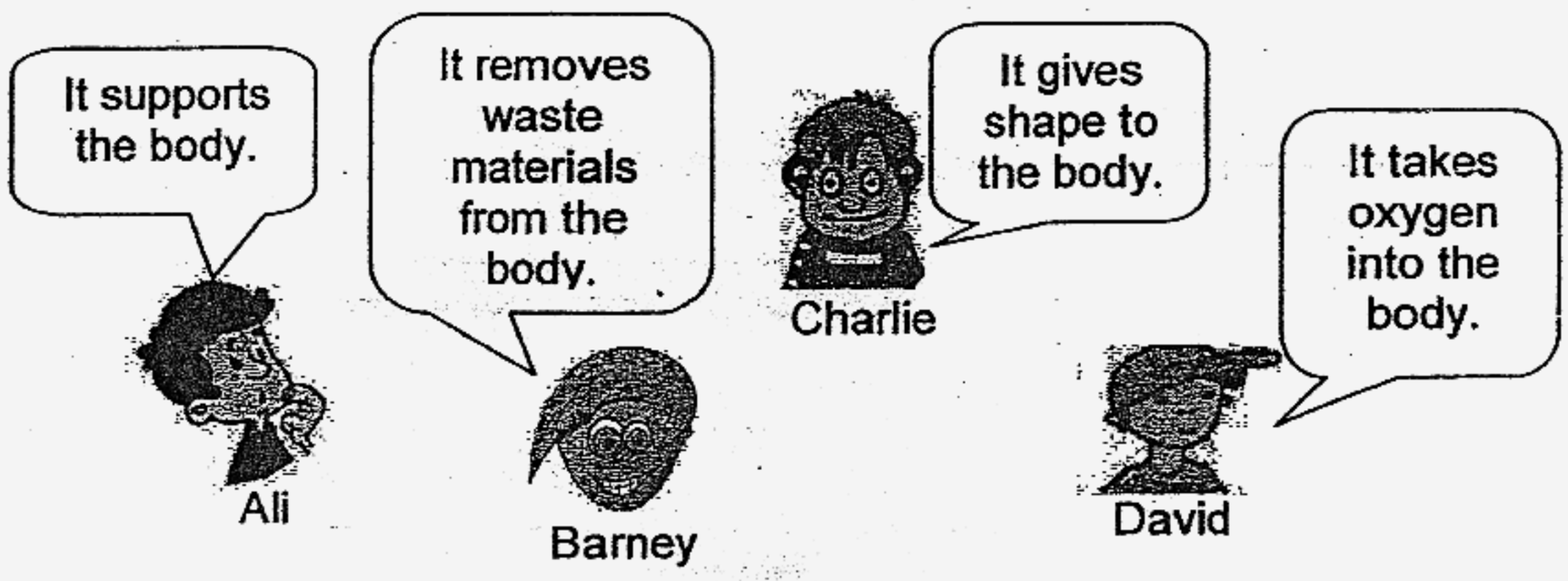
C : Y and Z are similar because both store food in their seeds.

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

19. Which of the following lists is <u>wrong</u>?

	Organ	Is food digested here?
(1)	Mouth	Yes
(2)	Gullet	Yes
(3)	Stomach	Yes
(4)	Small intestine	Yes

20. Four children, Ali, Barney, Charlie and David each made a statement about the human body systems.



Which two children were talking about the same system?

(1) Ali and Barney
(2) Ali and Charlie
(3) Charlie and David
(4) Barney and Charlie

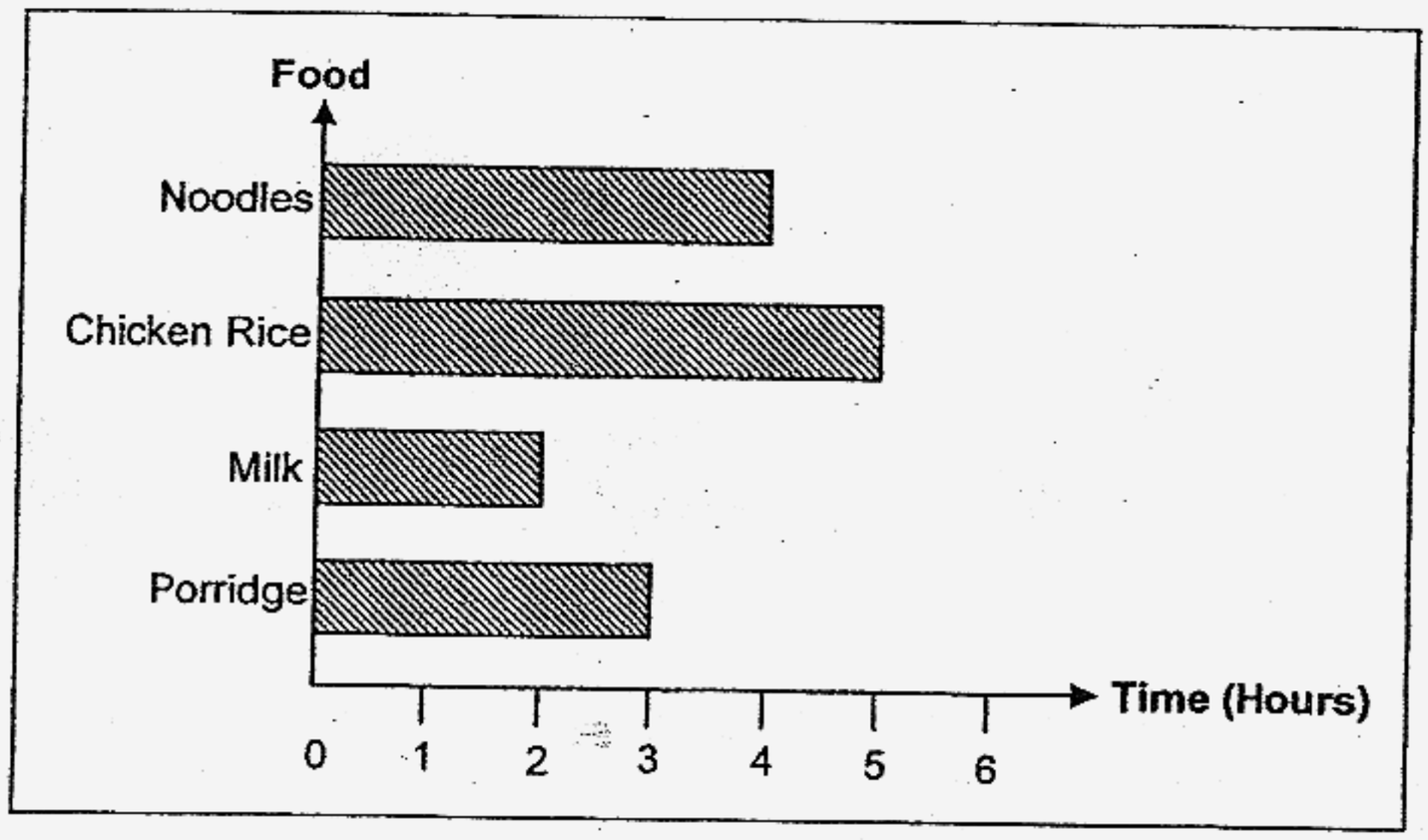
21. The account below was an extract from Nancy's diary.

Date	Problems Encountered
8th October	I had food poisoning.
14th October	I fell down and broke my ankle.
19th October	I had a muscle pull and my shoulders were aching.
25th October	I had a cut on my finger and it bled.

Which system in Nancy's body was affected on 25th October?

(1) Skeletal System
(2) Muscular System
(3) Digestive System
(4) Circulatory System

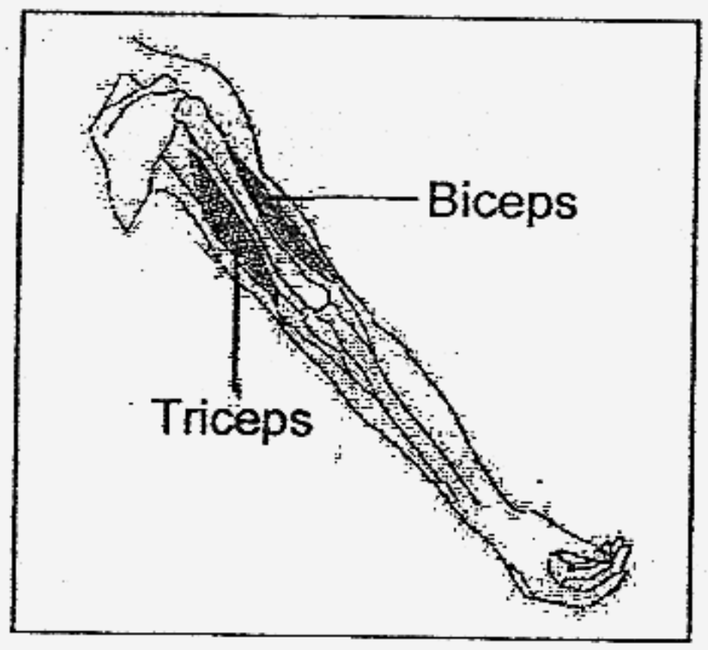
22. The graph below shows the time taken for the body to digest four different types of food.



Which food took the longest time to be digested in the body?

(1) Milk
(2) Noodles
(3) Porridge
(4) Chicken Rice

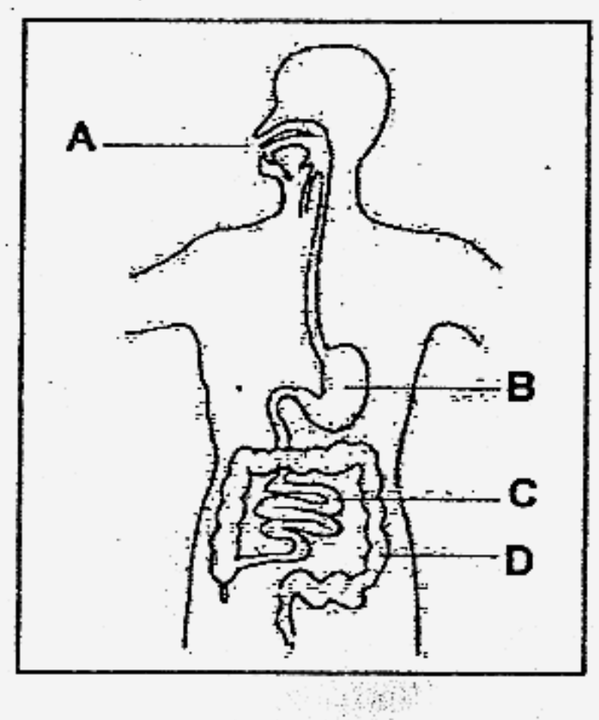
23. The diagram below shows the bones and the muscles in our arm.



What happen to our arm when it is straightened?

(1) Both the bicep and tricep relax.
(2) Both the bicep and tricep contract.
(3) The bicep contracts while the tricep relaxes.
(4) The bicep relaxes while the tricep contracts.

For questions 24 and 25, refer to the diagram below.



24. The diagram above shows a system in the human body.
At which part does digested food enter the blood stream?

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

25. What happens at D?

(1) Food is further digested.
(2) Food that is undigested is stored.
(3) Digested food enters the blood vessels.
(4) Water is removed from the undigested food.

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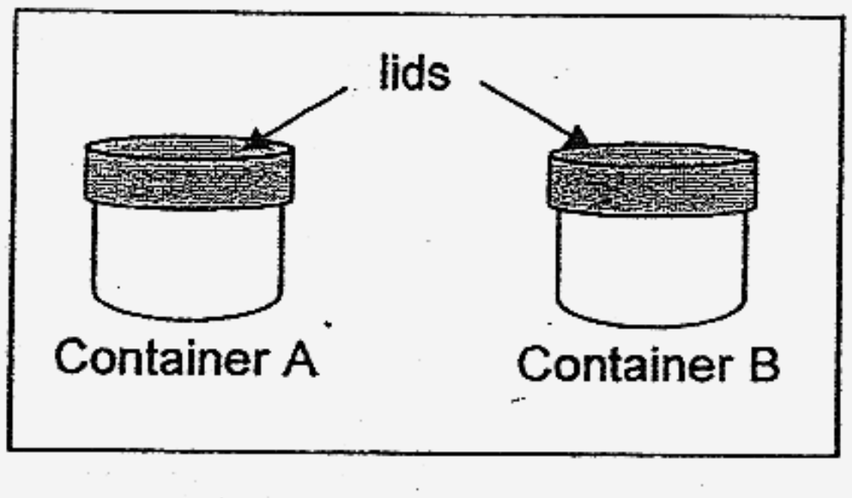
26. Sandra's teacher gave her two similar metal containers, A and B. One container was half-filled with tissue paper and the other was half-filled with pebbles.



Sandra's teacher wanted her to find out which container was filled with pebbles without opening the lids.
Which of the following senses would help her to do so?

(1) Sense of taste
(2) Sense of sight
(3) Sense of smell
(4) Sense of hearing

27. Mrs Chan, a Science teacher, asked the class which sense organs were used to find out whether a certain type of food had turned bad.

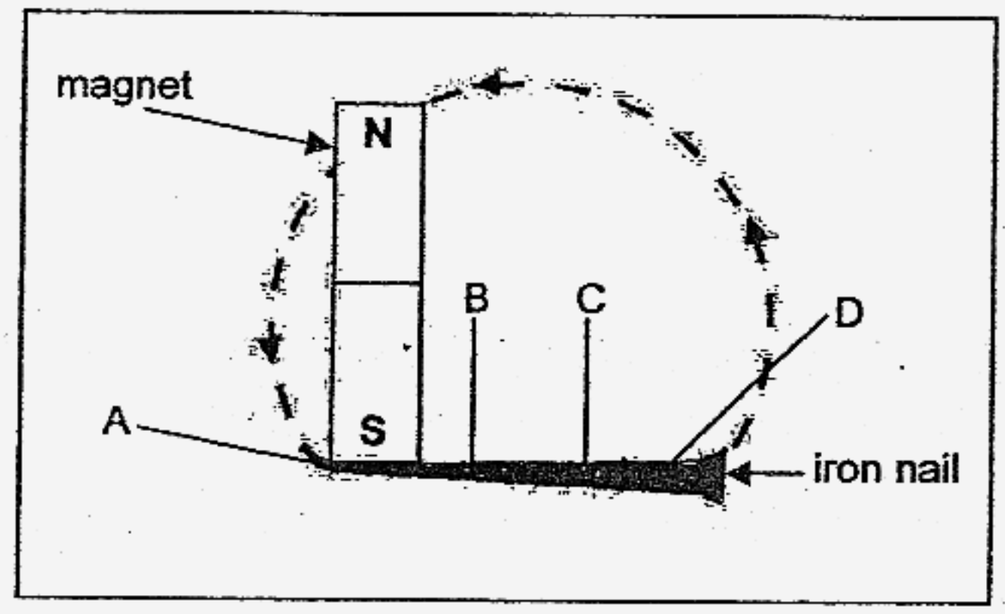
Four girls made the following statements.

Julia : We use our eyes.
Chloe : We use our ears.
Maria : We use our nose.
Kathy : We use our tongue.

Who made the correct statement/s?

(1) Julia and Chloe
(2) Chloe and Kathy
(3) Julia, Maria and Kathy
(4) Julia, Chloe, Maria and Kathy

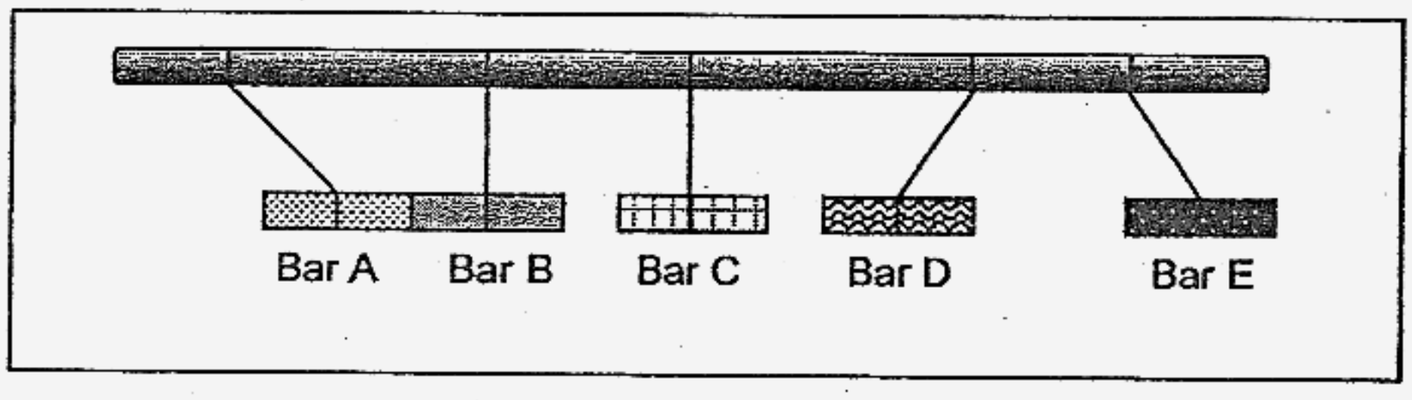
28. An iron nail was magnetised using the method as shown in the diagram below.



Which part of the iron nail would the N-pole be?

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

29. The diagram below shows five metal bars of the same size tied to a pole.



What could Bar D and Bar E **most likely** be?

	Bar D	Bar E
(1)	Magnetic material	Magnet
(2)	Non-magnetic material	Magnetic material
(3)	Magnet	Magnet
(4)	Magnet	Non-magnetic material

30. Danny used a magnet to stroke each of the items below several times in one direction.

A : iron needle
B : copper nail
C : plastic knife
D : wooden chopstick

Then he brought the items near a box of paper clips. He found that some of the items could not pick up any paper clips.

Which of the following statements explained his observation above **correctly**?

(1) Only items that were sharp could be magnetised.
(2) All items that were made of metal could be magnetised.
(3) Some items that were made of metal could be magnetised.
(4) Only items that were used as cutlery could not be magnetised.

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METHODIST GIRLS' SCHOOL (PRIMARY)
SEMESTRAL ASSESSMENT 2 – 2007
PRIMARY 3
SCIENCE

BOOKLET B

Name : _____ ( )

Class : Primary 3. _____

Date : 8th October 2007

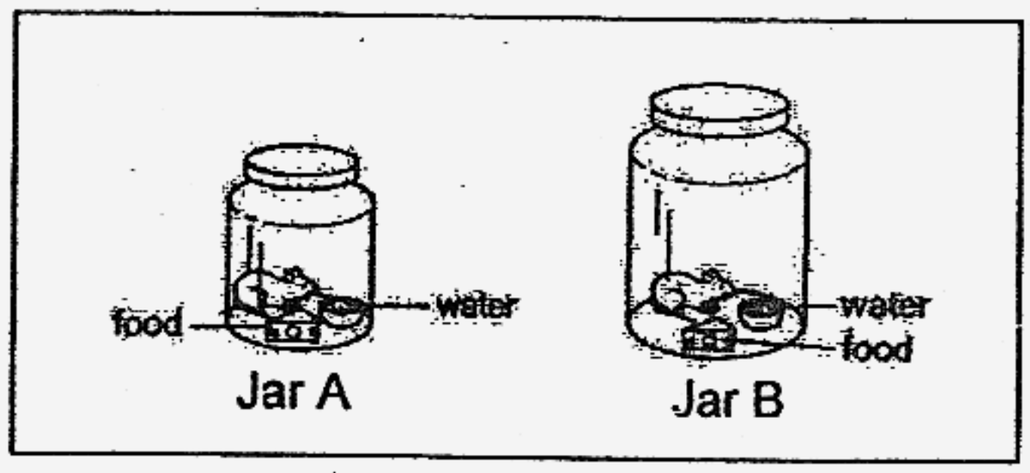
Part	Maximum Marks	Marks Obtained
A	60	
B	40	
Total Marks	100	

Parent's Signature : _____

Section B : (40 marks)

Write the answers in the blanks provided.

31. Shawn kept a rat in each of the **airtight** jars as shown in the diagram below. He gave both of them the same amount of water and food.



a) He then made a prediction that the rat in Jar B would survive for a longer period of time.
Do you think he made the correct prediction? (1m)

_____

b) Give a reason for your answer in a). (1m)

_____

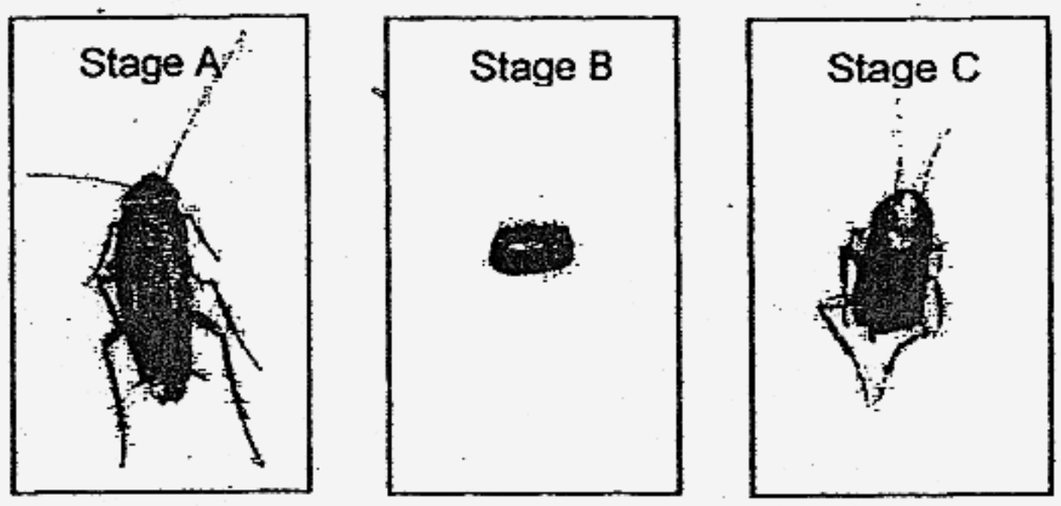
_____

32. Linda wants to carry out an experiment to find out if bread mould grows faster in a dark box or in a refrigerator.

In the table below, tick (√) the variables that she must keep the same or the variables that must be different in order to have a fair test. (2m)

Variables	Keep the same	Different
Size of bread		
Type of bread		
Place to put the bread		
Length of time to observe the bread		

33. The diagrams below show the stages in the life cycle of a cockroach.



a) Name the **stages** in the boxes below.
(The first one is done for you.) (1m)

Stage A : Adult

Stage B : _____

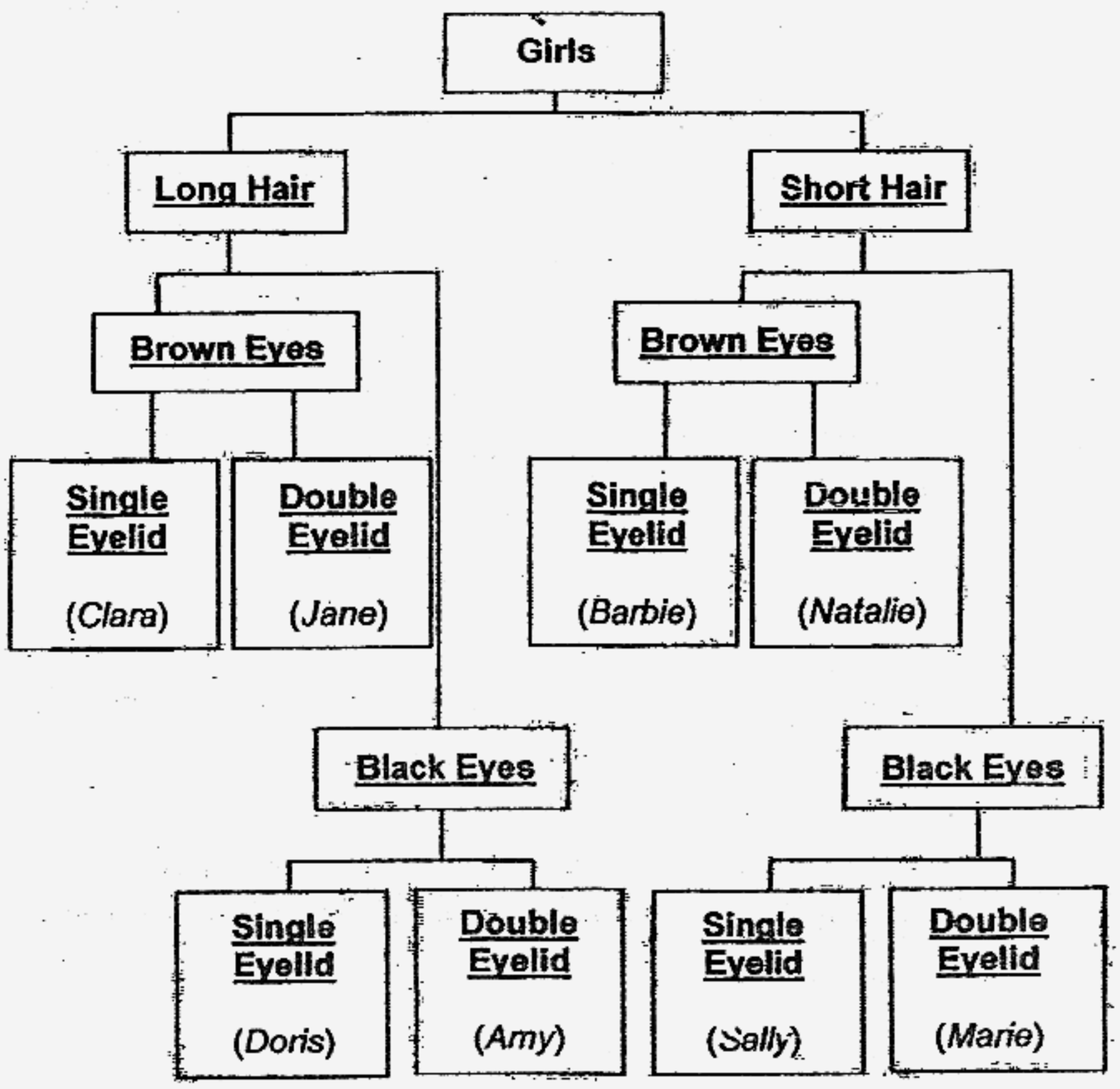
Stage C : _____

b) **Study the diagram** and state one difference between Stage A and Stage C. (1m)

_____

_____

34. Study the description of some girls in the flow chart below.



a) Which 2 headings, (in bold and underlined) are <u>not</u> characteristics that are inherited from the girls' parents? (1m)

_____

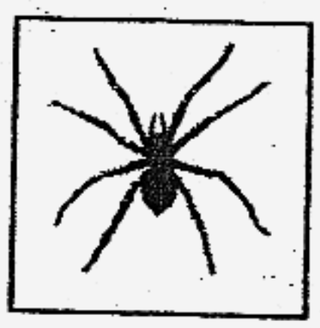
b) Give one similarity between Clara and Natalie. (1m)

_____

_____

2

35. The diagram below shows an animal.



Sheryl wants to find out whether the animal is an insect. She plans to do the following:

Step A	:	Measure its length
Step B	:	Check to see if it has wings
Step C	:	Check to see if it has feelers
Step D	:	Count to see if it has six legs
Step E	:	Examine it to see if it has three body parts

a) Which of the steps above are useful in determining if the animal is an insect? (1m)

_____

b) After examining the animal, Sheryl concluded that the animal above is **not** an insect. Do you agree with her? (1m)

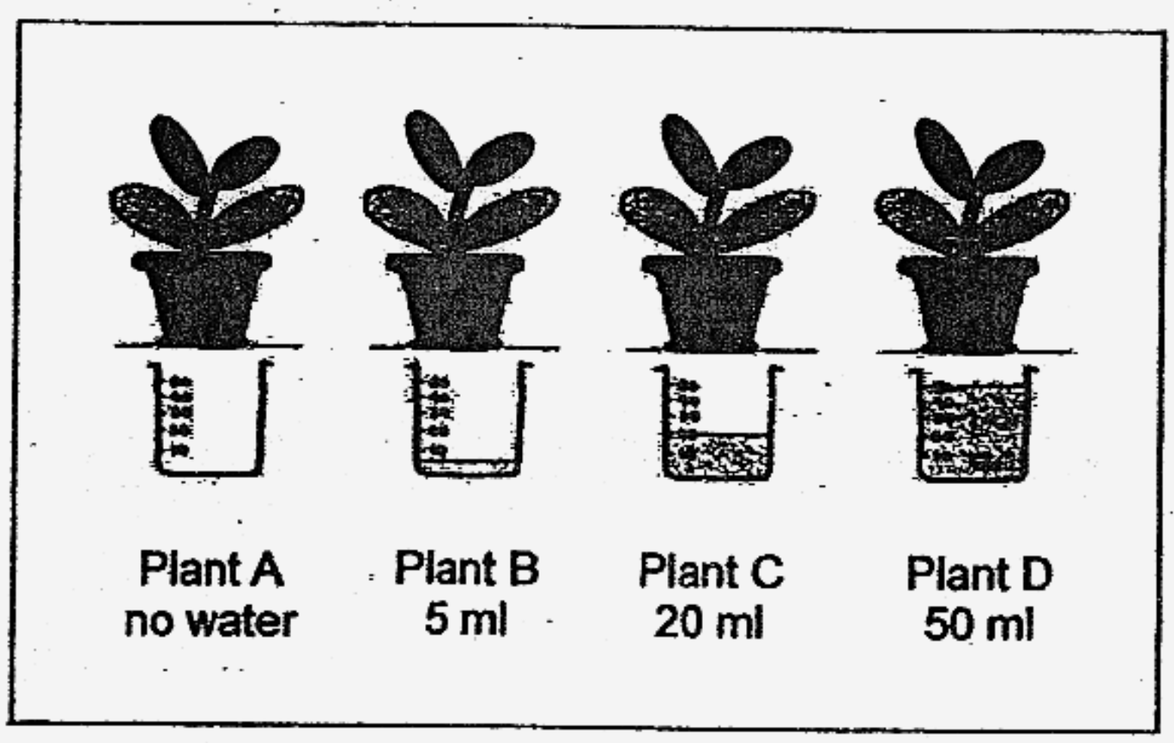
_____

c) Give a reason for your answer in b). (1m)

_____

_____

36. Susan carried out an experiment to find out if plants needed water to grow. She had 4 similar potted plants in the same type of soil. She added different amount of water to Plant B, C and D but none to Plant A.



The table below shows the observations she recorded.

Plant	Height of plants (cm)			
	At start	Week 1	Week 2	Week 3
A	9 cm	dead	dead	dead
B	9 cm	10 cm	?	12 cm
C	9 cm	dead	dead	dead
D	9 cm	9 cm	dead	dead

a) Susan had forgotten to write down the height for Plant B for Week 2. What do you think the height was? (1m)

_____

b) Is the experiment above a fair test? (1m)

_____

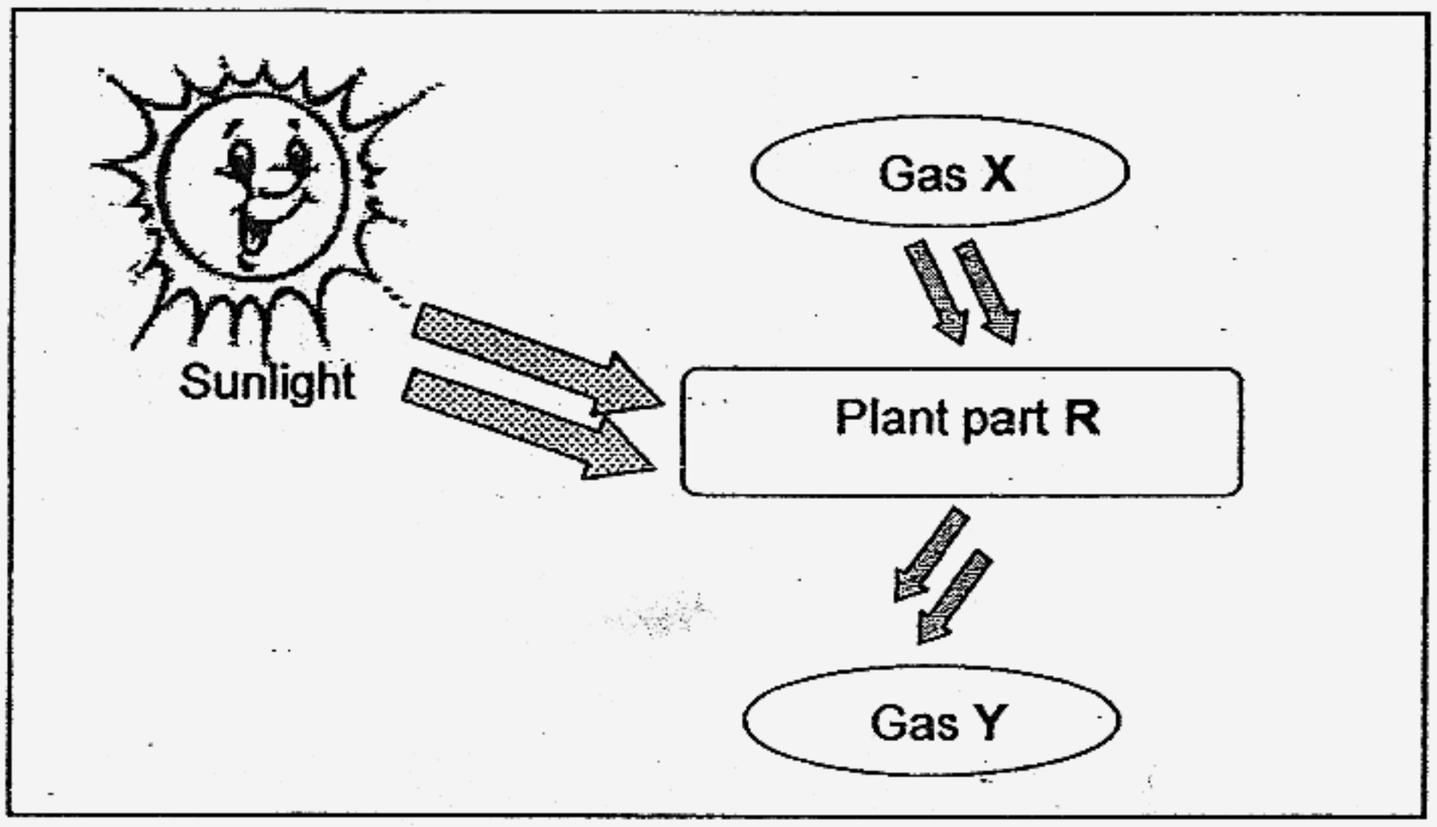
c) Give a reason for your answer in b). (1m)

_____

_____

3

37. The diagram below shows a certain part of a plant going through a process. During this process, Gas X is used up while Gas Y is released into the air.



a) What could this process be? (1m)

_____

b) What could Gas **X** and **Y** be? (1m)

Gas **X** : _____

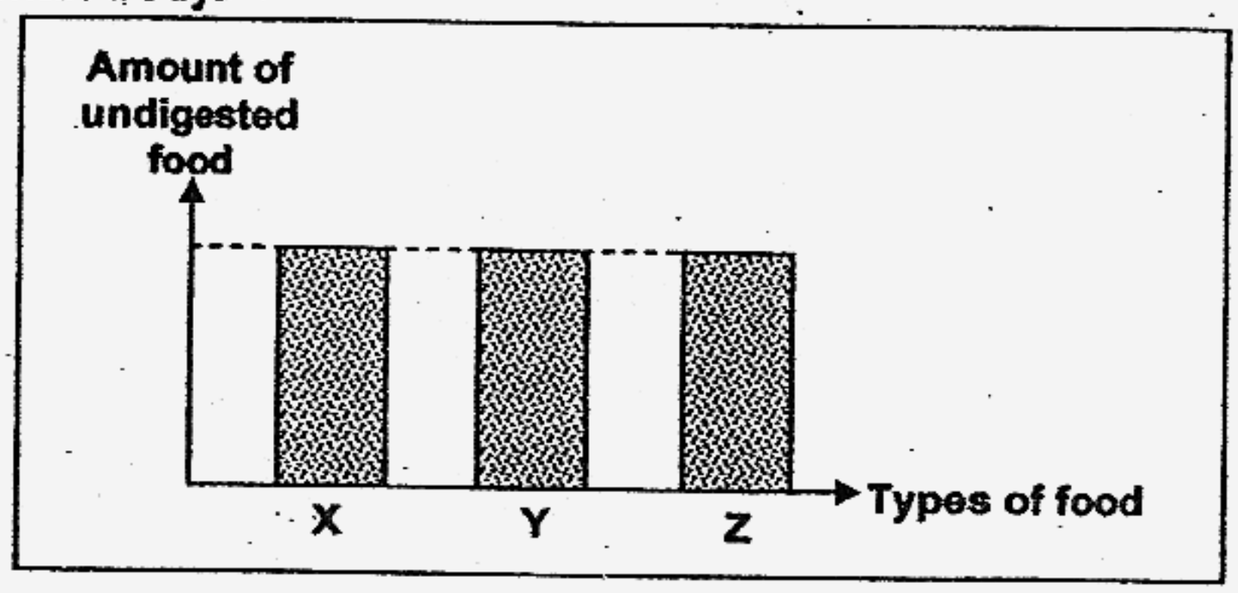
Gas **Y** : _____

c) In order to carry out this process, a green substance must be present in this plant part **R**.
What is this green substance called? (1m)

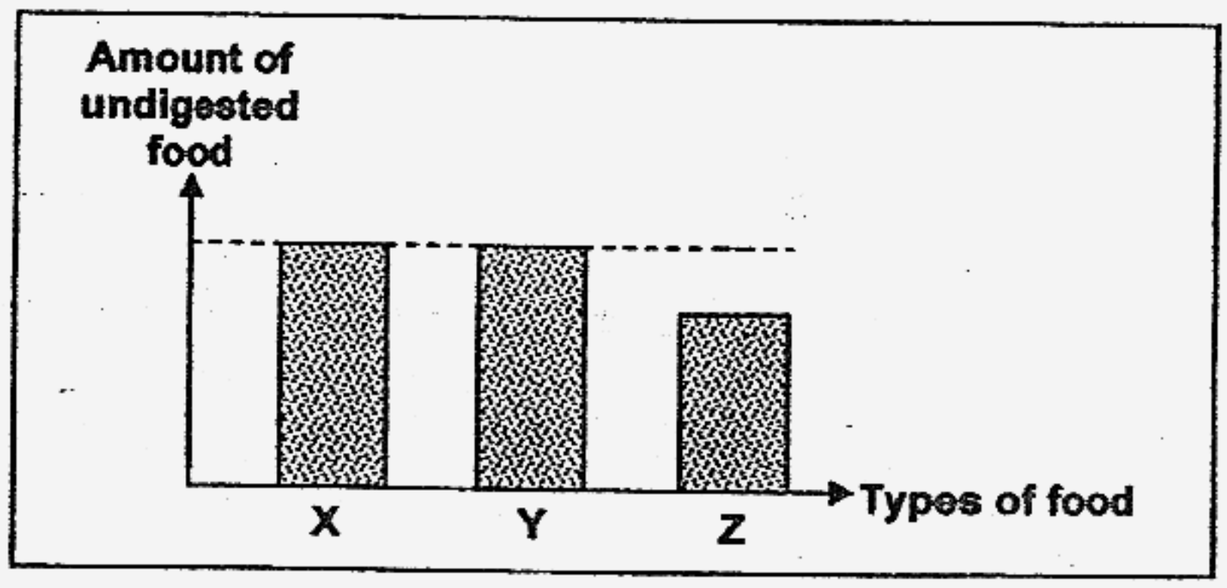
_____

38. The graphs below show the amount of food, X, Y and Z which are being digested in a human body.

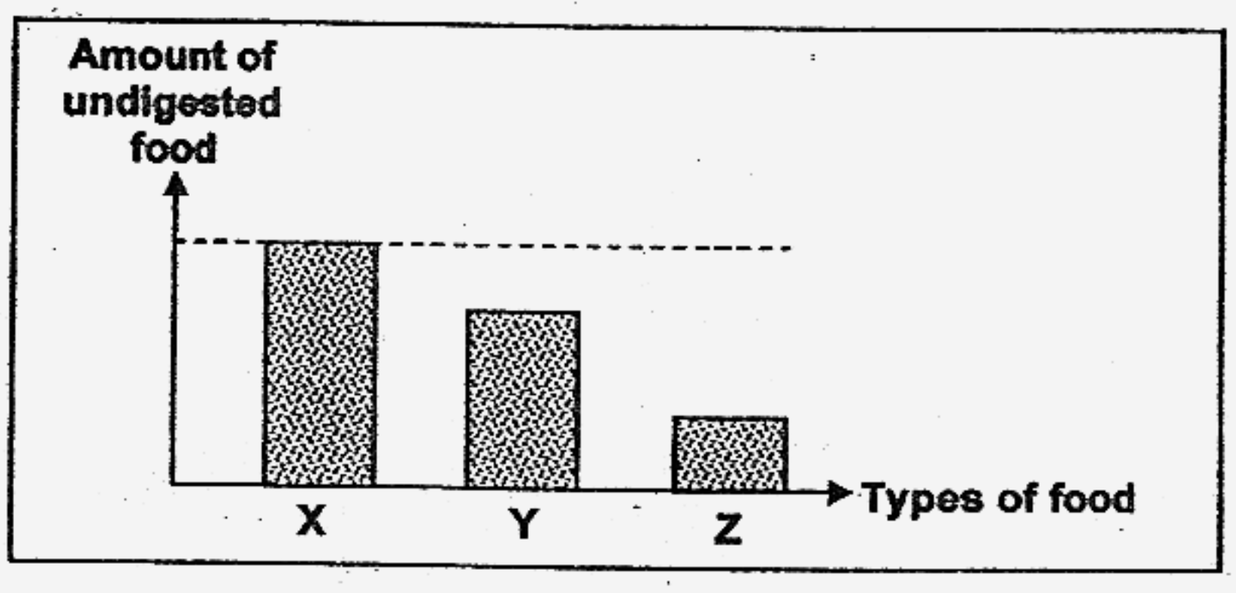
At the start:



In the mouth:



In the stomach:



a) Which type/s of food X, Y or Z only start/s being digested in the stomach? (1m)

_____

b) In which system in the body does the above process take place? (1m)

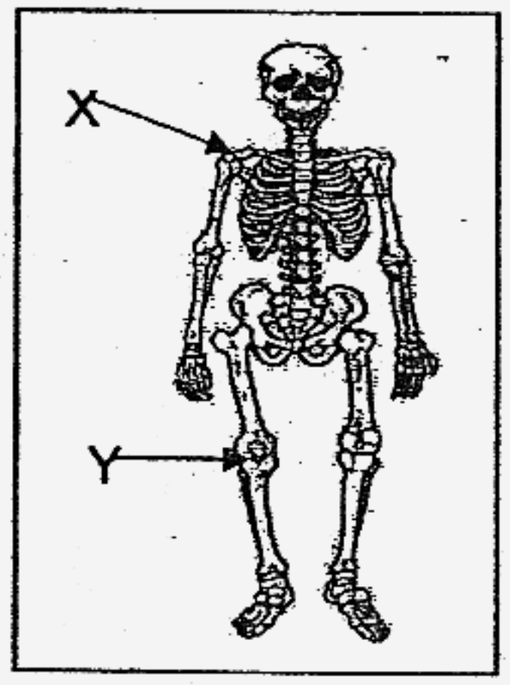
_____

c) What is the function of the system in your answer in b)? (1m)

_____

3

39. Look at the diagram below.



a) The parts marked X and Y are places where bones meet and are connected to one another. What are they called? (1m)

_____

b) Why are the part marked X and Y important to us? (1m)

_____

_____

40. The diagram below shows a human skull.

a) Name 2 organs that are found in the skull. (1m)

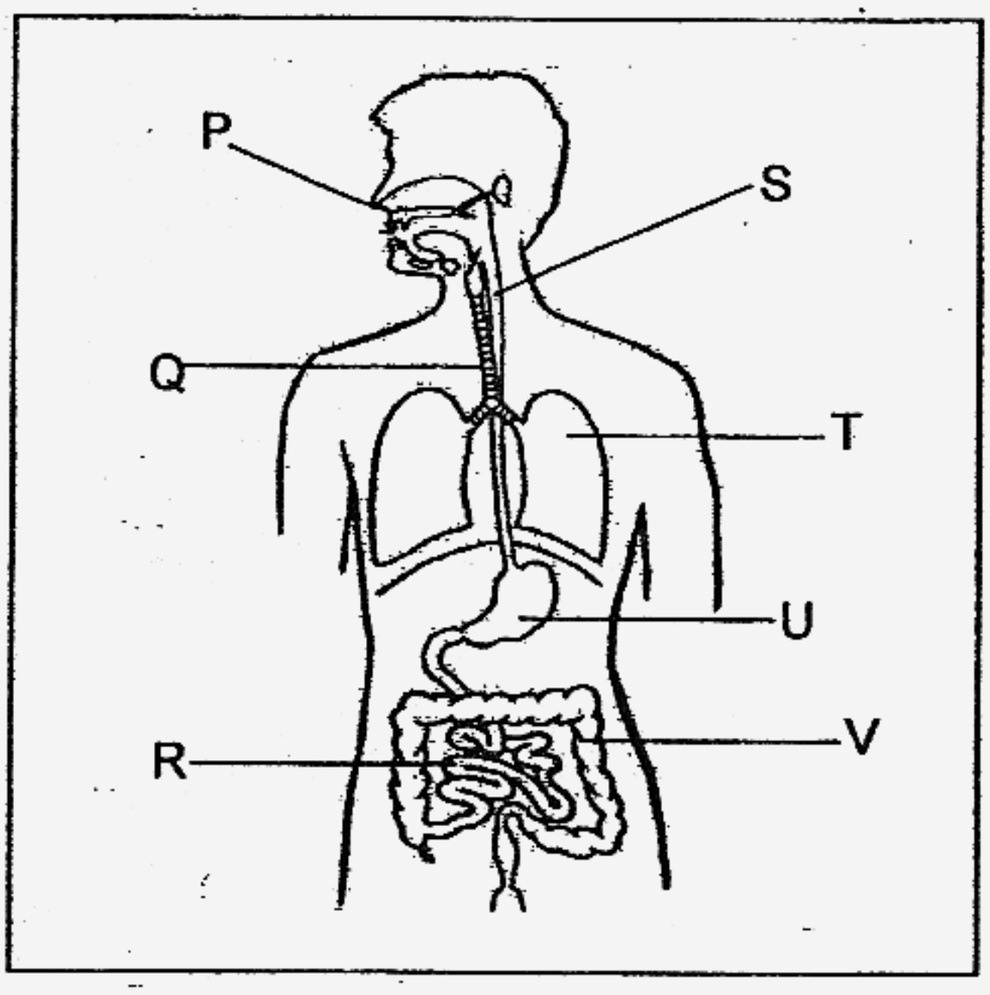
_____ and _____

b) Why is the skull important to the organs that you have mentioned in a)? (1m)

_____

4

41. Study the diagram below.



a) Which three organs, labelled P to V above, belong to the respiratory system? (2m)

i) _____

ii) _____

iii) _____

b) Why is the respiratory system important to us? (1m)

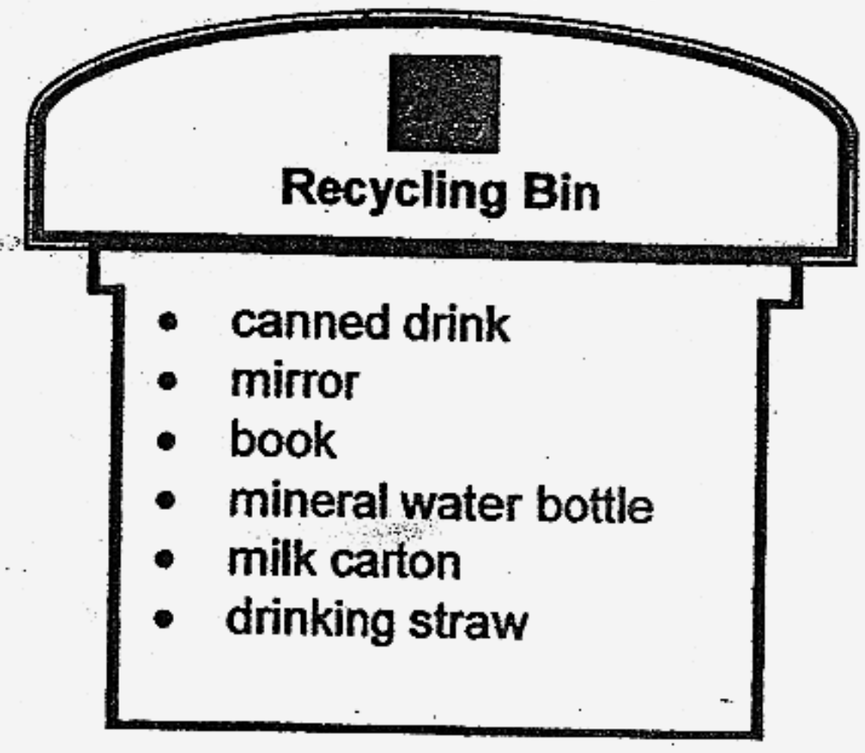
_____

_____

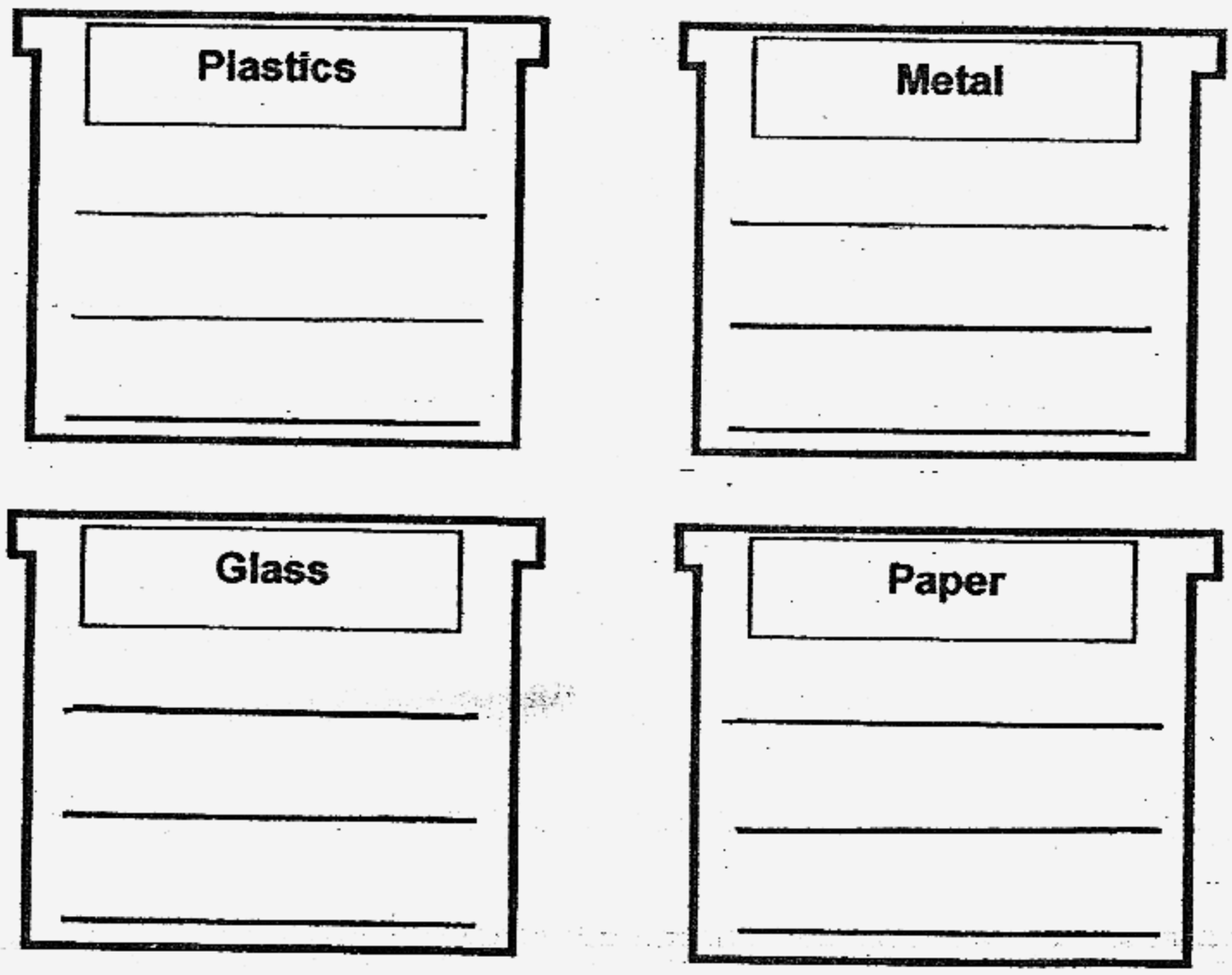
3

42. In a Science lesson, Wei Mun learnt that before waste could be recycled, the waste must first be sorted into groups according to the materials they are made of.

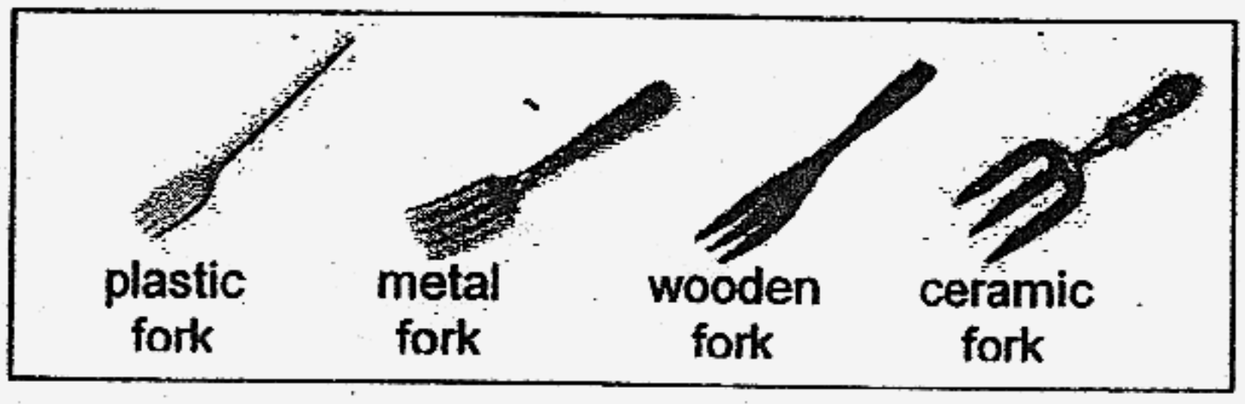
Below is a list of things that Wei Mun found in a recyling bin.



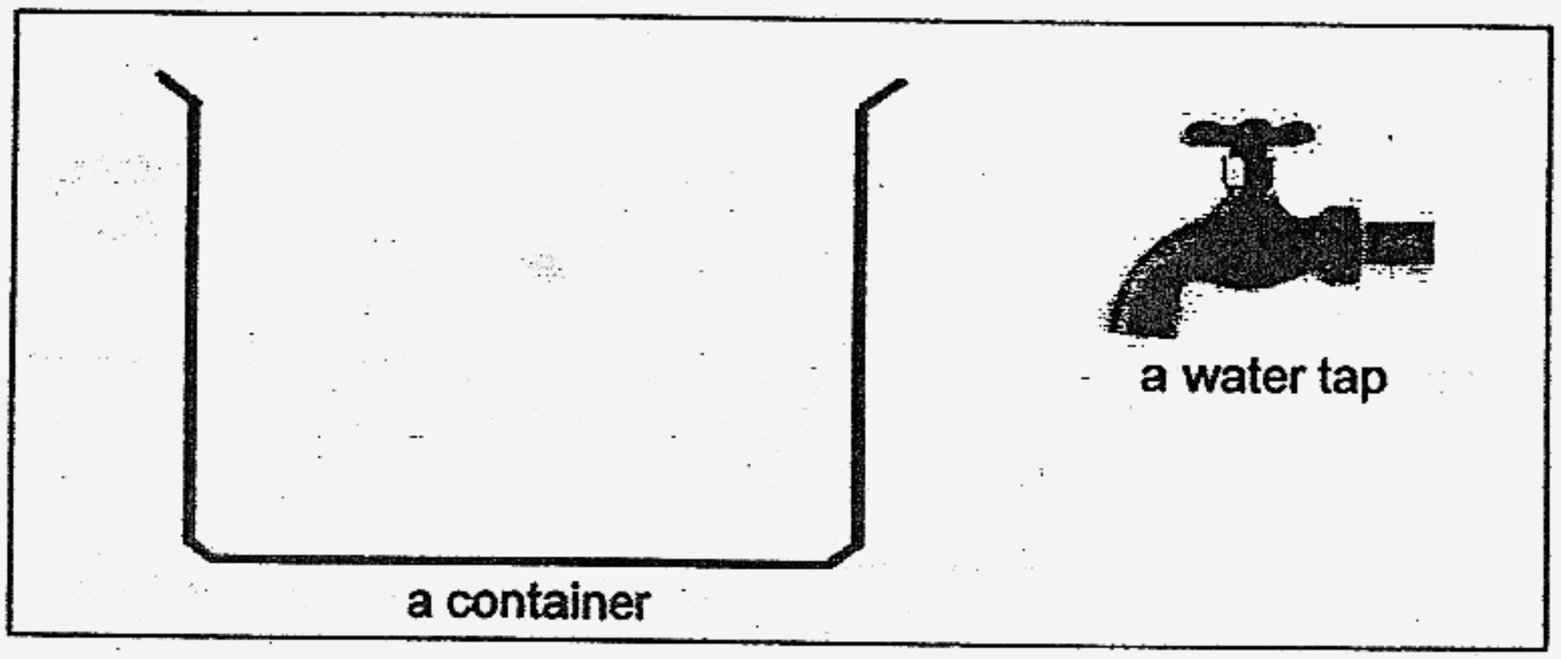
Based on the materials they are made of, put the items listed above in the correct groups below. (3m)



43. Grace had some forks made of different materials and of different sizes.



She wanted to find out if the different forks float or sink in water. She was given the following items:



a) List two steps she should take to find out which fork would sink or float. (2m)

Step 1: _____

_____

Step 2: _____

_____

b) Which two forks would definitely sink? (1m)

_____

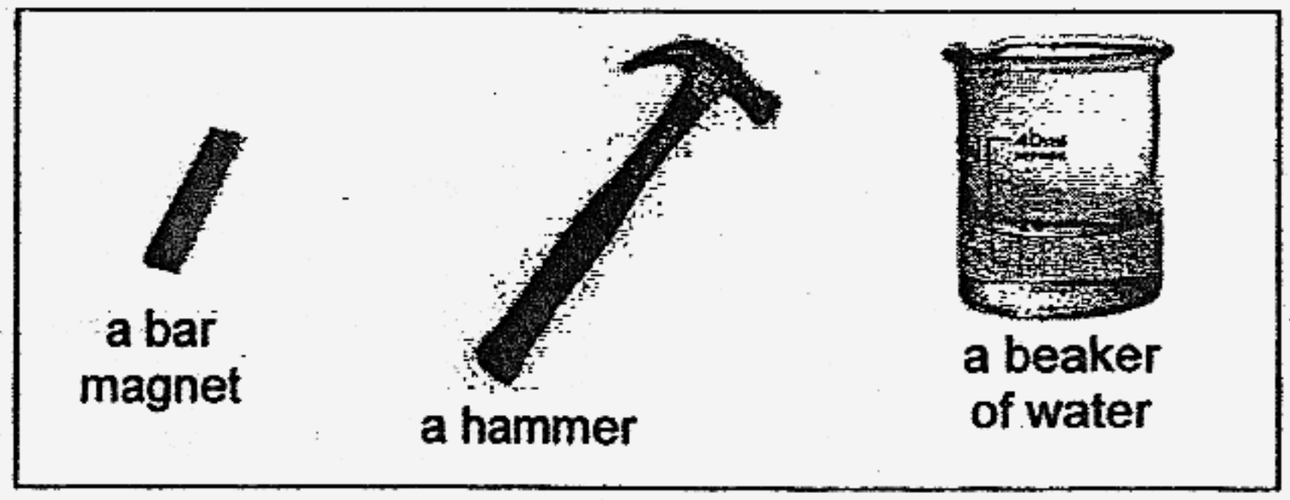
c) Grace's teacher said that her test was not fair. What must she do to ensure that it was a fair test? (1m)

_____

_____

4

44. Susan and her friends learnt that a magnet could lose its magnetism in various ways.
They were given the items below.



a) By referring to the items above, what could they do to make the bar magnet lose its magnetism? (1m)

_____

_____

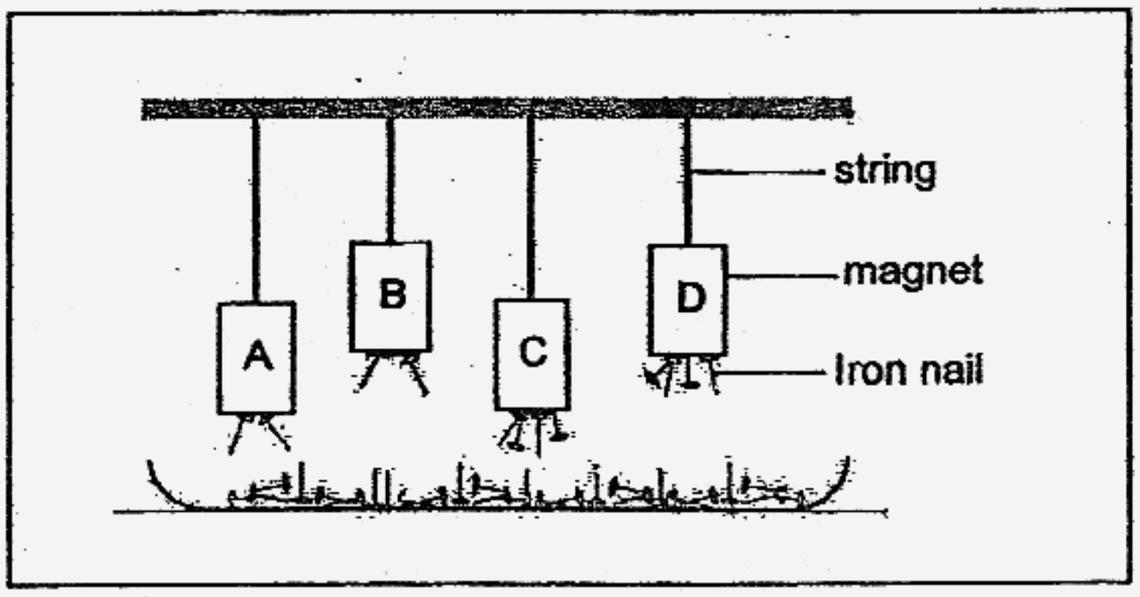
b) Then, they listed down other ways in which a magnet could lose its magnetism as shown in the table below.

Put a (√) for a true statement and a (X) for a false statement in the boxes below. (2m)

	Ways in which a magnet could lose its magnetism	√ or X
i)	Drop the magnet several times on the floor.	
ii)	Wrap the magnet with a piece of handkerchief.	
iii)	Heat the magnet over a candle flame for a few minutes.	
iv)	Place the magnet in a cool and dry place for a few minutes.	

3

45. Fannie hung 4 magnets of different strength, A, B, C and D above a tray of iron nails. The magnets were hung at different distances above the tray. The diagram below shows the number of iron nails that were attracted by each magnet.



a) Which magnet has the strongest magnetic strength? (1m)

_____

b) Which magnet has the weakest magnetic strength? (1m)

_____

c) Her teacher said that this was not a fair test to find out the magnetic strength of a magnet.
What could Fannie do to make the test above a fair one? (1m)

_____

_____

End of Paper
Have you checked through your work?

3

MGS Primary School

Primary 3 Science SA2 Exams (2007)

Answer Keys

SECTION A : (60 MARKS)

Qn no.	Ans
1	**1**
2	**4**
3	**3**
4	**1**
5	**1**
6	**4**
7	**4**
8	**2**
9	**1**
10	**3**

Qn no.	Ans
11	**1**
12	**4**
13	**4**
14	**3**
15	**1**
16	**1**
17	**2**
18	**4**
19	**2**
20	**2**

Qn no.	Ans
21	**4**
22	**4**
23	**4**
24	**3**
25	**4**
26	**4**
27	**3**
28	**4**
29	**3**
30	**3**

SECTION B (40 MARKS)

31a. **Yes.**
31b. **Because there is a bigger space in Jar B and there should have more air.**

32. √
√
√
√

33a. **A : Adult B : Egg C : Nymph**
33b. **The nymph which is stage C has no wings but the adult which is a stage A has wings.**

34a. **Long hair and short hair.**
34b. **The both have brown eyes.**

35a. **Step C, D and E are useful in determining if the animal is an insect.**
35b. **Yes.**
35c. **Because it has four pairs of legs and it has two body parts.**

36a. **11 cm**
36b. **Yes**
36c. **Because she planted four similar plants, the pots were the same size and the soil was the same.**

37a. **Photosynthesis**
37b. **X: Carbon dioxide Y: Oxygen**
37c. **Chlorophyll**

38a. Y only starts being digested in the stomach.
38b. Digestive system.
38c. To break down the food into similar substances for the body.

39a. Joints.
39b. They help us to move.

40a. brain and eyes.
40b. It helps to protect them organs.

41a. (i) Q
(ii) T
(iii) P
41b. It exchanges gases with the air that we breathe.

42a. Plastic: drinking straw, mineral water bottle
Metal: canned drink
Glass: mirror
Paper: milk carton, book

43a. (1) She should turn on the tap and let the water flow into the container.
(2) Then, she should put the fork into the container.
43b. The metal fork and the ceramic fork.
43c. She should make sure that the forks are made of the same size.

44a. Use the hammer to hit the magnet several time.
44b. (i) √
(ii) ×
(iii) √
(iv) ×

45a. Magnet D
45b. magnet A
45c. Fannie should make the length of the strings all the same.