CATHOLIC HIGH SCHOOL
PRIMARY 3
SEMESTRAL ASSESSMENT 2, 2011

SCIENCE

Name :_____( )

Class : Primary 3_____

Date : 28 October 2011

BOOKLET A

30 Questions
60 Marks

Total Time for Booklets A & B : 1 hour 30 minutes

Instructions to Candidates

Do not open this booklet until you are told to do so.
Follow all instructions carefully.
Answer all questions.

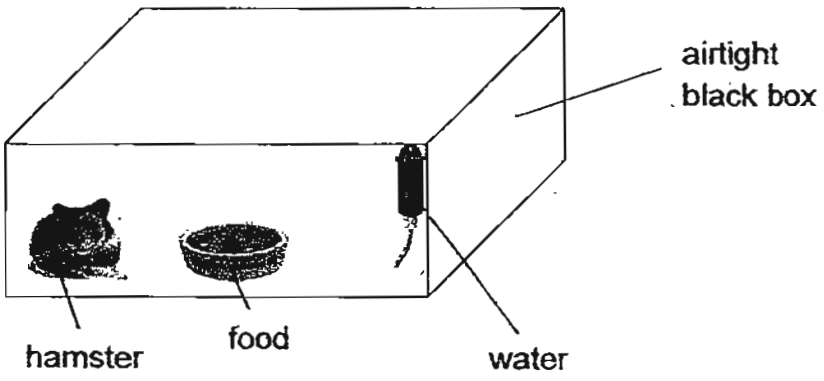
Section A : Multiple Choice Questions (60 marks)

For each question from 1 to 30, four options are given. One of them is the most suitable answer. Make your choice (1, 2, 3 or 4) on the Optical Answer Sheet.

1. Which one of the following is a living thing?

   (1) cloud
   (2) candle
   (3) volcano
   (4) bread mould

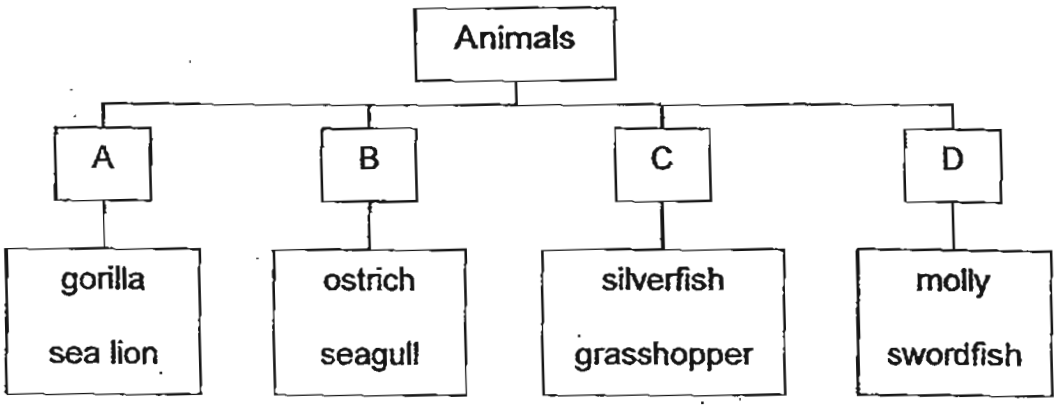
2. A hamster was kept in an airtight box as shown below for twenty-four hours. Food and water are put into the airtight box.



What would happen to the hamster after twenty-four hours?

(1) The hamster would survive as it was given food.
(2) The hamster would survive as it was given water.
(3) The hamster would die as it was not given enough air.
(4) The hamster would die as it could not receive sunlight.

3. Look at the classification table below.



In which group would you place the platypus?

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

4. Abigail found Animal P near a pond in her school's eco-garden. She observed that it has the following characteristics:

- a pair of wings
- a pair of feelers
- has three body parts
- lays eggs in the water

Animal P is most likely to be a _____ .

(1) flea
(2) tick
(3) silverfish
(4) dragonfly

5. Flowering plants, ferns and fungi have some similarities and differences. Study their characteristics in the tables below.

Table A	Able to make food	Able to produce spores
Fungi	Yes	No
Ferns	Yes	Yes
Flowering plants	Yes	No

Table B	Able to make food	Able to produce spores
Fungi	No	Yes
Ferns	Yes	No
Flowering plants	Yes	No

Table C	Able to make food	Able to produce spores
Fungi	No	Yes
Ferns	Yes	Yes
Flowering plants	Yes	No

Table D	Able to make food	Able to produce spores
Fungi	No	Yes
Ferns	No	Yes
Flowering plants	Yes	Yes

Which table above gives you the correct information about fungi, ferns and flowering plants?

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

6. Look at the plant shown below.

Which of the following correctly represents Part P and Q?

	Part P	Part Q
(1)	leaf	root
(2)	leaf	stem
(3)	stem	root
(4)	stem	leaf

7. Look at the leaf shown below carefully.

Identify the parts of a leaf in the table below.

	A	B	C	D
(1)	vein	leaf stalk	edge	leaf blade
(2)	vein	edge	leaf stalk	leaf blade
(3)	edge	vein	leaf stalk	leaf blade
(4)	edge	leaf stalk	vein	leaf blade

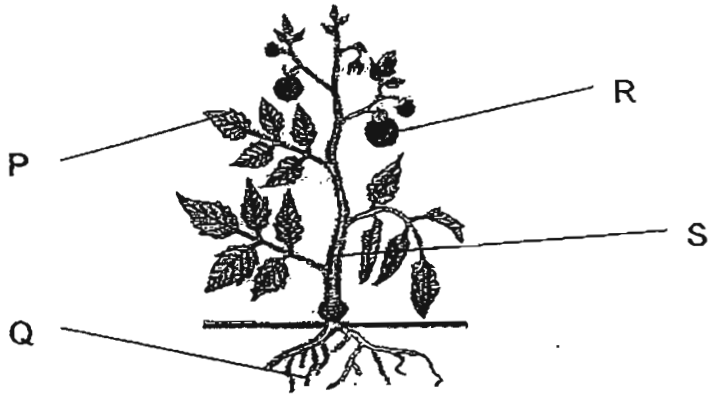
8. Look at the plant parts shown below.

turnip carrot radish sweet potato

Which plant part is shown in the pictures above?

(1) leaf
(2) fruit
(3) root
(4) stem

9. The picture below shows a tomato plant. Different parts of the plant are labelled P, Q, R and S.



The tomato plant will not be able to make food if part _____ is completely removed.

(1) P
(2) Q
(3) R
(4) S

10. Which of the following statements are not the functions of the roots?

A Holds the plant firmly to the ground

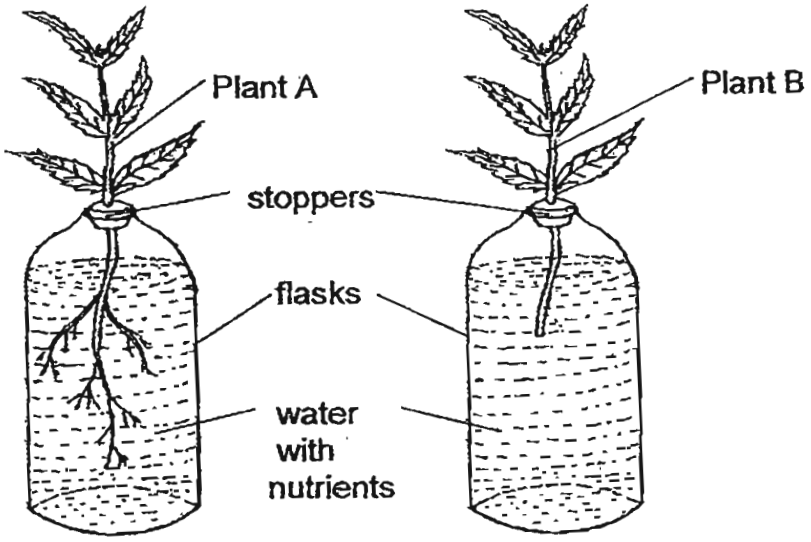
B Absorb water and mineral salts from the soil

C Carry food made by the leaves to the rest of the plant

D Holds the leaves and enables them to reach for sunlight

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

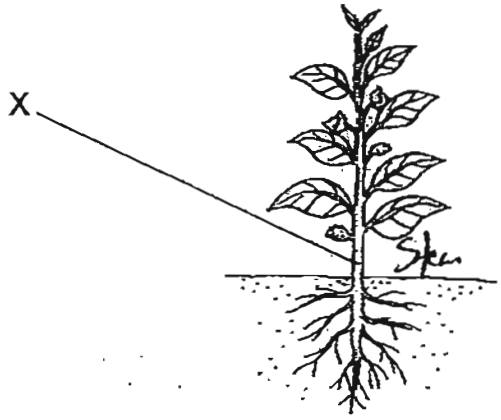
11. Bryant conducted an experiment using two balsam plants of similar size as shown below. He placed Plants A and B in two similar glass flasks. He cut off the roots of Plant B but left the roots of Plant A intact. The two plants were placed near the window in the same location. After seven days, she recorded the amount of water left in both flasks.



We can conclude that Bryant was trying to find out if _____.

(1) roots absorb water
(2) stems absorb water
(3) plants can make food in the presence of sunlight
(4) water with nutrients helps both plants to grow healthily

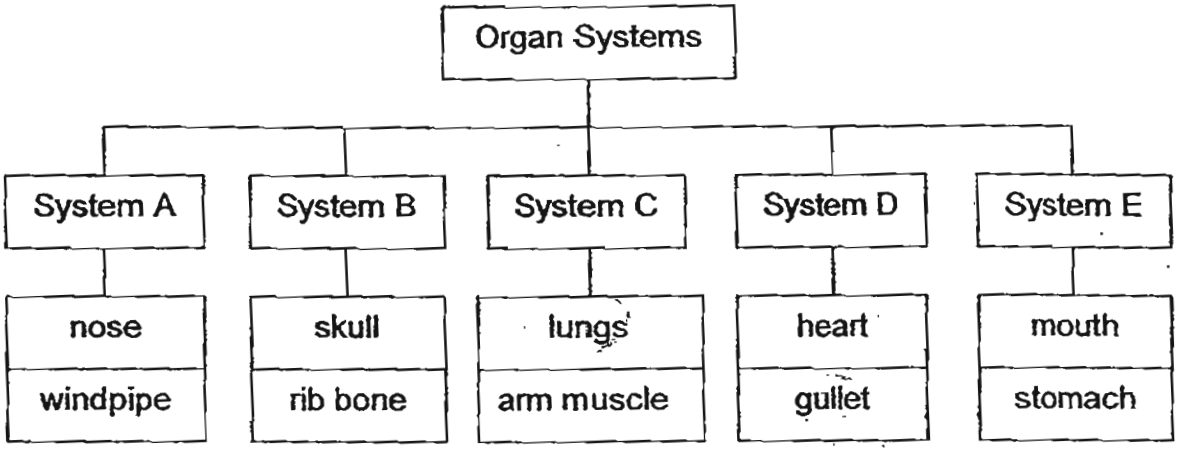
12. Which of the following functions does the Part X of the plant below perform?



A Part X helps the plant to absorb water
B Part X holds the plant firmly to the ground.
C Part X enables the leaves to reach for sunlight.
D Part X carries food made by the leaves to the rest of the plant.
E Part X transports water and mineral salts from the roots to the other parts of the plant.

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

13. Study the classification table below.



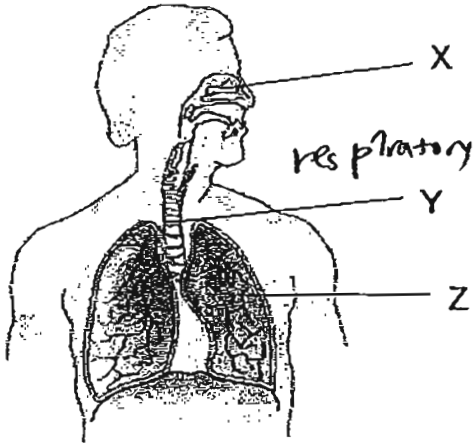
Which of the systems above have organs that are wrongly classified?

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

14. What is the function of saliva?

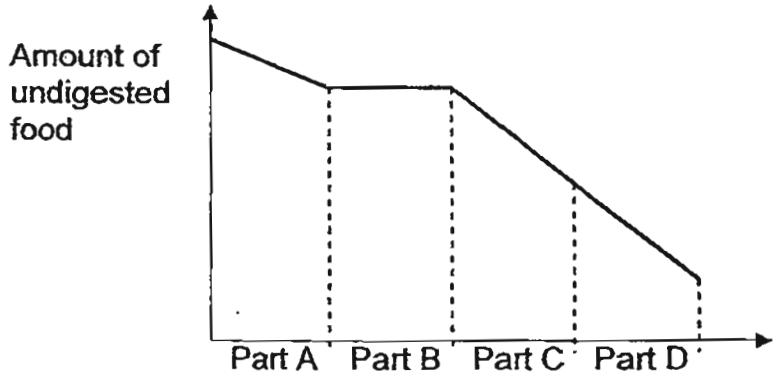
(1) Saliva helps to chew the food we eat.
(2) Saliva helps to dissolve the food we eat completely.
(3) Saliva helps to make the food we eat moist and soft.
(4) Saliva helps to improve the taste of the food we consume.

15. Look at the system below. Which of the following are represented by X, Y and Z?



	X	Y	Z
(1)	nose	gullet	lung
(2)	mouth	gullet	heart
(3)	nose	windpipe	lung
(4)	mouth	windpipe	heart

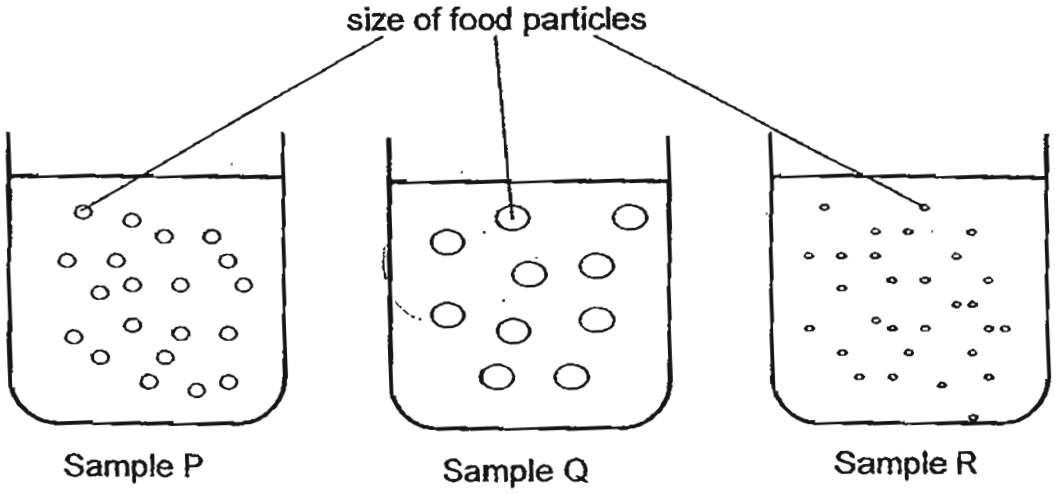
16. The graph below shows the amount of undigested food as it passes through different parts of the human digestive system.



Based on the graph above, which part represents the stomach?

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

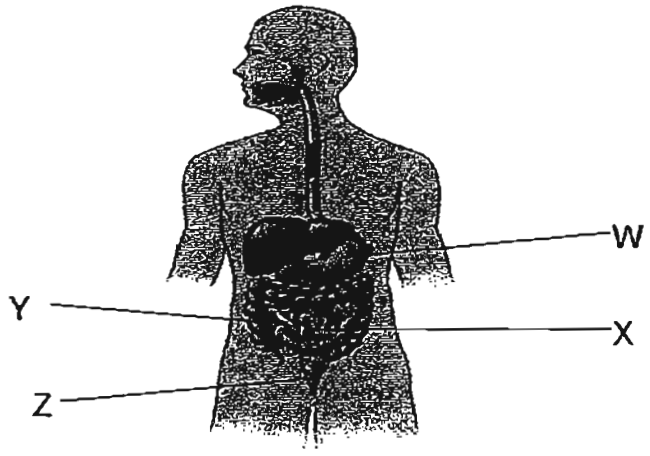
17. Three samples of partially digested food were taken from three different parts of the digestive system as shown below.



From which part of the digestive system could Samples P, Q and R be taken from?

	P	Q	R
(1)	stomach	mouth	small intestine
(2)	large intestine	mouth	stomach
(3)	mouth	stomach	small intestine
(4)	stomach	small intestine	large intestine

18. The diagram below shows parts of our digestive system.

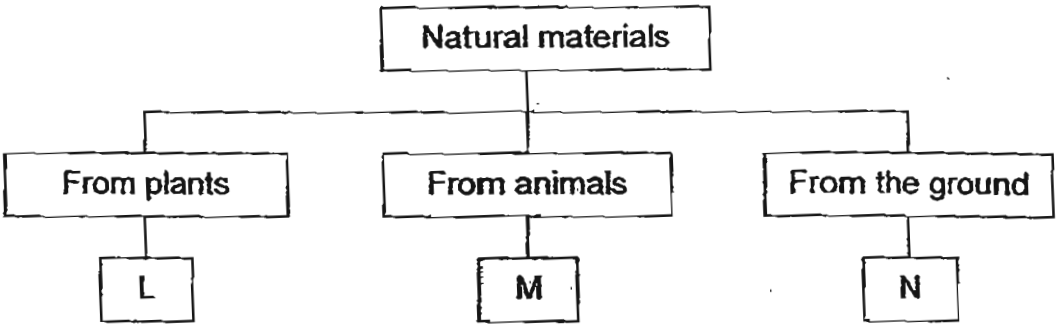


Which of the following statements match the parts labelled W, X, Y and Z?

A Solid waste is found here.
B Digested food enters the blood here.
C Food stays here for about two to five hours.
D A mixture of water and undigested food is found here.

	W	X	Y	Z
(1)	A	D	C	B
(2)	C	B	D	A
(3)	B	C	A	D
(4)	D	B	C	A

19. Study the classification table below carefully.



Which of the materials best represent L, M and N?

	L	M	N
(1)	silk	cotton	iron
(2)	paper	wool	clay
(3)	rubber	nylon	glass
(4)	wood	plastic	iron

20. Adelene was given four different types of paper bags. She put canned drinks, one at a time, into each bag until it began to tear. In the table below, she recorded the data collected.

Type of paper bags	Number of canned drinks put in the paper bag before it began to tear
A	6
B	9
C	12
D	4

Based on the results from the table above, which type of paper bag is the strongest?

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

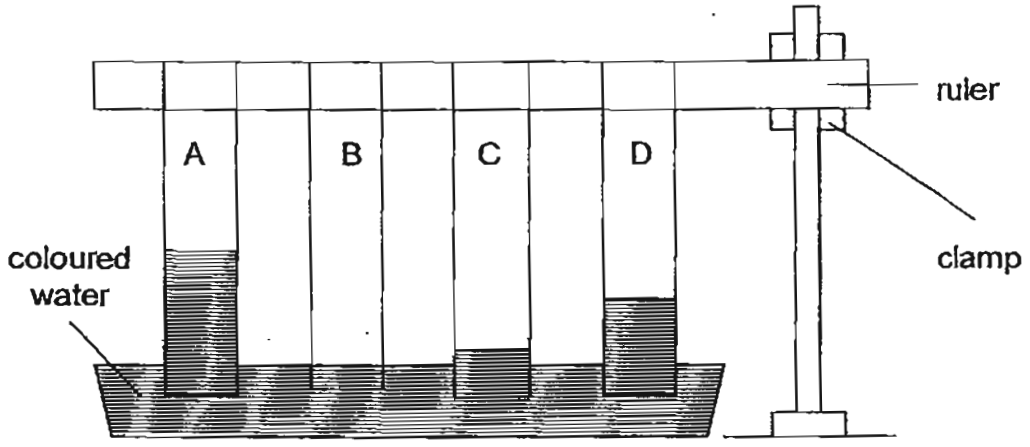
21. Rani compared the hardness of four rocks, W, X, Y and Z, by scratching them with discs made of different materials. She recorded the results in the table below, by using a tick (✓) to indicate the presence of scratch marks on the rocks.

Rock	presence of scratch marks made by		
	plastic disc	wooden disc	iron disc
W			
X	✓	✓	✓
Y			✓
Z		✓	✓

Which of the following correctly shows the four rocks arranged in increasing order of hardness?

	→ hardest			
(1)	W	Z	Y	X
(2)	X	Z	Y	W
(3)	W	Y	Z	X
(4)	X	Y	Z	W

22. The set-up below is used to find out which material, A, B, C or D is able to absorb water the fastest.



Which one of the materials (A, B, C or D) is most suitable for making a diaper?

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

23. A clothing factory is producing their new range of T-shirts. If you are their designer, which material would you choose to produce the T-shirt?

Reasons	Materials			
	P	Q	R	S
Comfortable	✓	✓	✓	✗
Easy to wash	✓	✓	✗	✗
Absorbs sweat	✗	✓	✓	✗

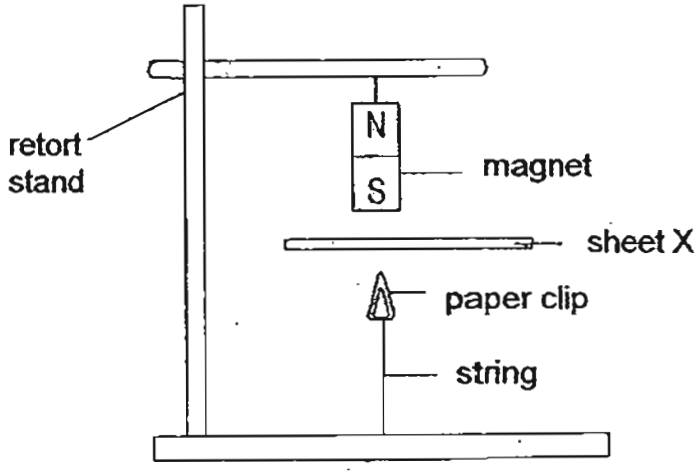
(1) Material P
(2) Material Q
(3) Material R
(4) Material S

24. Serene brought three objects S, T and U near a bar magnet.

The magnet pulled object S towards it but pushed object T away.
Object U remained at the same place where it was placed.
Which of the following most likely represents the three objects?

	Object S	Object T	Object U
(1)	Plastic ruler	Steel spoon	Magnet
(2)	Magnet	Steel spoon	Plastic ruler
(3)	Steel spoon	Magnet	Plastic ruler
(4)	Plastic ruler	Magnet	Steel spoon

25. Sue set up an experiment as shown below. When she placed sheet X between the magnet and the paper clip, she noticed that the paper clip floated in the air.



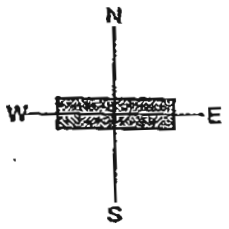
Which one of the following materials can sheet X be made of?

A Iron
B Steel
C Silver
D Aluminium

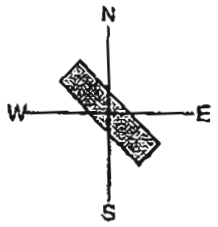
(1) B and D only
(2) A and B only
(3) B and C only
(4) C and D only

26. Which one of the following diagrams shows the final position of a freely suspended magnet?

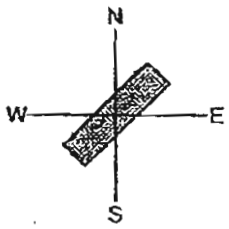
(1)



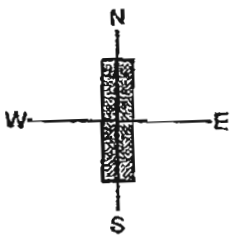
(2)



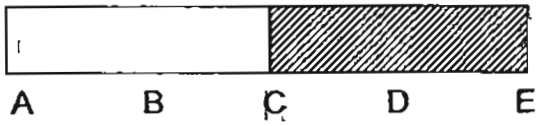
(3)



(4)



27. The diagram below shows different parts of a bar magnet.



If a string is attached to it at point C and the magnet is lowered into a tray of paper clips, which of the following would most likely be observed?

	Number of paper clips attracted at the different parts				
	Part A	Part B	Part C	Part D	Part E
(1)	8	8	7	9	9
(2)	8	7	11	6	10
(3)	10	4	2	5	9
(4)	12	11	11	11	12

28. A magnet loses its magnetism when _____.

A heated over a fire
B put in ice cold water
C dropped several times on the floor

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

29. Four nails magnetised by the 'Stroking' method were brought near some safety pins. The nails and the number of strokes they were given are shown in the table below.

Nail	Number of strokes
A	25
B	35
C	45
D	55

Which nail would be able to pick up the most number of safety pins?

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

30. What are the use(s) of a magnet?

A To separate iron filings from a tray of sand.
B To keep the door of a refrigerator tightly closed.
C To hold a piece of paper onto a magnetic board.

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

-End of Section A-

CATHOLIC HIGH SCHOOL
PRIMARY 3
SEMESTRAL ASSESSMENT 2, 2011

SCIENCE

Name :_____ ( )

Class : Primary 3 _____

Date : 28 October 2011

BOOKLET B

14 Questions
40 Marks

Total Time for Booklets A & B: 1 hour 30 minutes

Instructions to Candidates

Follow all instructions carefully.
Answer all questions.

Score	
Section A	60
Section B	40
Total	100

Parent's Signature:_____

Date:_____

Section B : Open-Ended Questions (40 marks)
Read questions 31 to 44 carefully and write your answers in the space provided. The maximum marks that can be awarded are shown at the end of each question or part-question.

31. Look at the two plants below carefully.

Plant X

Plant Y

(a) State a similarity between Plant X and Plant Y. [1]
(Do not compare size, colour or pot.)

_____

_____

(b) State a difference between Plant X and Plant Y. [1]
(Do not compare size or colour.)

_____

_____

(c) What are the three basic needs Plant X and Y need in order to grow? [1]

_____

_____

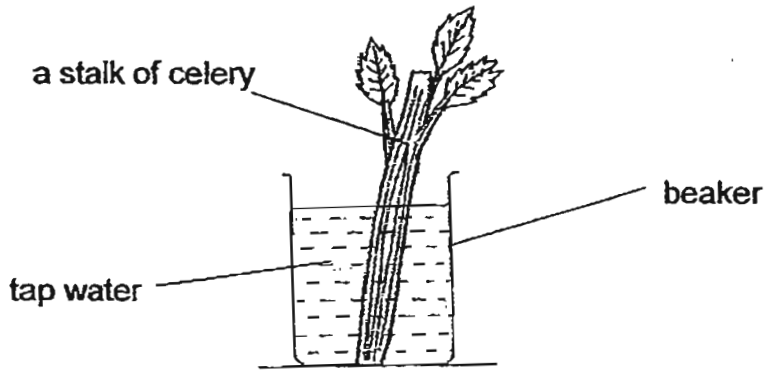
3

32. For each of the following statements, write 'T' for true or 'F' for false in the boxes provided. [3]

	Statements	
(a)	All bacteria can make their own food.	
(b)	Some fungi look like plants and have leaves, stems and roots.	
(c)	Insects have hard outer coverings.	
(d)	Female mammals produce milk to feed their young.	
(e)	Birds reproduce by laying eggs with hard shells.	
(f)	All fish lay eggs without shells.	

3

33. Benjamin set up an experiment using a beaker of clear tap water and a stalk of celery as shown in the diagram below. He wanted to prove that the stem of a stalk of celery transported water to the leaves. He left his set-up near the window for three days.



After three days, he did not observe any changes to the leaves of the stalk of celery.

(a) What should Benjamin have done in order to be able to observe changes to the leaves? Read the following choices and tick [✓] in the relevant box(es). [1m]

		Tick [✓]
(a)	Change a new stalk of celery that has roots attached.	
(b)	Change a new stalk of celery that has more than three leaves.	
(c)	Leave the set-up near the window for another three more days.	
(d)	Add three drops of blue colouring to the beaker of tap water and stir.	

(b) What would he observe in the leaves after making a change to his set-up as chosen in (a)? [1]

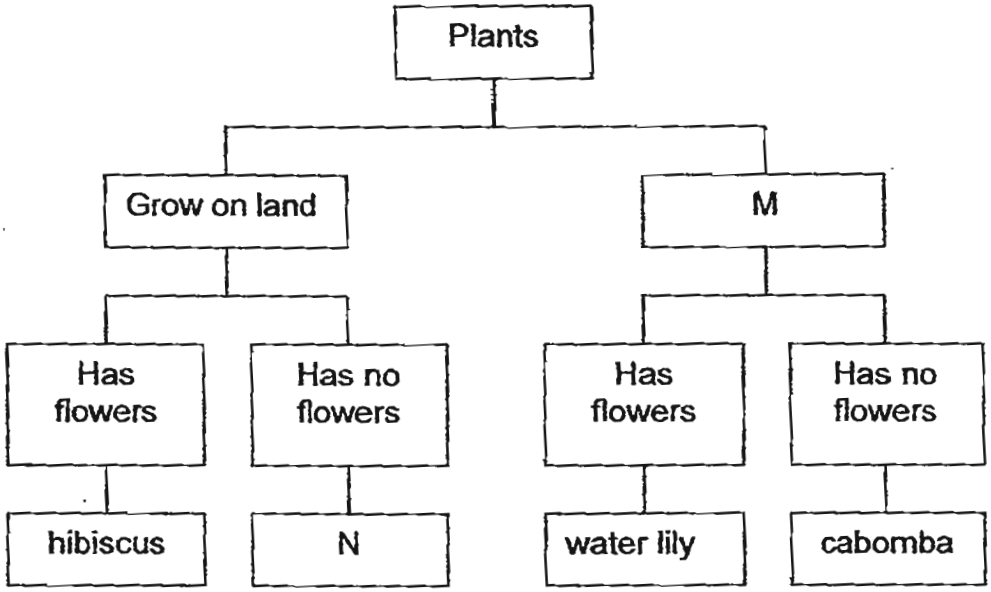
_____

(c) What conclusion could he make about the function of the stem of the stalk of celery? [1]

_____

3

34. Study the classification chart below.



(a) Give a suitable heading for M. [1]

_____

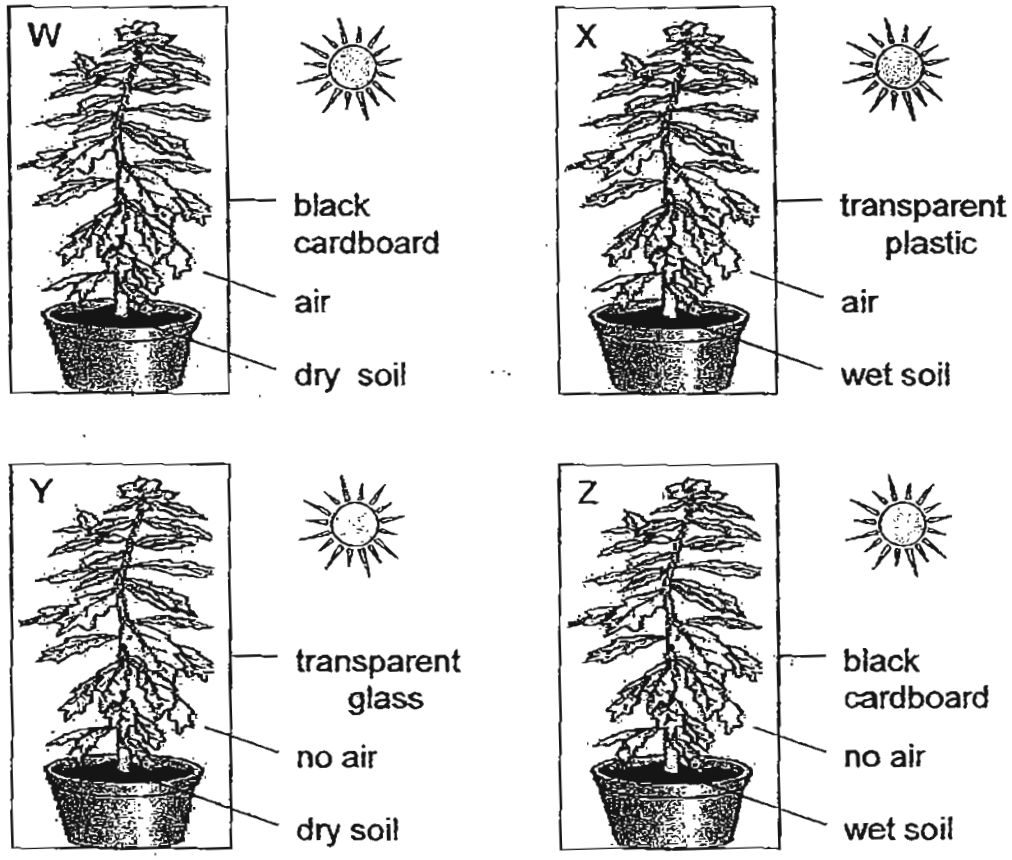
(b) From the classification chart above, describe plant N. [1]

_____

_____

2

35. Look at the four set-ups below. Four similar potted plants W, X, Y and Z are placed under the sun.



(a) Which one of the above potted plants W, X, Y or Z will survive for the longest period of time? [1]

_____

(b) Explain your choice in (a). [2]

_____

_____

_____

3

36. (a) Name the organ system that match the functions shown in the table below. [2]

Functions	Organ Systems
(i) carries digested food and oxygen to all parts of the body	_____
(ii) enables the exchange of gases	_____
(iii) protects the important organs	_____
(iv) enables the different parts of the body to move	_____

(b) Besides being able to carry digested food and oxygen to all parts of the body, the organ system in (i) can also carry _____ from all parts of the body to be removed. [1]

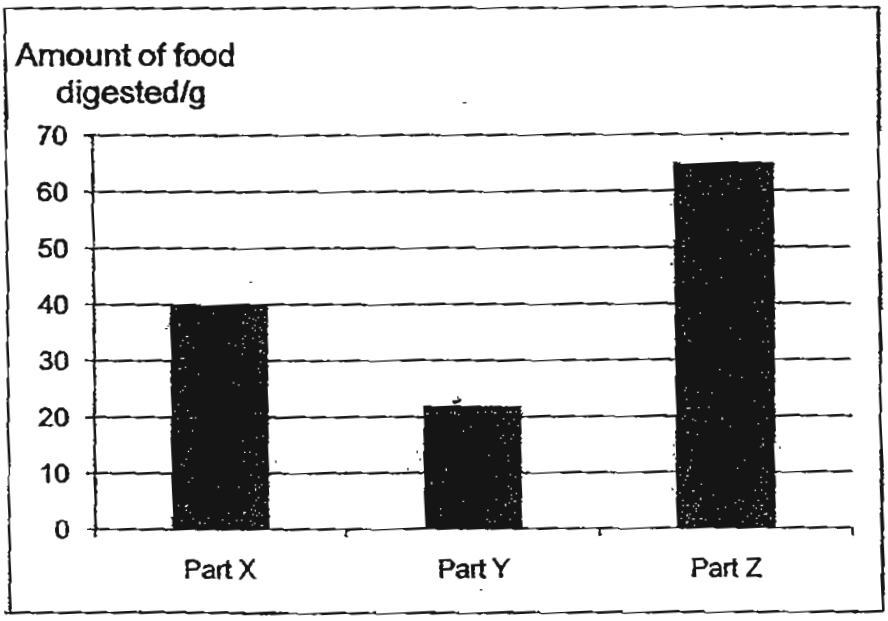
3

37. Arrange the digestive process in steps below to show the order of digestion of a chicken sandwich. Write 1, 2, 3, 4, 5 or 6 in the boxes provided. [3]

Digestive Process	Steps
Balls of food are pushed from the mouth into the stomach.	
Water is then removed from the undigested food in the large intestine. Undigested food passes out of the body through the anus.	
The partly-digested food leaves the stomach and enters the small intestine.	
The teeth chew and grind the chicken sandwich into smaller pieces. The tongue mixes it with saliva before being swallowed.	
The digested food passes through the intestinal walls into the blood.	
The food is churned and mixed with digestive juices to break down some of the food into simple forms.	

3

38. Mr Tan ate 100g of food for tea. The graph below shows the amount of food digested by three different parts X, Y and Z of the digestive system.



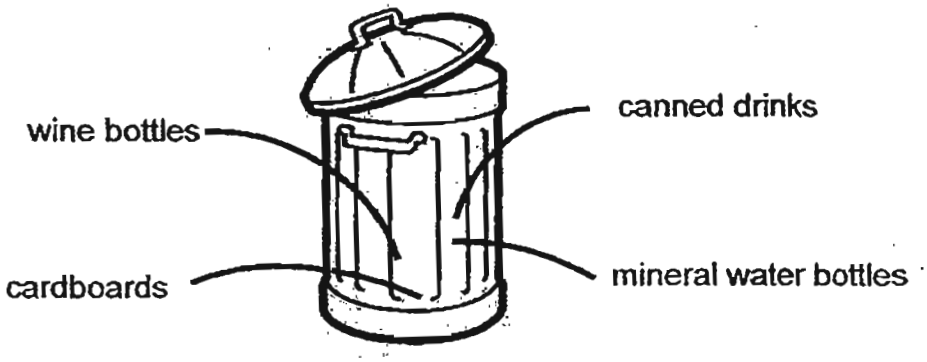
(a) From the graph, which part (X, Y or Z) of the digestive system does most digestion takes place? [1]

(b) Which part of the digestive system does your answer in (a) represent? [1]

(c) At which part of the digestive system is digestion completed? [1]

3

39. Before waste can be recycled, they have to be sorted into groups according to the materials they are made of. The list below shows the items found in a bin.

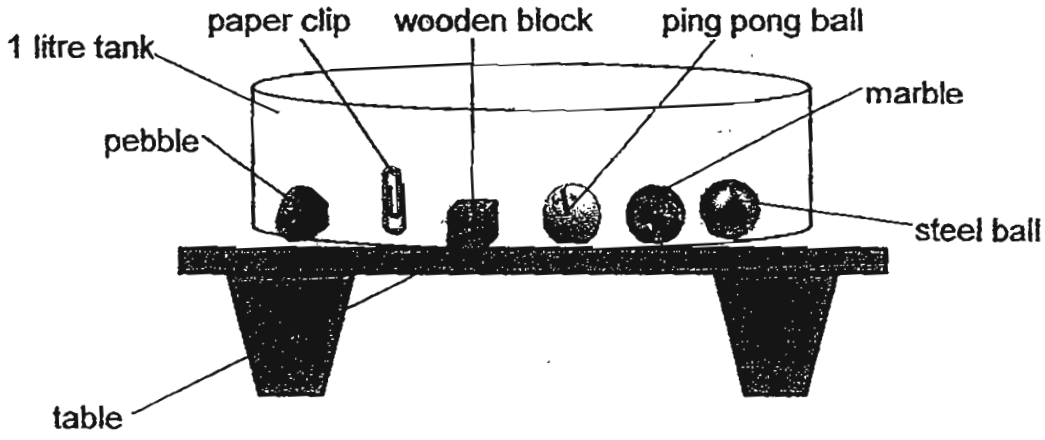


Based on the materials they are made of, place them in the correct groups. [2]

Paper	Glass	Metal	Plastic

2

40. Joshua conducted an experiment using the objects (pebble, paper clip, wooden block, ping pong ball, marble and steel ball) as shown below. He filled the tank with 500ml of water and put in all the items. He then observed the positions of the six objects.

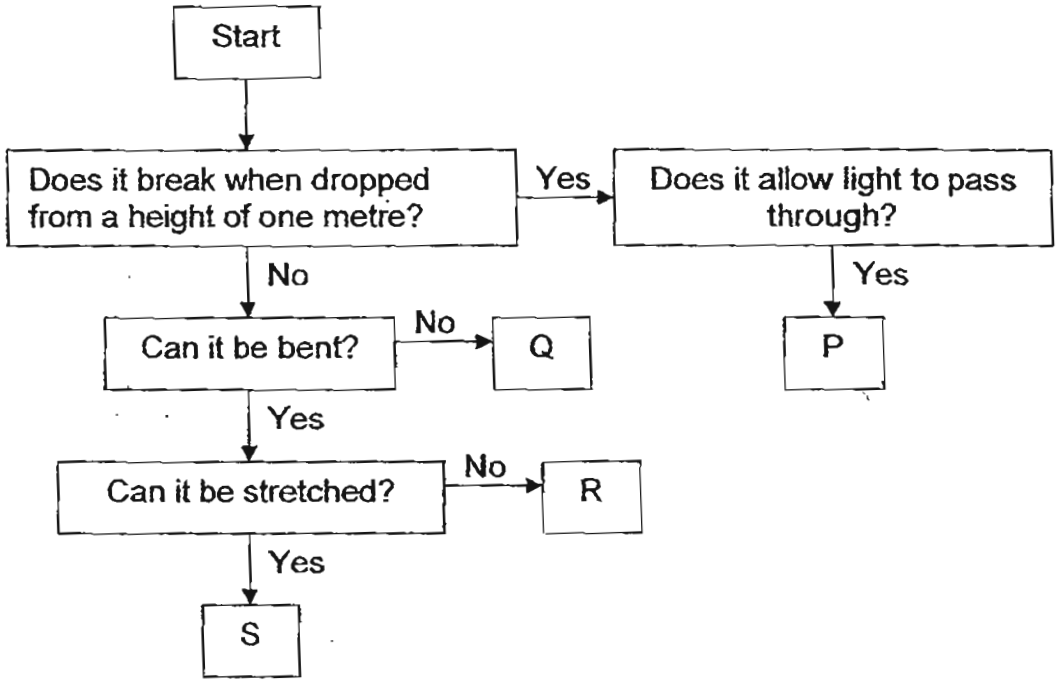


Which of the above objects would rise to the surface of the water or sink to the bottom of the tank? Tick[✓] in the relevant boxes for each of the items. [3]

	Objects	Sink	Float
(a)	pebble	☐	☐
(b)	paper clip	☐	☐
(c)	wooden block	☐	☐
(d)	ping pong ball	☐	☐
(e)	marble	☐	☐
(f)	steel ball	☐	☐

3

41. Study the flow chart below carefully.

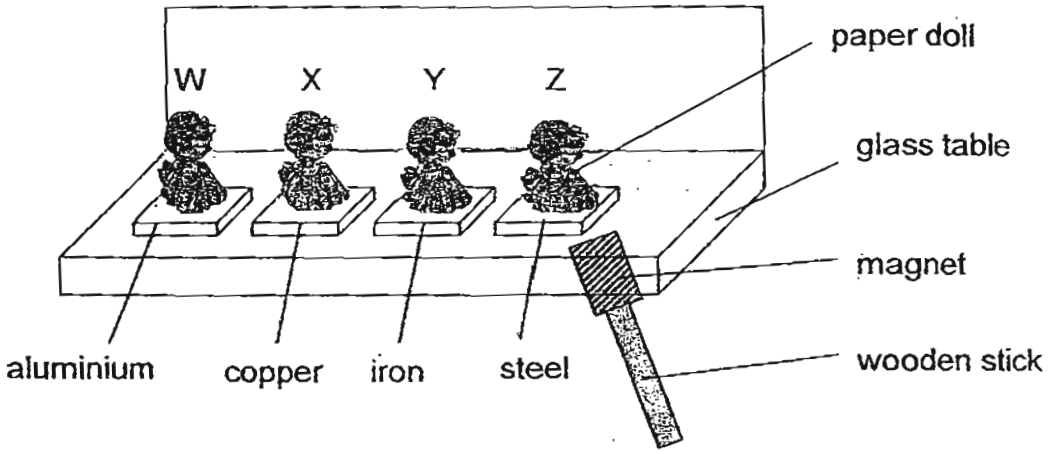


You are given the following objects. Which objects best represent P, Q, R and S? Write the letters in the boxes provided. [2]

	Objects	Letter
(a)	an eraser	
(b)	a piece of iron rod	
(c)	a piece of window pane	
(d)	a rubber ring	

2

42. Michelle conducted an experiment as shown below. She attached a paper doll on each of the four pieces of metals, aluminium, copper, iron and steel. She then placed the four paper dolls on the glass table. She tied a magnet to one end of the wooden stick and placed the magnetic end of the stick under the glass table.



(a) She tried to move the dolls using the magnet. Which doll(s) could be moved? [1]

_____

(b) Explain why the doll(s) in (a) was/were able to be moved. [2]

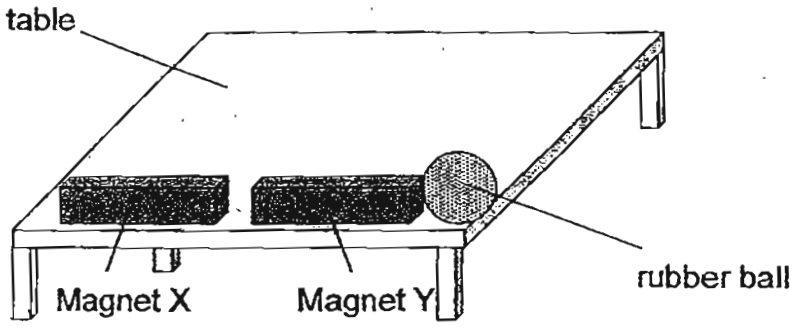
_____

_____

_____

3

43. Two magnets, X and Y of equal strength were placed near to each other with like poles facing each other. A rubber ball was placed on the table against magnet Y as shown in the diagram below.



(a) What will happen to magnet X and Y? [1]

_____

(b) What will most likely happen to the rubber ball? [1]

_____

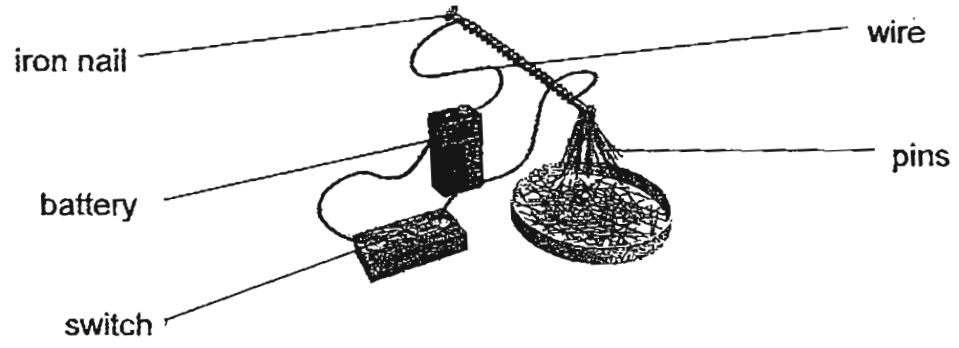
(c) Explain your answer in (b). [1]

_____

_____

3

44. Freddy made a magnet as shown below. He coiled a wire around an iron nail and connected the ends of the wire to a battery. He repeated this several times with a different number of turns around the iron nail. With each different number of turns of wire around the nail, the number of pins picked up was different.



(a) What will happen to the iron nail when the set-up is switched on? [1]

_____

(b) If the iron nail is replaced by an aluminium object, will it still be able to attract any pins? Give a reason to support your answer. [2]

_____

_____

Look at the results of the experiment in the table below.

Number of turns of wire around the nail	Number of pins picked up by the nail
10	1
15	3
20	7
25	12

(c) What can you conclude from the results of the experiment? [1]

_____

_____

4

Answer Ke

EXAM PAPER 2011

SCHOOL : CATHOLIC HIGH
SUBJECT : PRIMARY 3 SCIENCE

TERM : SA2

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

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

31)a)Plant X and Y both have a stem root and leaves.
b)Plant X has flowers while Plant Y does not have flowers.
c)Both plants need air, sunlight and water to grow.

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

33)a)d
b)The leaves will turn bluish.
c)The water-currying tubes in the stem carry the blue coloured water to the leaves.

34)a)Grow on water.
b)Plant N is a non-flowering land plant.

35)a)Plant X.
b)Plant X received sunlight, air and water thus it is able to photosynthesize or make food.

36)a)i)Circulatory system. ii)Respiratory system.
iii)Skeletal system. iv)Muscular system.
b)waste materials

37)264153

38)a)Part Z.
b)Small intestine.
c)Small intestine.

39)

Paper	Glass	Metal	Plastic
Cardboards	wine bottle	canned drinks	mineral water bottle

40)a)Sink
b)Sink
c)Float
d)Float
e)Sink
f)Sink

41)a)R
b)Q
c)P
d)S

42)a)Y and Z.
b)Magnetism can pass through the glass which is a non-magnetic material to attract the iron and steel which are magnetic material thus the dolls Y and Z were able to be moved.

43)a)They will repel.
b)The rubber ball will drop off from the table.
c)When Magnet X and Y repel, Magnet Y will be pushed away from magnet X, therefore, Magnet Y will hit the rubber ball, and it will fall of the table.

44)a)The iron nail will become an electromagnet.
b)No. Aluminium is a non-magnet material thus it cannot be magnetized.
c)The more times you coil the wire around the magnet the greater the strength of the electromagnet.