CATHOLIC HIGH SCHOOL
SEMESTRAL ASSESSMENT 2
2013
PRIMARY THREE

SCIENCE

BOOKLET A

Name: _____ ( )

Class: Primary 3 - _____

Date: 24 October 2013

30 questions

60 marks

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

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Shade your answers in the Optical Answer Sheet (OAS) provided.

This booklet consists of 21 printed pages, excluding cover page.

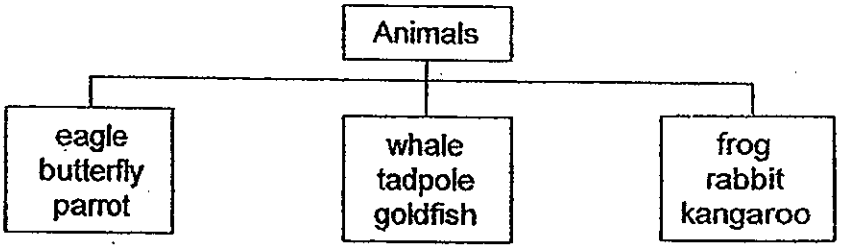
Booklet A (30 × 2 marks)

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 your answer on the Optical Answer Sheet. (60 marks)

1. Which one of the following observations is matched correctly to the characteristic of living things?

	Observation	Characteristic
(1)	A frog lays eggs.	Living things can grow.
(2)	A caterpillar changes into a butterfly.	Living things need air, food and water.
(3)	A boy moved his foot away from a sharp object he stepped on.	Living things can reproduce.
(4)	A monkey swings from tree to tree.	Living things can move by themselves.

2. Zhiping classified some animals into three groups as shown.



He classified the animals according to _____.

(1) how they move
(2) where they live
(3) the way they reproduce
(4) their outer body covering

3. The diagram below shows a toadstool and a bird's nest fern.

toadstool

bird's nest fern

Which statement(s) describe(s) both the toadstool and the bird's nest fern?

A Both have stems.

B Both make their own food.

C Both reproduce by spores.

D Both are non-flowering plants.

(1) A only

(2) C only

(3) B and C only

(4) C and D only

4. Which one of the following characteristics can be used to differentiate between birds and mammals?

(1) type of food

(2) number of legs

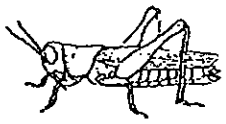
(3) presence of wings

(4) type of body covering

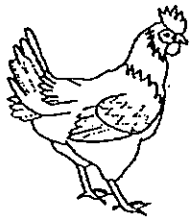
5. Jamie had to classify the four animals shown below.

bat

frog

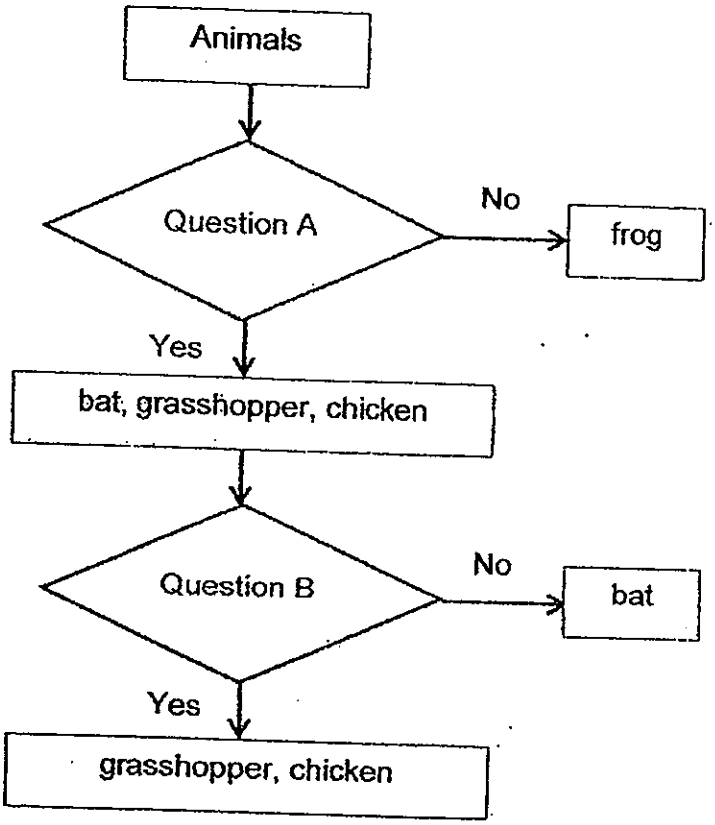


grasshopper



chicken

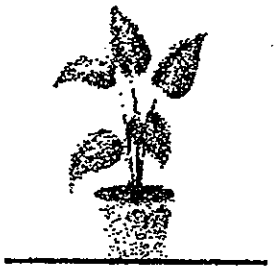
He classified them with the help of the chart below.



What are the questions that can be placed in A and B?

	Question A	Question B
(1)	Do they lay eggs?	Do they have wings?
(2)	Do they lay eggs?	Do they take care of their young?
(3)	Do they have wings?	Do they lay eggs?
(4)	Do they have wings?	Do they take care of their young?

6. Amy carried out an experiment with four set-ups, A, B, C and D, as shown in the diagram below. At the end of the experiment, it was observed that some of the potted plants grew well but the others did not.

<table>
<tr>
<td>Set-up A
Well-lit room
Plant is not watered
Fertiliser Z is added to the soil
  </td>
<td>Set-up B
Well-lit room
Plant watered daily
Fertiliser Z is added to the soil
  </td>
</tr>
<tr>
<td>Set-up C
Dark room
Plant is not watered
Fertiliser Z is added to the soil
  </td>
<td>Set-up D
Dark room
Plant watered daily
Fertiliser Z is added to the soil
  </td>
</tr>
</table>

What was the likely aim of Amy's experiment?

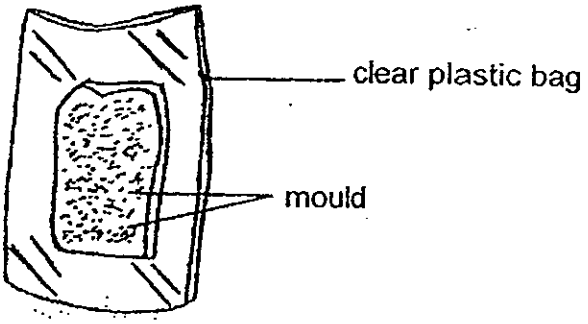
(1) To find out whether the plants need light and water to grow well.

(2) To find out the amount of light needed by the plants to grow well.

(3) To find out whether the plants need light and fertilizer to grow well.

(4) To find out whether the plants need light, water and fertilizer to grow well.

7. Joel put a piece of moist bread into a clear plastic bag. He noticed that mould had started to grow on the bread after a week.



Several conditions are needed in order for mould to grow.
Which of the conditions need(s) to be present for the mould to grow?

A air

B light

C water

(1) C only

(2) A and B only

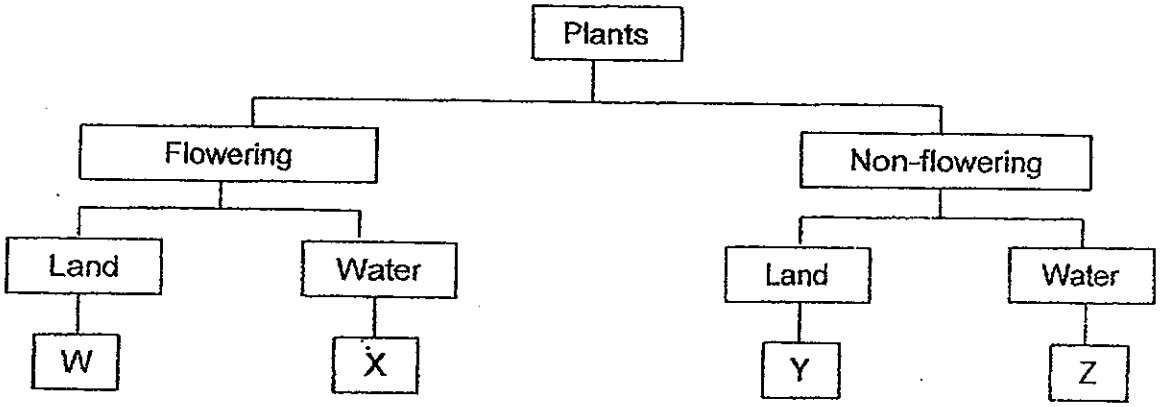
(3) A and C only

(4) A, B and C

8. Peter observed four plants, A, B, C and D, in the eco-garden. He recorded the characteristics of the plants in the table below. A tick (√) shows that the plant has the characteristic.

Plant / Characteristic	A	B	C	D
Bears fruit		√		√
Grows on land	√			√

Peter then drew the classification chart as shown below.

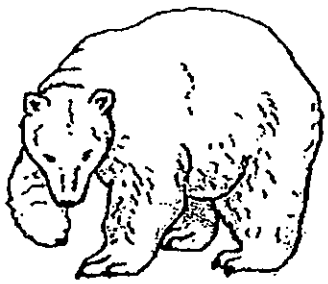


From the information above, where do Plants B and D belong in the classification chart above?

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

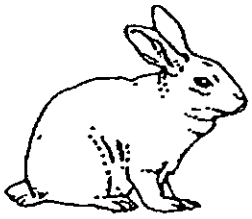
9. Which one of the following animals has a different body covering from the other three?

(1)



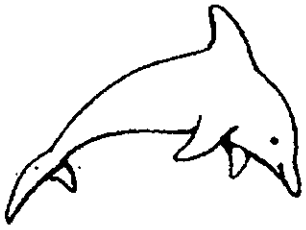
bear

(2)



rabbit

(3)

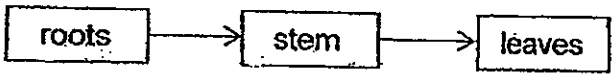


dolphin

(4)

bee

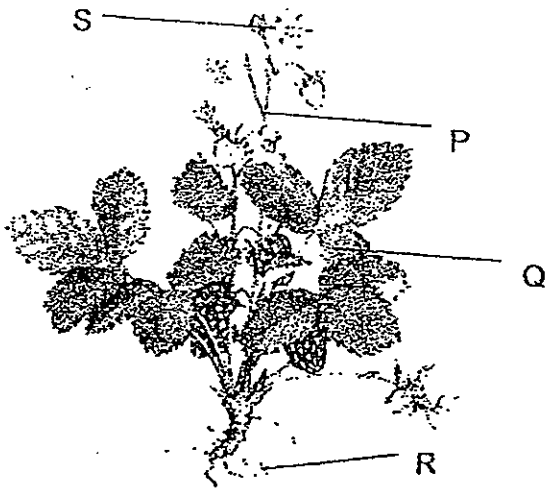
10. Study the diagram below.



The arrows show the path taken by _____ in the plant.

(1) air
(2) food
(3) water
(4) sunlight

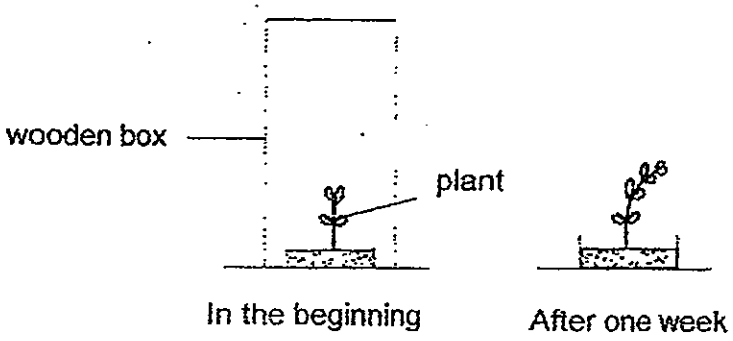
11. The diagram below shows a strawberry plant.



The plant will not be able to transport water and food to the other parts of the plant if Part _____ is removed.

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

12. Fuwen kept a potted plant near a window. He watered the plant every day. After one week, he noticed that the plant looked different after he had removed the wooden box.



Why did the plant look different after one week?

(1) The plant was responding to sunlight.
(2) The plant was too weak to grow straight up.
(3) The plant needed more air from the window.
(4) The plant started to die because there was not enough food.

13. Ben and Clive classified some organisms into 2 groups.

Ben's classification :

Group X	Group Y
Bird's Nest Fern Mushroom	Rose Hibiscus

Clive's classification :

Group P	Group Q
Mushroom	Rose Hibiscus Bird's Nest Fern

Which one of the following groups of classification shows how they have grouped the organisms?

	Ben		Clive	
	X	Y	P	Q
(1)	Can make their own food	Cannot make their own food	Non-flowering plants	Flowering plants
(2)	Non-flowering plants	Flowering plants	Fungi	Plants
(3)	Reproduce by spores	Reproduce by seeds	Cannot make their own food	Can make their own food
(4)	Fungi	Plants	Non-flowering plants	Flowering plants

14. Zavier gives the following description of a part of a plant.

- ✓ It holds the plant upright.
- ✓ It holds the leaves up to get sunlight.
- ✓ It carries food, water and mineral salts to all parts of the plant.

Which part of the plant is he describing?

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

15. Which of the following statements are true about the human digestive system?

A There is no digestive juice in the mouth.

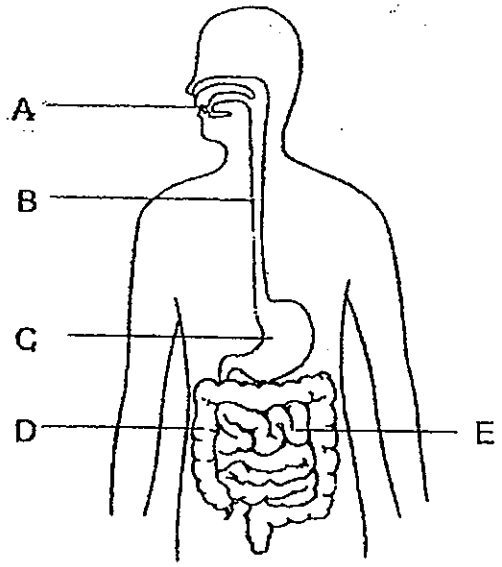
B Food is digested completely in the stomach.

C Digested food passes through the walls of the small intestine into the bloodstream.

D Inside the large intestine, most of the water from the undigested food is absorbed by the body.

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

16. The diagram below shows the human digestive system.
Answer questions 16 and 17 according to the diagram below.



At which parts of the digestive system do digestion takes place?

(1) B and D only

(2) A, C and D only

(3) A, C and E only

(4) C, D and E only

17. Which one of the following shows the correct pathway in which food travels through the digestive system before it enters the bloodstream?

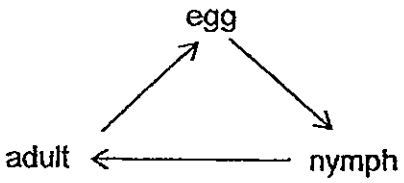
(1) A → B → C → D

(2) A → B → C → E

(3) A → B → C → D → E

(4) A → B → C → E → D

18. Study the life cycle shown below.



Which of the following animals go through the life cycle as shown above?

A chicken

B butterfly

C cockroach

D mealworm beetle

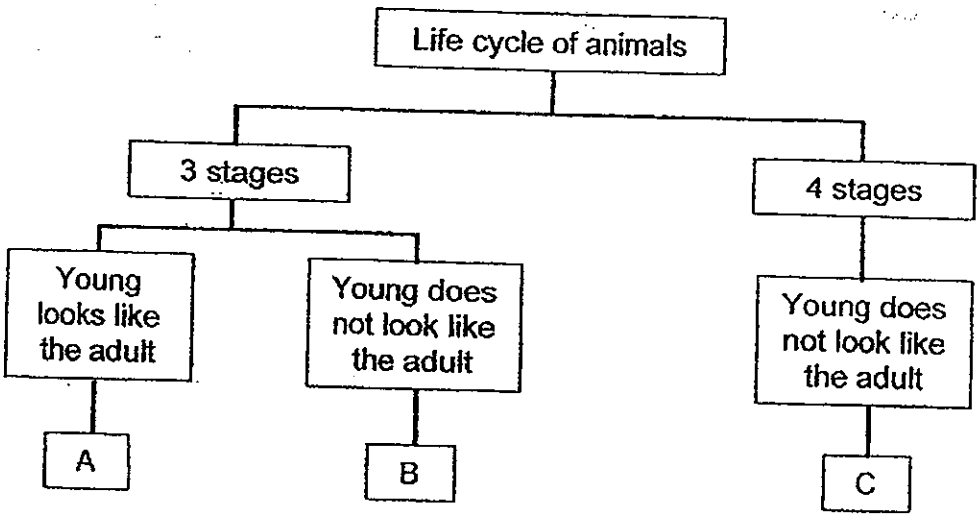
(1) C only

(2) A and C only

(3) B and D only

(4) B, C and D only

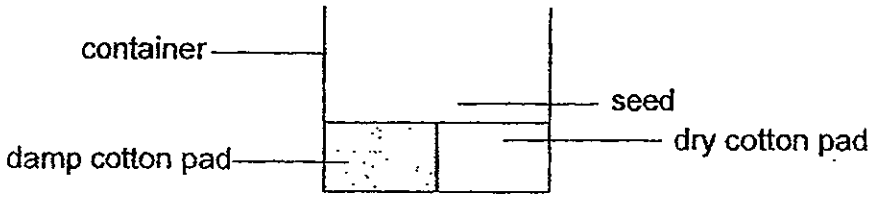
19. Study the classification diagram below.



Which of the following represents A, B and C?

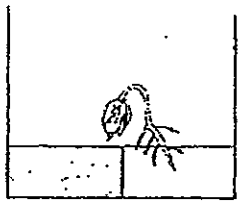
	A	B	C
(1)	frog	grasshopper	butterfly
(2)	butterfly	grasshopper	frog
(3)	grasshopper	butterfly	frog
(4)	grasshopper	frog	butterfly

20. A seed is placed between a damp cotton pad and a dry cotton pad in a container as shown below.

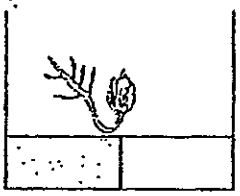


The container is placed near a window. Which one of the following diagrams shows the growth of the seed after three days?

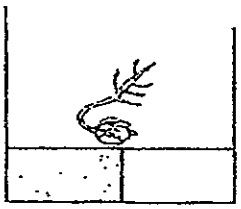
(1)



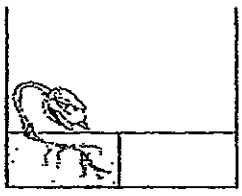
(2)



(3)



(4)



21. Kelly prepared four similar containers, A, B, C and D. She placed the same amount of cotton wool and five bean seeds in each container but placed them in different places and conditions as shown in the table below.

Container	Air	Water	Sunlight	Where the containers were placed
A	Yes	Yes	Yes	In an open area
B	No	Yes	Yes	In an air-tight container, next to a window
C	Yes	Yes	No	On the kitchen table
D	Yes	Yes	No	In the freezer

Based on the information above, which container(s) would have seedlings after a week?

(1) A only

(2) A and C only

(3) B and C only

(4) A, C and D only

22. May conducted several tests on materials A, B, C and D. She recorded her results in the table below. A tick (√) indicates the presence of the property and a cross (X) indicates the absence of the property.

Property	Materials			
	A	B	C	D
Flexible	X	√	X	√
Waterproof	√	√	√	X
Breaks easily when dropped	√	X	X	X

Which material best represents the swimming cap that May uses to keep her hair dry?

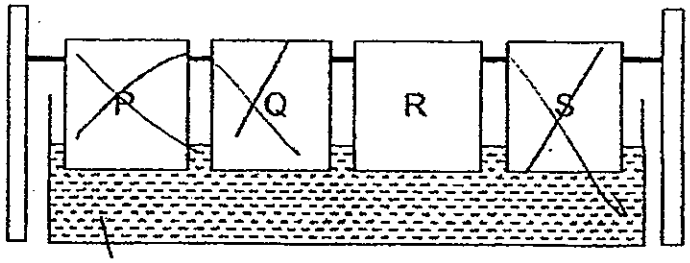
(1) A

(2) B

(3) C

(4) D

23. Beckham wanted to find out which material makes a good hand towel that dries wet hands well. He dipped four different materials P, Q, R and S, of the same shape and size, into a plastic container with coloured water as shown below.



plastic container
with coloured water

After 5 minutes, Beckham measured the height at which the coloured water travelled up the materials. He recorded the results as shown.

Material	Height to which the coloured water travelled (cm)
P	0
Q	12
R	20
S	7

Which material would be the best to make a hand towel?

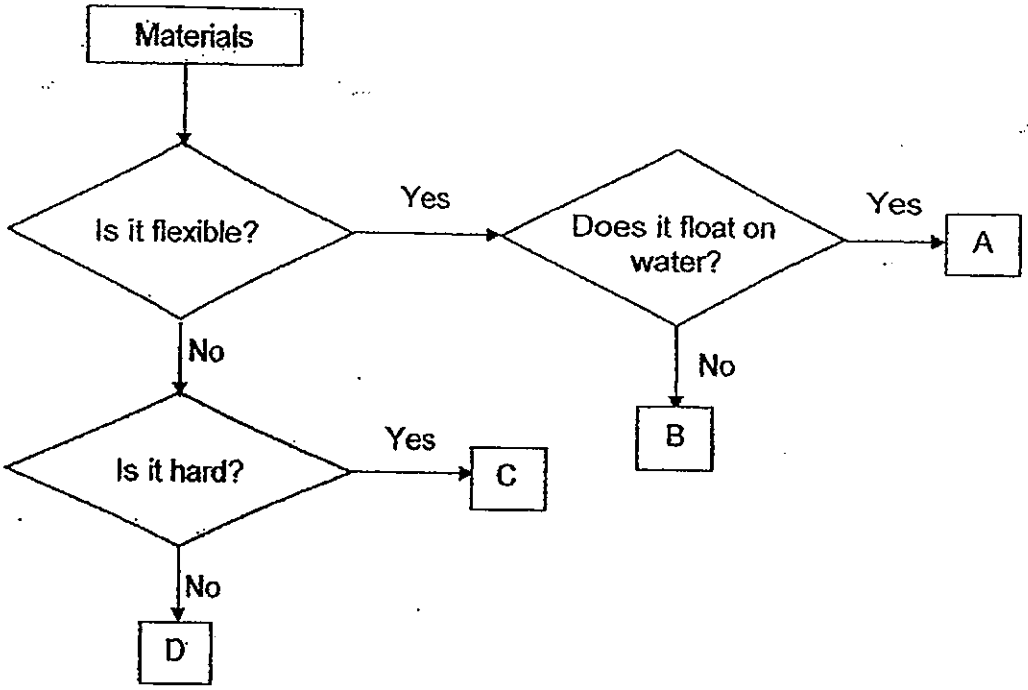
(1) P

(2) Q

(3) R

(4) S

24. Study the flow chart below.



Which materials, A, B, C or D, are used to make a metal spoon and a paper bag?

	Metal spoon	Paper bag
(1)	A	D
(2)	B	D
(3)	C	B
(4)	D	C

25. Kaijie carried out an experiment with four rulers of similar size but made of different materials. He scratched them against one another and observed the depth of the scratches made. What was Kaijie trying to find out in his experiment?

(1) To find out which material is the hardest.

(2) To find out which material is the strongest.

(3) To find out which material is the most elastic.

(4) To find out which material is the least flexible.

26. Anna was asked by her teacher to conduct an experiment to find out how the strength of a magnet was affected when it was hammered. She counted the number of times a magnet was hammered. She then measured how close the magnet must get to the paper clips in order to attract at least one paper clip.

The table below shows the results of her experiment.

Number of times the magnet was hammered	20	30	40	50
Distance between magnet and the paper clip (cm)	5	3	2	1

From the table above, which conclusion about the magnet is true?

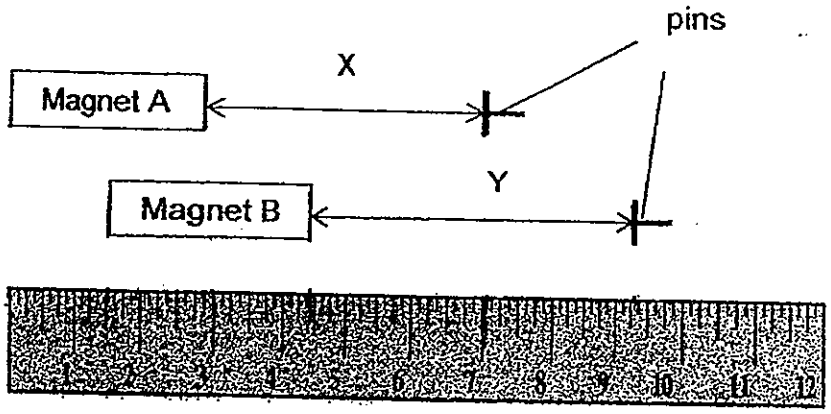
(1) The more number of times the magnet was hammered, the stronger the magnet.

(2) The least number of times the magnet was hammered, the stronger the magnet.

(3) The more number of times the magnet was hammered, the shorter the distance at which the magnet could attract the paper clip.

(4) The number of times the magnet was hammered would not affect the distance at which the magnet could attract the paper clip.

27. Pam conducted an experiment using 2 different magnets, A and B, and a pin. X and Y mark the distance at which each magnet attracted the pin. The diagram below shows her observation.



What conclusion can Pam draw from her observation?

A The pin is made of a magnetic material.

B Magnet A is a stronger magnet than B.

C A magnet can attract magnetic materials from a distance.

D The poles of the magnet have the greatest magnetic strength.

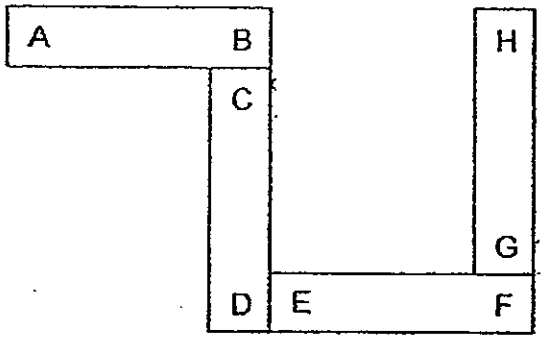
(1) A and C only

(2) C and D only

(3) A, B and D only

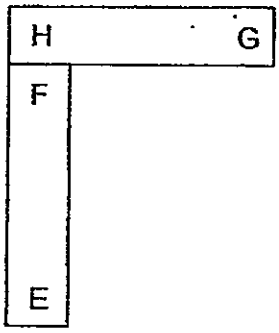
(4) A, B, C and D

28. Four bar magnets with their ends marked A to H can be arranged as shown below.

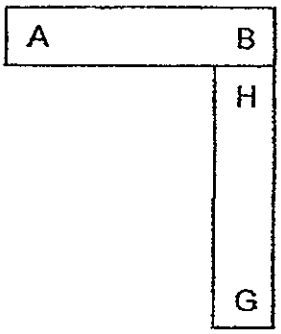


Which one of the following diagrams shows a possible arrangement of two of the magnets?

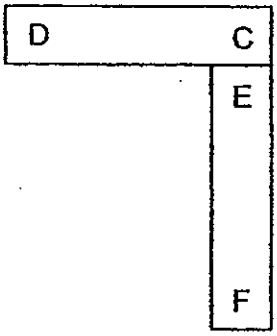
(1)



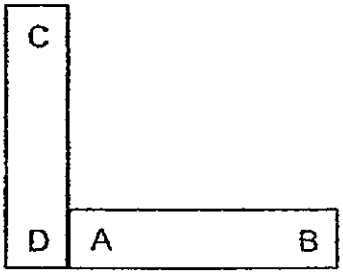
(2)



(3)



(4)



29. Ronaldo was given 4 rods, G, H, J and K. He tested each rod with a bar magnet. His observations are as follows :

Rod G was repelled by the North pole of the bar magnet.

Nothing happened when the bar magnet was brought close to Rod H.

Rod J was attracted by the North pole of the bar magnet.

Rod K was attracted by the South pole of the bar magnet.

Which rod is definitely a magnet?

(1) G

(2) H

(3) J

(4) K

30. Diagram 1 below shows a balance with two objects, G and H. When Object J is placed below Object H, the balance tilts, as shown in Diagram 2.

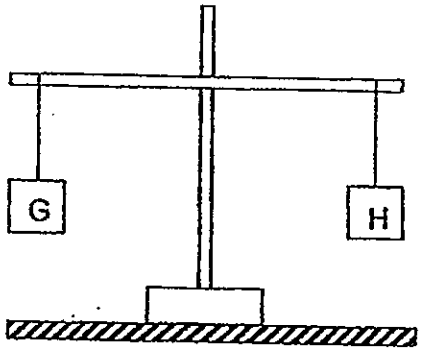


Diagram 1

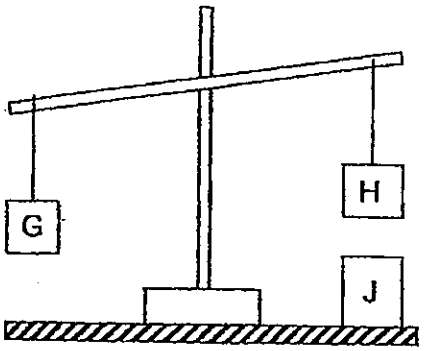


Diagram 2

Based on the observations in Diagrams 1 and 2, what conclusion can we make about Objects H and J?

	H	J
(1)	magnet	magnet
(2)	magnet	made of magnetic material
(3)	magnet	non-magnetic material
(4)	made of magnetic material	magnet

End of Booklet A

CATHOLIC HIGH SCHOOL
SEMESTRAL ASSESSMENT 2
2013
PRIMARY THREE

SCIENCE

BOOKLET B

Name:_____ ( )

Class: Primary 3 - _____

Date: 24 October 2013

Parent's Signature: _____

Booklet A	60
Booklet B	40
Total	100

14 questions

40 marks

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

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Write your answers in this booklet.

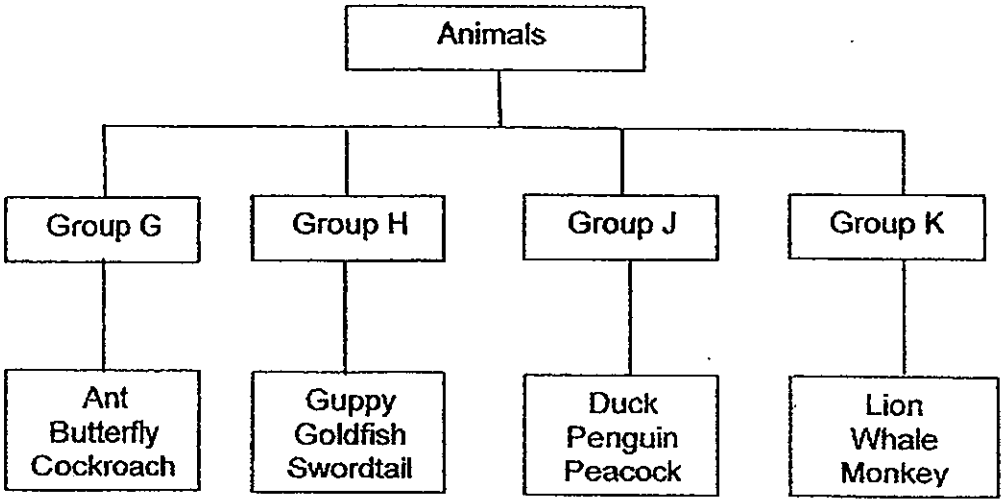
This booklet consists of 13 printed pages, excluding cover page.

Booklet B (40 marks)

For questions 31 to 44, write your answers in this booklet.

The number of marks available is shown in brackets [ ] at the end of each question or part question. (40 marks)

31. Some animals are put into groups as shown in the classification chart below.



(a) Which group of animals does Group J belong to? [1]

_____

(b) Name one main characteristic of animals in: [2]

(i) Group J: _____

_____

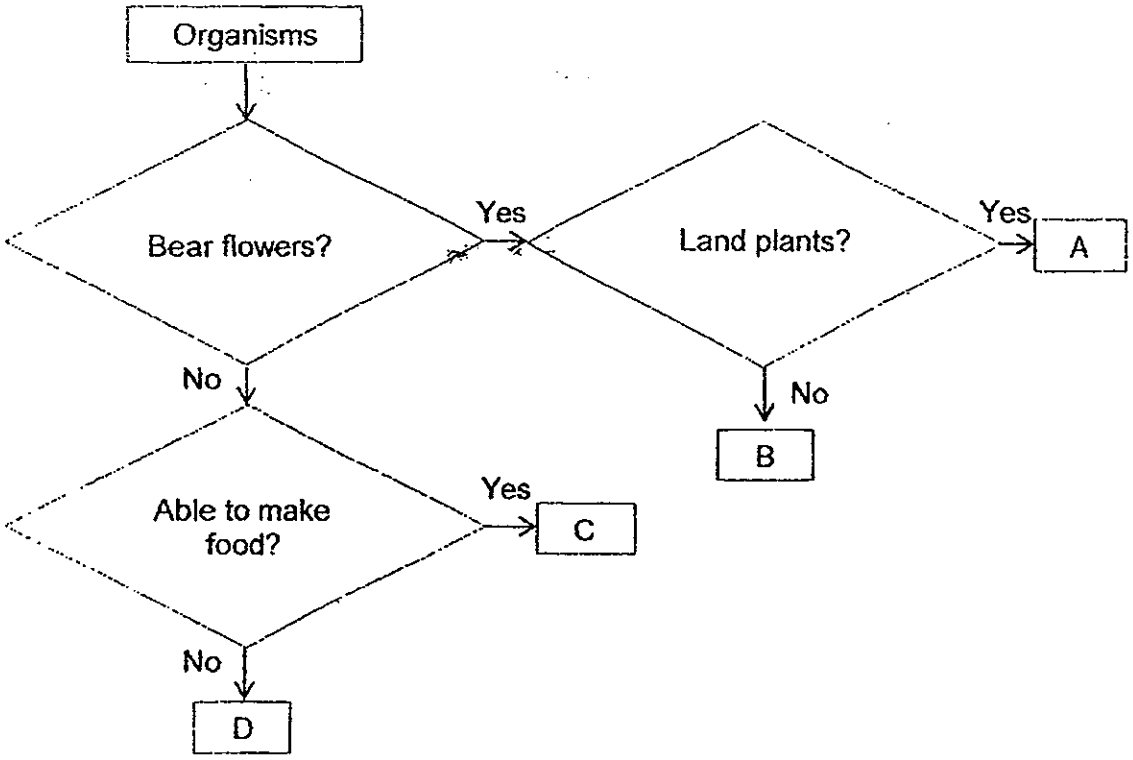
(ii) Group K: _____

_____

(Go on to the next page)

SCORE	/ 3

32. Study the flowchart below carefully.



(a) Based on the flowchart, where would you place the organisms listed below? Fill in the blanks with the letters A, B, C or D. [2]

(i) Hibiscus _____ (iii) Mushroom _____

(ii) Water Hyacinth _____ (iv) Bird's Nest Fern _____

(b) Name one similarity between organisms A and B. [1]

_____

_____

(Go on to the next page)

SCORE 3

33. Jack wrote the following statements about Animal M in his Science journal.

Animal M
Animal M lives on land.
It reproduces by laying eggs.
It has 2 body parts, 6 legs and a pair of feelers.

His teacher read it and told him that he had made a mistake with one of its characteristics.

(a) Write the correct characteristic below. [1]

_____

(b) Which group of animals does Animal M belong to? [1]

_____

34. Bacteria are tiny living things which cannot be seen with the naked eye.

(a) Which group of living things does bacteria belong to? [1]

_____

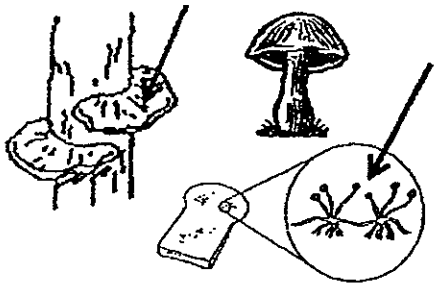
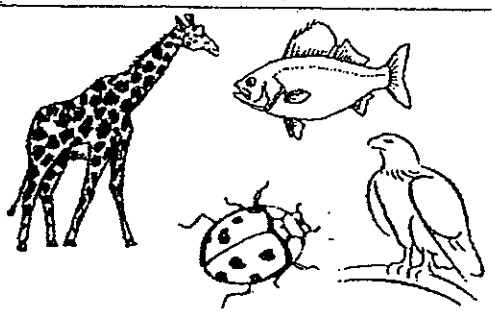
(b) What instrument can we use to help us see bacteria? [1]

_____

(Go on to the next page)

SCORE	/ 4

35. Compare the living things in Group A and Group B.

	
Group A	Group B

(a) Identify the two groups of living things above. [1]

(i) Group A:_____

(ii) Group B:_____

(b) How do the living things in Group A reproduce? [1]

_____

(c) How are the living things in Groups A and B different from plants? [1]

_____

_____

(Go on to the next page)

SCORE	/ 3

36. The table below shows the plant parts that were removed from three plants, P, Q and R.

Plants	Part that was removed
P	Roots
Q	Fruits
R	Flowers

(a) Which plant will die first? [1]

_____

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

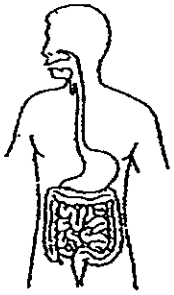
_____

_____

(Go on to the next page)

SCORE	2

37. The picture below shows the human digestive system.

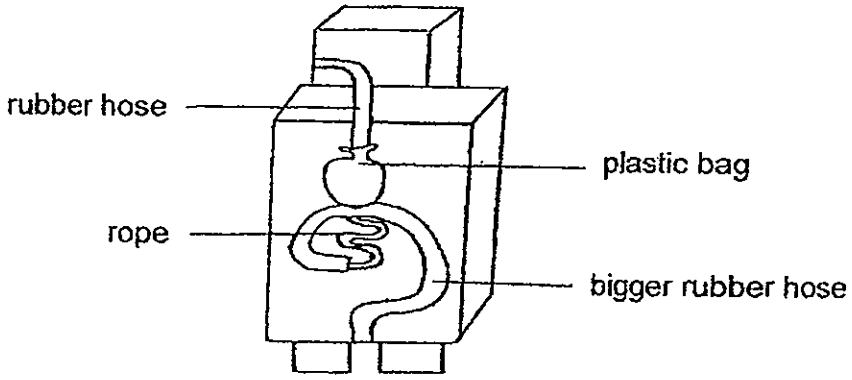


(a) What is the function of the digestive system? [1]

_____

_____

Ravi used some scrap materials to make a model, as shown below, to represent parts of the human digestive system.



(b) Name the parts of the digestive system represented by each of the scrap materials used. [1]

(i) Plastic bag :_____

(ii) Bigger rubber hose :_____

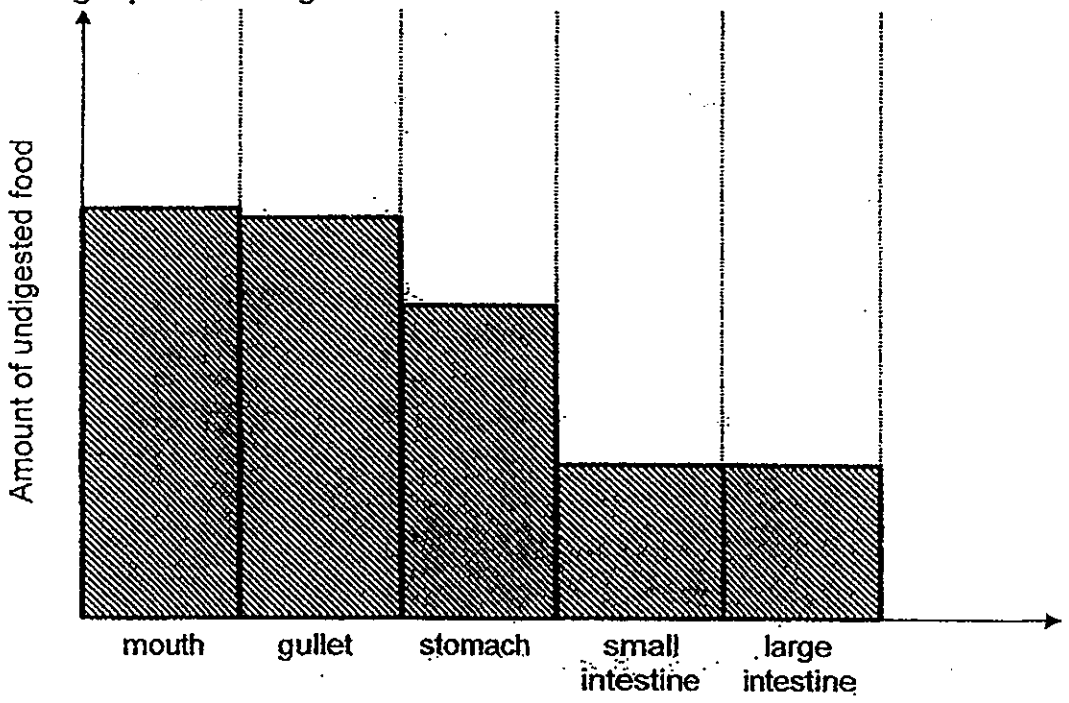
(c) Jack was down with diarrhoea (watery faeces). Which part of his digestive system was not functioning properly? [1]

_____

(Go on to the next page)

SCORE	/ 3

38. John ate a hamburger for lunch. The graph below shows how the amount of undigested food in the various parts of the digestive system changes as the hamburger passes through them.



(a) Based on the graph, at which part of the digestive system would the greatest amount of food be digested? [1]

_____

(b) Why is food not digested in the gullet? [1]

_____

(c) Which substance in our mouth helps to digest the food? [1]

_____

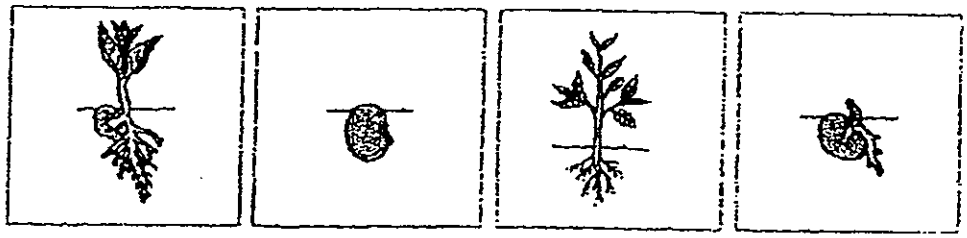
(d) At which part of the digestive system does digestion end? [1]

_____

(Go on to the next page)

SCORE	/ 4

39. The diagrams (not drawn to scale) below show the different stages of the growth of a bean seed. They are not arranged in order.



Stage A Stage B Stage C Stage D

(a) Arrange the stages of growth of a bean seed in the correct order. [1]

Stage ____ → Stage____ → Stage ____ → Stage____

(b) At which stages of the bean plant, is the plant able to make its own food? [1]

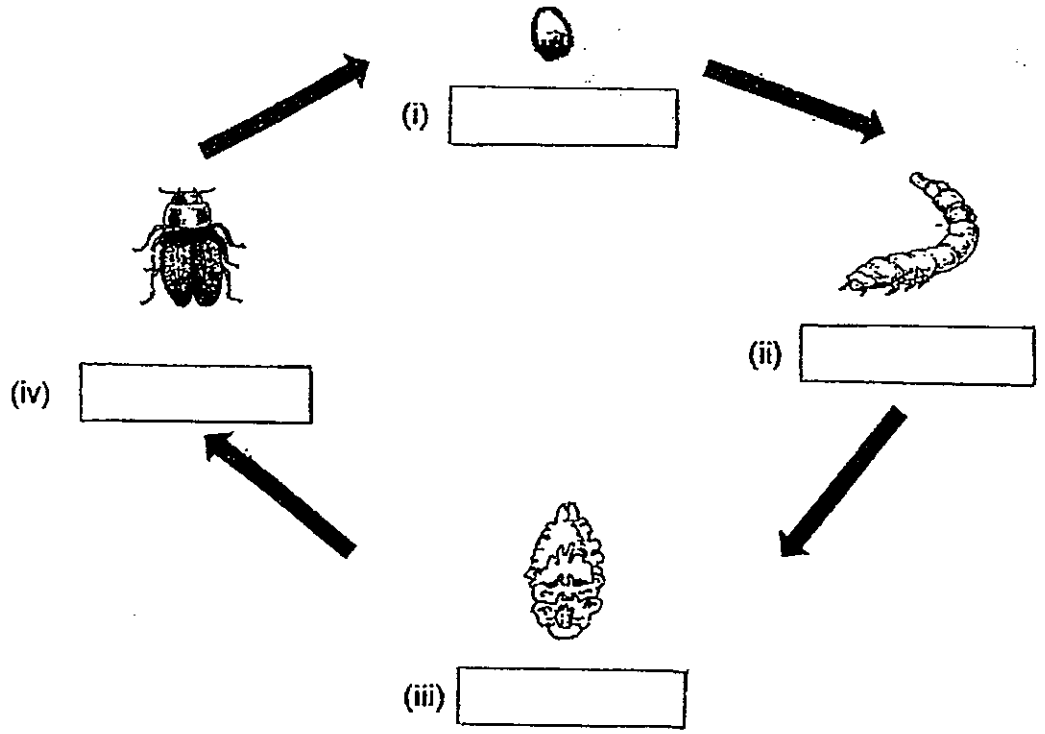
_____

(Go on to the next page)

SCORE	/ 2

40. The diagram below shows the life cycle of an animal.

(a) Fill in the boxes to complete the life cycle. [2]



(b) Which insect's life cycle is shown above? [1]

_____

(c) Study the diagram below carefully.

young adult

State a difference between the young and the adult cockroach shown above. (Do not compare shape and size.) [1]

_____

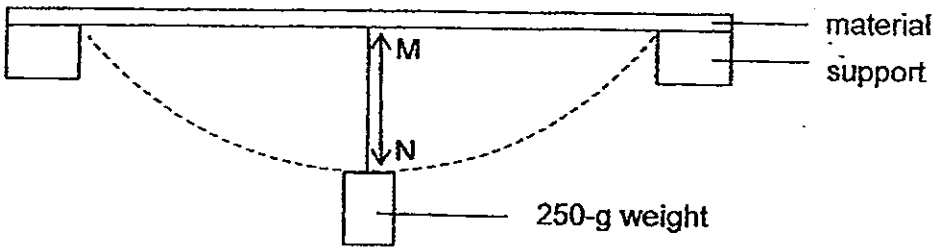
_____

(Go on to the next page)

SCORE	/4

41. Mary did an experiment with 2 different materials, P and Q, as shown in the set-up below. She placed a 250-g weight on each material. The dotted line showed what happened when she placed the weight on Material P. She measured the distance between M and N for Material P.

She then repeated the experiment with Material Q and recorded her observations in the table below.



Material	Distance between M and N (cm)
P	5
Q	0

(a) Based on the results above, which material should Mary use to make a tyre? [1]

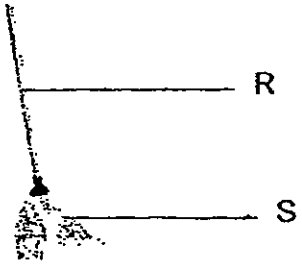
_____

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

_____

_____

(c) Name the materials used to make Parts R and S of the mop. [1]



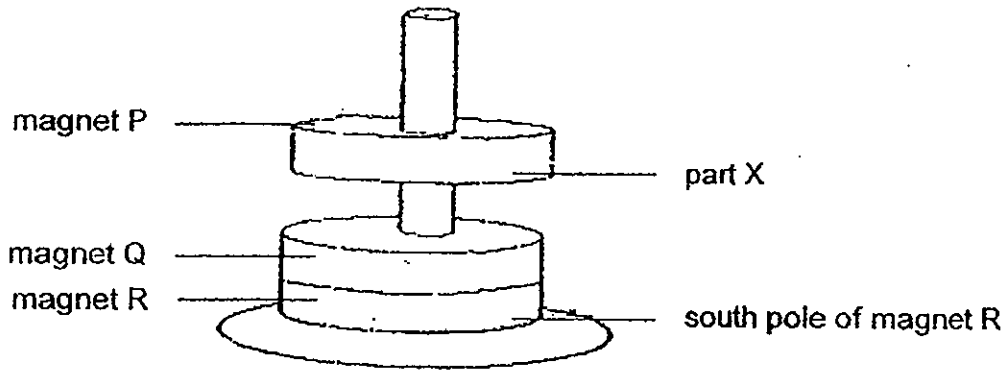
(i) R: _____

(ii) S: _____

(Go on to the next page)

SCORE	3

42. The set-up below consists of three ring magnets, supported through a wooden rod.



(a) Identify the pole of magnet P, labelled part X, that is facing magnet Q in the set-up above. [1]

_____

(b) Explain why magnet P is 'floating' in the air. [2]

_____

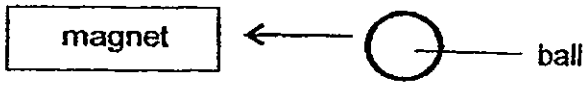
_____

_____

(Go on to the next page)

SCORE	/ 3

43. Max placed a magnet near a ball as shown below.



(a) He observed that the ball moved towards the magnet in the direction indicated by the arrow.
Name two materials that the ball can be made of. [1]

_____

(b) Explain why you would choose the two materials in part (a). [1]

_____

_____

(c) Max replaced the ball with a ping pong ball. What do you think he will observe? Give a reason to support your answer. [1]

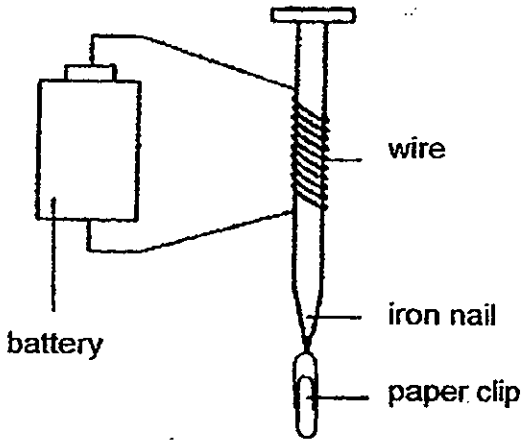
_____

_____

(Go on to the next page)

SCORE	/ 3

44. Ken coiled an electrical wire around an iron nail to make an electromagnet and connected it to a battery and some wires. He brought a paper clip towards the iron nail and observed that the paper clip was attracted to the iron nail.



(a) If the battery was removed, what would happen to the paper clip? [1]

_____

Ken then carried out the experiment again with different number of batteries and coils around the iron nail to see how many paper clips it could attract. The table below shows the results.

Number of batteries	Number of coils around the iron nail	Number of paper clips attracted
1	20	4
2	20	7
1	30	7
2	30	9

(b) From the results above, what has Ken done to increase the strength of his electromagnet? [2]

(i) _____

(ii) _____

End of Booklet B

SCORE	/ 3

Answer Ke

EXAM PAPER 2013
SCHOOL : CATHOLIC HIGH SCHOOL
SUBJECT : PRIMARY 3 SCIENCE

TERM : SA2

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

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

Booklet B

Q31

a) Birds

b) i) Group J has beaks

ii) Group K has fur

Q32

a) i) A

ii) B

iii) D

iv) C

b) Both A and B bear flowers

Q33

a) It has 3 body parts, 6 legs and a pair of feelers

b) It belongs to the insect group

Q34

a) Micro-organisms

b) A microscope

Q35
a) i) Fungi
ii) Animals
b) They reproduce bu spores
c) Living things in Group A and B cannot make their own food but plants can make their own food

Q36
a) Plant P
b) When the roots are removed the plant will not be ablt to absorb water for the plant, therefore the leaves cannot make food, so Plant P will die first

Q37
a) To break down food into simpler substances
b) i) Stomach
ii) Large intestine
c) His large intestine

Q38
a) Small intestine
b) There are no digestive juices there
c) Saliva
d) Small intestine

Q39
a) B → D→ A → C
b) Stage C and A

Q40
a) i) Egg
ii) Mealworm
iii) Pupa
iv) Mealworm beetle
b) Mealworm beetle
c) The young does not have wings while the adult has wings

Q41
a) Material

b) P is flexible
c) i) R: wood
ii) S: Fabric

Q42
a) North-pole
b) The like poles of magnet P and Q are facing each other. Like poles repel

Q43
a) Iron or nickel
b) They are both magnetic materials and a magnet can attract these materials
c) Nothing will happen. A ping pong ball is a non-magnetic item

Q44
a) The paper clip would drop
b) i) Increase the number of batteries
ii) Increase the number of coils