

Name : _____ ()

Class : Primary 3 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL



Primary 3

Semestral Assessment 2 – 2013

SCIENCE

BOOKLET A

29 October 2013

Total Time for Booklets A and B: 1 hour 45 minutes

**30 questions
60 marks**

**Do not open this booklet 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 paper consists of 16 printed pages.

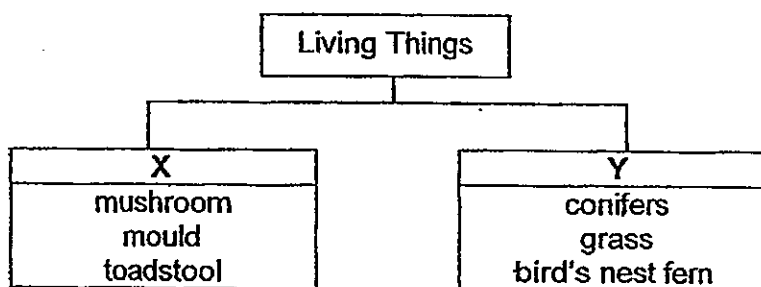
Section A : (30 x 2 marks)

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

1. Which one of the following statements about living things is not true?

- (1) All living things need food.
- (2) All living things can respond.
- (3) All living things need sunlight.
- (4) All living things can reproduce.

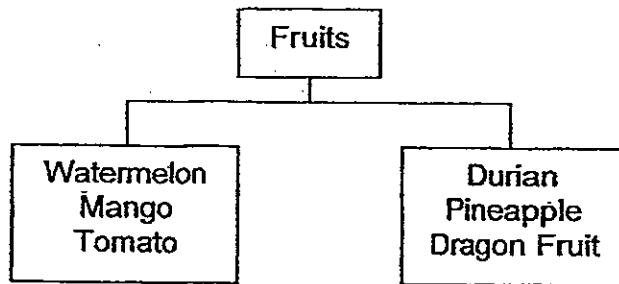
2. Study the classification chart below carefully.



Which one of the following sets of headings is the most suitable for X and Y?

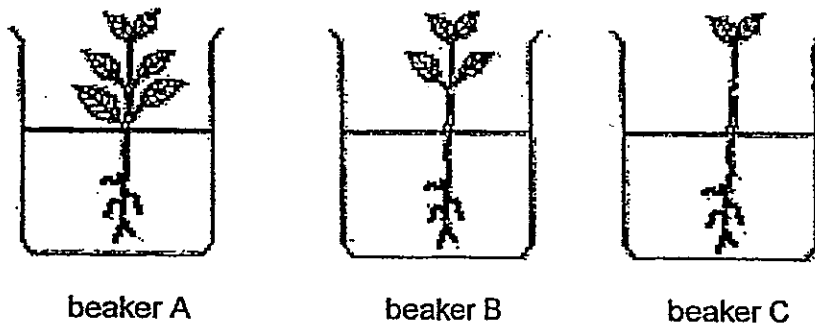
	X	Y
(1)	Reproduce by spores	Do not reproduce by spores
(2)	Do not produce fruits	Produce fruits
(3)	Cannot make food	Can make food
(4)	Flowering	Non-flowering

3. Study the classification chart below.



The fruits are grouped according to _____.

- (1) smell
 - (2) shape
 - (3) colour
 - (4) texture of skin
4. Chloe conducted an experiment with three similar plants with different number of leaves. Each plant was placed in a beaker containing 50ml of water.



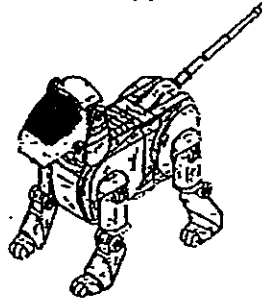
She recorded the amount of water left in the beakers after 7 days as shown below.

Beaker	Amount of water in beaker	
	Start	After 7 days
A	50ml	28ml
B	50ml	?
C	50ml	43ml

Which one of the following best represents the amount of water left in beaker B after seven days?

- (1) 15ml
- (2) 25ml
- (3) 35ml
- (4) 45ml

5. Karen saw a battery-operated robot dog in a department store perform some tricks for 5 minutes. It danced when someone clapped his hands.



robot dog

Which of the following best explains why it is not considered a living thing?

- A It does not need air.
- B It cannot respond to stimuli.
- C It cannot move freely from place to place.

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

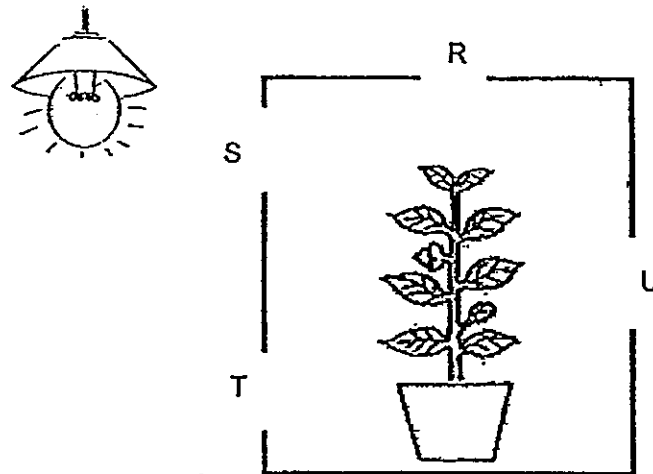
6. Study the table below carefully.

Characteristics	Plants			
	E	F	G	H
Does the plant live in water?	No	Yes	Yes	No
Are its fruits poisonous?	Yes	No	No	No
Does its fruits grow singly?	No	Yes	No	Yes

Based on the information in the table above, which one of the following statements is most likely to be true?

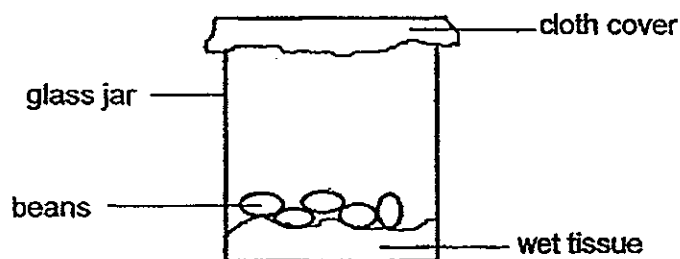
- (1) Plant H grows on land and its poisonous fruits grow in a bunch.
- (2) Plant F grows in water and it has poisonous fruits that grow singly.
- (3) Plant G grows in water and it has non-poisonous fruits that grow singly.
- (4) Plant E grows on land and it has poisonous fruits that grow in a bunch.

7. A pot of plant was placed in a wooden box with four holes R, S, T and U. The box is then left in a room with a single light source as shown in the diagram below.



Based on the diagram above, which hole, R, S, T or U, will the plant most likely grow towards after a few days?

- (1) R
 - (2) S
 - (3) T
 - (4) U
8. Serene conducted an experiment to grow some beans using the set-up shown below. After three weeks, none of the beans grew into seedlings.



Which one of the following statements best explains why the beans did not germinate?

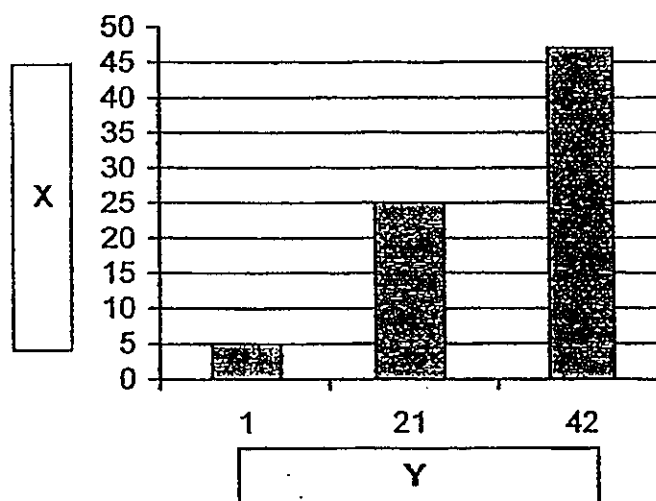
- (1) There was no soil in the glass jar.
- (2) Air could not pass through the cloth cover.
- (3) The glass jar was placed in the refrigerator.
- (4) Sunlight could not pass through the cloth cover.

9. Which of the following statements about bacteria are true?

- A Some bacteria can be useful.
- B Bacteria do not need air and water.
- C All bacteria can make their own food.
- D Bacteria can only be seen using a microscope.

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

10. Sam caught 5 cockroaches and kept them in a container with some bread. After some weeks, he observed that there were more cockroaches. He recorded his observations in the graph below.



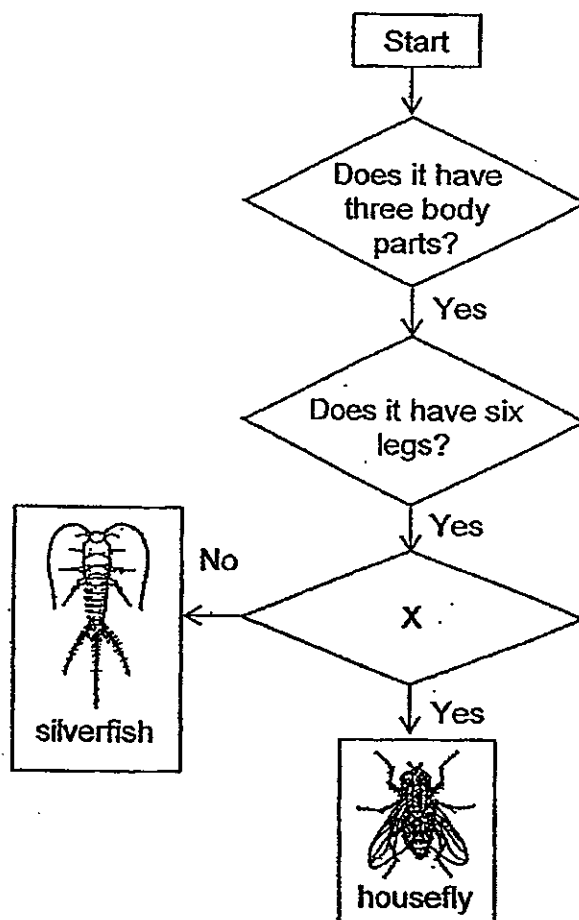
Which one of the following best represents X and Y?

	X	Y
1	Number of days	Number of cockroaches
2	Number of cockroaches	Number of days
3	Amount of bread	Number of cockroaches
4	Number of cockroaches	Amount of bread

11. Which one of the following actions best identifies a bird?

- (1) Observe the body covering
- (2) Observe the number of legs
- (3) Observe the diet of the animal
- (4) Observe if the animal lays eggs

12. Tracy observed two adult animals over a period of time and recorded her observations in the flowchart below.



Base on the above flowchart, which one of the following questions is the most suitable for X?

- (1) Does it have wings?
- (2) Does it have feelers?
- (3) Does it have an abdomen?
- (4) Does it have three body parts?

13. Which of the following body systems directly enable the human body to move?

- A Skeletal System
- B Muscular System
- C Digestive System
- D Circulatory System

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

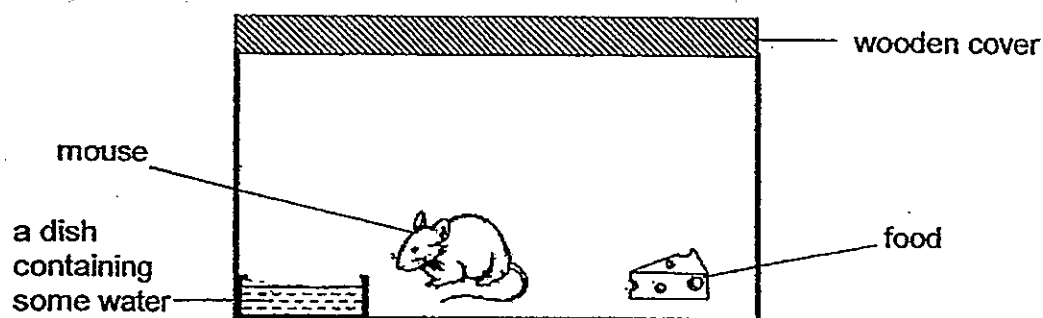
14. Janice made some observations of three animals over a period of time in a table as shown below.

Animal		
A	B	C
Has gills	Has lungs	Has lungs
Can swim	Can swim	Can swim
Has scales	Has hair	Has feathers
Gives birth to young alive	Gives birth to young alive	Lays eggs

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

	Animal		
	A	B	C
(1)	Guppy	Elephant	Platypus
(2)	Seal	Penguin	Molly
(3)	Penguin	Seal	Guppy
(4)	Swordtail	Polar Bear	Penguin

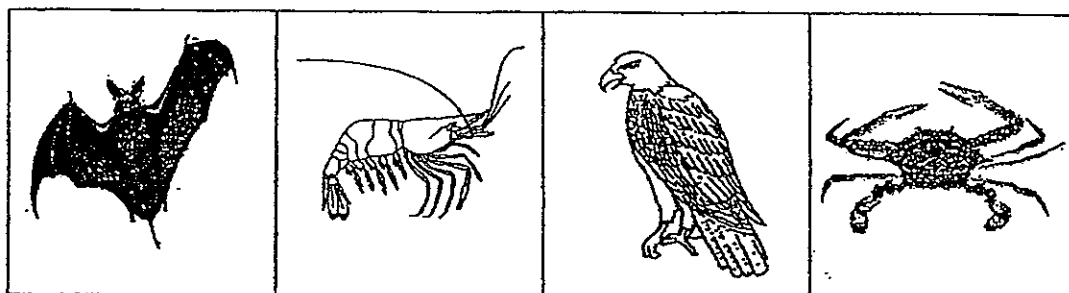
15. Adrian kept a mouse in a metal container with a wooden cover. He put some water and food for the mouse as shown in the diagram below.



Adrian's father told him that the mouse would not be able to survive for more than a day. What must he do in order to allow the mouse to survive the day?

- (1) Provide it with more food.
- (2) Provide it with more water.
- (3) Make some holes in the wooden cover.
- (4) Change the wooden cover to a glass one to allow some light in.

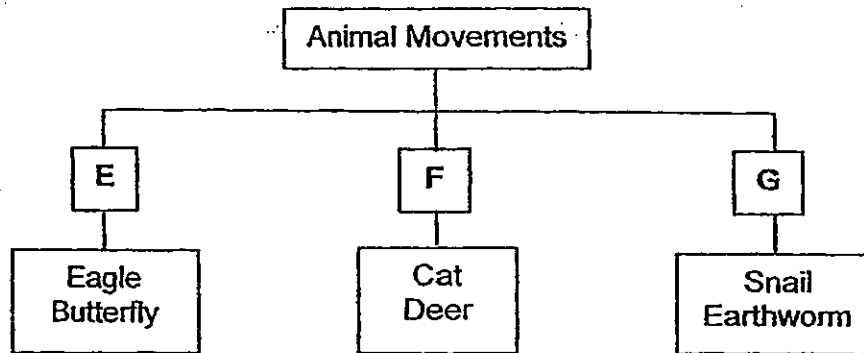
16. Study the animals below carefully.



To classify the animals shown above into 2 groups with only 2 animals in each group, which one of the following sets of headings is not appropriate?

	Group 1	Group 2
(1)	Do not have more than 4 legs	Have more than 4 legs
(2)	Do not have wings	Have wings
(3)	Birds	Not birds
(4)	Can live in water	Cannot live in water

17. The classification chart below shows how some animals are grouped.



In which of the above groups E, F or G should the bat and ostrich be placed?

	Bat	Ostrich
(1)	Group E	Group E
(2)	Group F	Group E
(3)	Group F	Group G
(4)	Group E	Group F

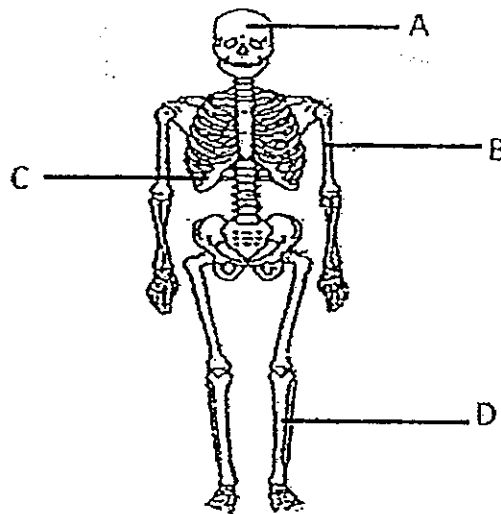
18. Kelly observed the following organisms in a garden.

- Toad
- Moth
- Grass

Which one of the following characteristics is **not** common to the three organisms?

- (1) They can reproduce.
- (2) They need air to survive.
- (3) They need water to survive.
- (4) They can move freely from place to place.

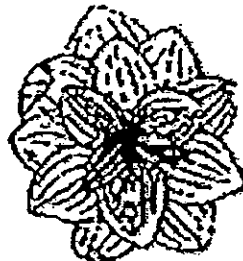
19. The diagram below shows a human skeletal system.



Which part(s) of the skeletal system labelled above protect(s) the major organs?

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

20. The diagram below shows the arrangement of the leaves of a plant as seen from the top.



Which one of the following statements best explains how this arrangement of the leaves helps the plant to make more food?

- (1) It helps the plant to take in more air.
- (2) It helps the plant to take in more light.
- (3) It helps the plant to absorb more nutrients.
- (4) It helps the plant to absorb more rainwater.

21. Which of the following statements about saliva are true?

- A Saliva is a liquid.
- B Saliva helps to digest food.
- C Saliva makes food easier to swallow.
- D Saliva helps food to be absorbed in the stomach.

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

22. Which one of the following statements is true about seeds?

- (1) Seeds are not living things.
- (2) Seeds help the plant to reproduce.
- (3) Seeds help the plant to make food.
- (4) Seeds can only grow when they are exposed to sunlight.

23. Which of the following are functions of the roots of a plant?

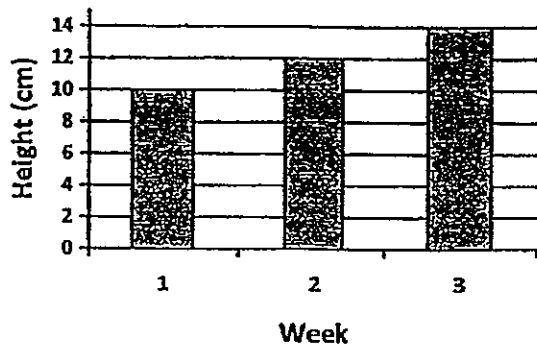
- A absorbs water for the plant
- B absorbs mineral salts for the plant
- C anchors the plant firmly to the ground

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

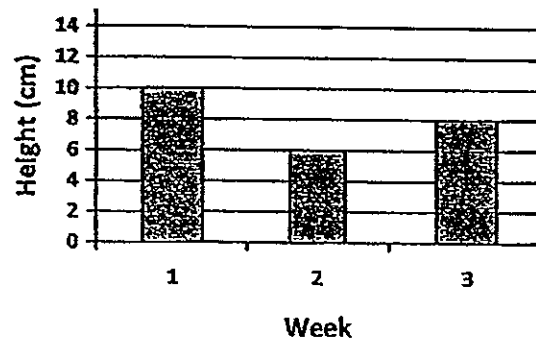
24. Elaine put a pot of plant near a window and watered it daily. She observed her plant growing healthily over three weeks.

Which one of the following graphs best represents the plant's growth?

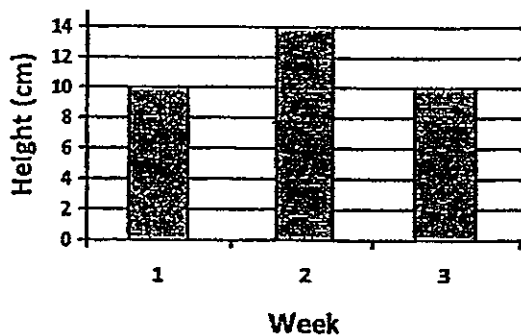
(1)



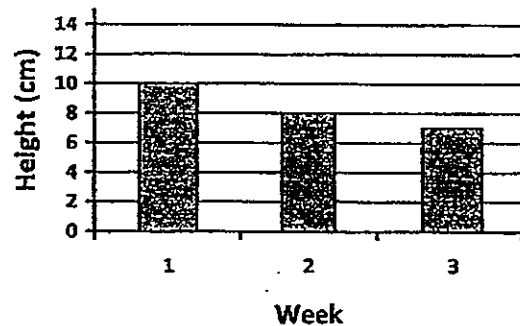
(2)



(3)



(4)



25. The following properties are observed of a raincoat.

- A It can float.
- B It is flexible.
- C It is waterproof.
- D It is transparent.

Which of the above properties are the main reasons for using plastic to make raincoats?

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

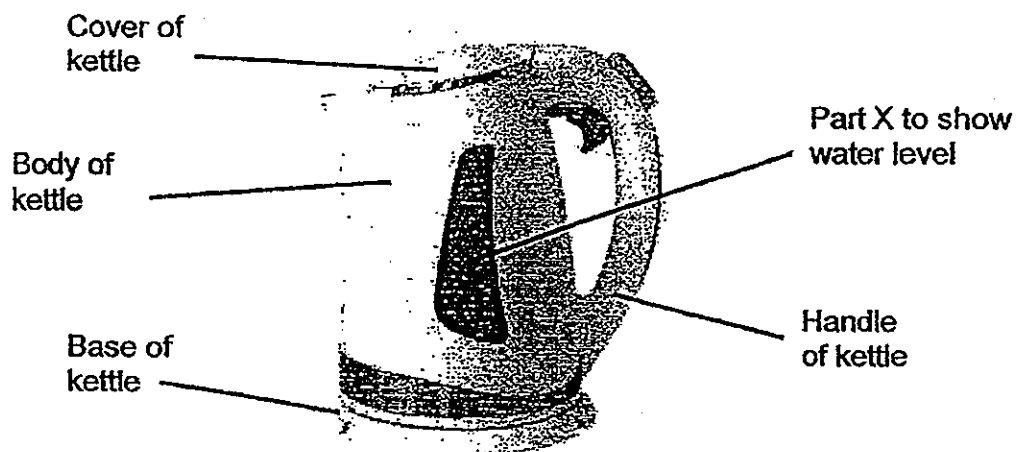
26. Mark conducted an experiment to investigate the hardness of four different materials L, M, N and O. He used the sharp corner of a plastic ruler and a wooden toothpick to scratch each of these materials. He recorded his observations in the table below.

Objects used	Scratch marks observed on materials?			
	L	M	N	O
plastic ruler	yes	no	no	no
wooden toothpick	yes	yes	yes	no

Based on the results shown above, which one of the following conclusions is correct?

- (1) Material L is the hardest.
- (2) Material O is the strongest.
- (3) Material L, M and O are harder than wood.
- (4) Material M, N and O are harder than plastic.

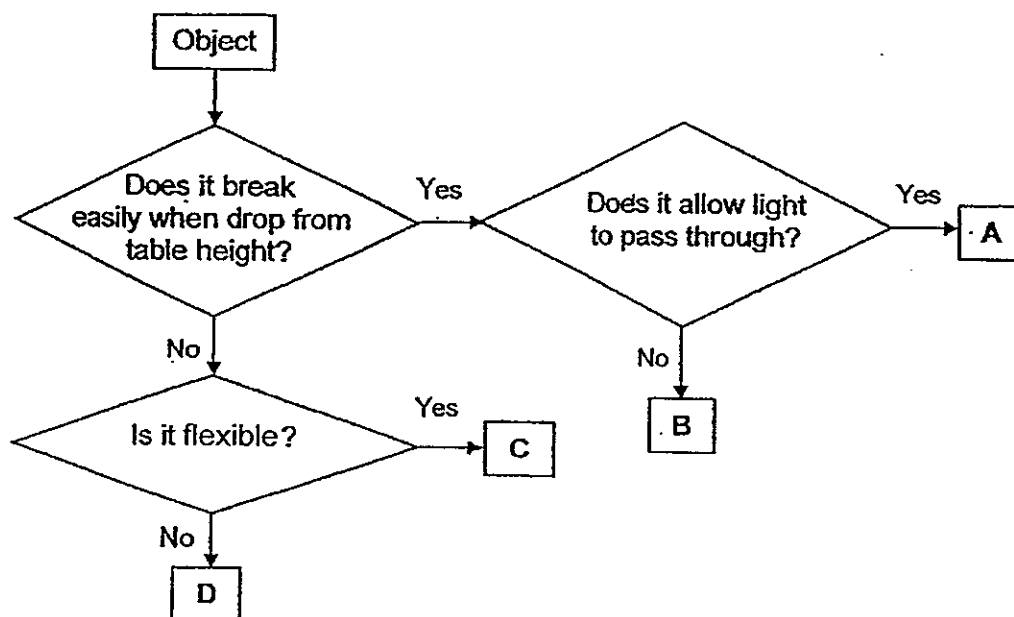
27. The picture below shows the various plastic parts of an electric kettle.



Which one of the following properties of plastic is observed only in part X of the kettle?

- (1) It is light.
- (2) It is hard.
- (3) It is waterproof.
- (4) It is transparent.

28. Study the flowchart below.



Which one of the following best represents A, B, C and D respectively?

	A	B	C	D
(1)	Fish tank	Wooden bowl	Plastic ruler	Paper cup
(2)	Plastic ruler	Glass mug	Wooden chopsticks	Knife
(3)	Glass mug	Ceramic bowl	Eraser	Metal spoon
(4)	Magnifying glass	Wooden chopsticks	Textbook	Glass mug

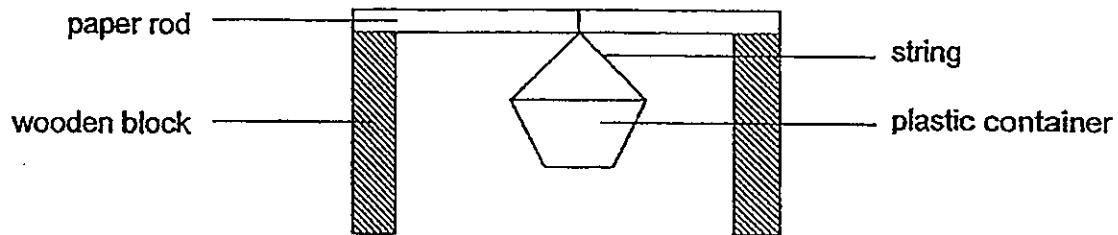
29. The table below shows some objects being classified into group E and F.

Group E	Group F
Plastic bags	Paper bags
Styrofoam box	Cardboard box
Rubber gloves	Cotton gloves

Which one of the following properties is used to classify the objects?

- (1) strength
- (2) flexibility
- (3) hardness
- (4) ability to absorb water

30. Angelina set up an experiment to find out the strength of 4 different types of paper cut to the same size. Each type of paper was rolled into a rod of similar size before being placed on two blocks of wood. A plastic container was hung onto the rods with some strings.



Angelina put one-dollar coins into the plastic container, one at a time, until the paper rod bent. She recorded her findings in the table below.

Type of paper rod	Number of one-dollar coin
Construction paper	20
Magazine paper	14
Wrapping paper	10
Newspaper	15

Based on the results shown in the table above, we can conclude that

- (1) construction paper is heavier than newspaper
- (2) wrapping paper is harder than magazine paper
- (3) newspaper is less flexible than wrapping paper
- (4) magazine paper is stronger than wrapping paper

End of Section A

Name : _____ ()

Class : Primary 3 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL



Primary 3

Semestral Assessment 2 – 2013

SCIENCE

BOOKLET B

29 October 2013

Total Time for Booklets A and B: 1 hour 45 minutes

14 questions
40 marks

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

This paper consists of 15 printed pages.

Booklet A	60
Booklet B	40
Total	100

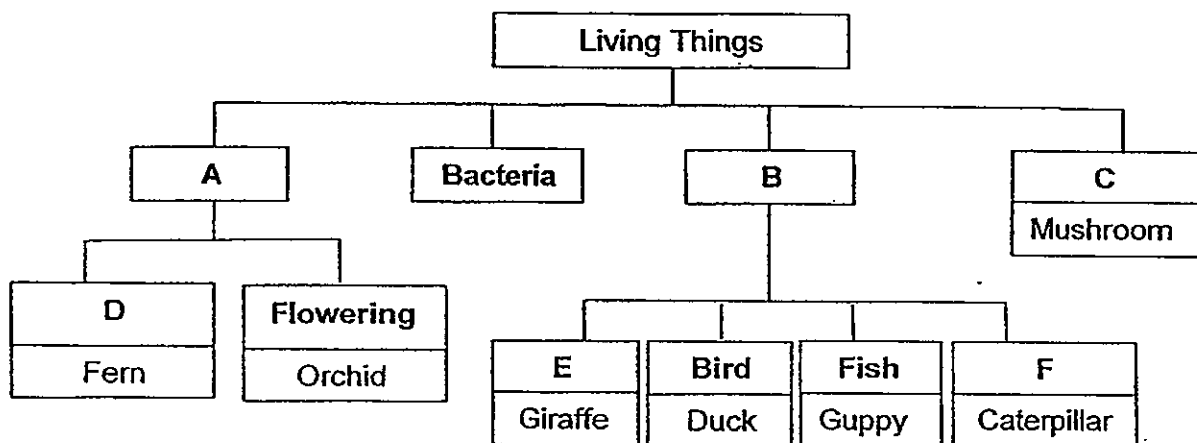
Parent's Signature/Date

Section B : (40 marks)

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

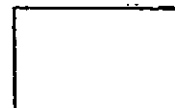
The number of marks available is shown in brackets [] at the end of each question or part question.

31. Study the classification chart below carefully.

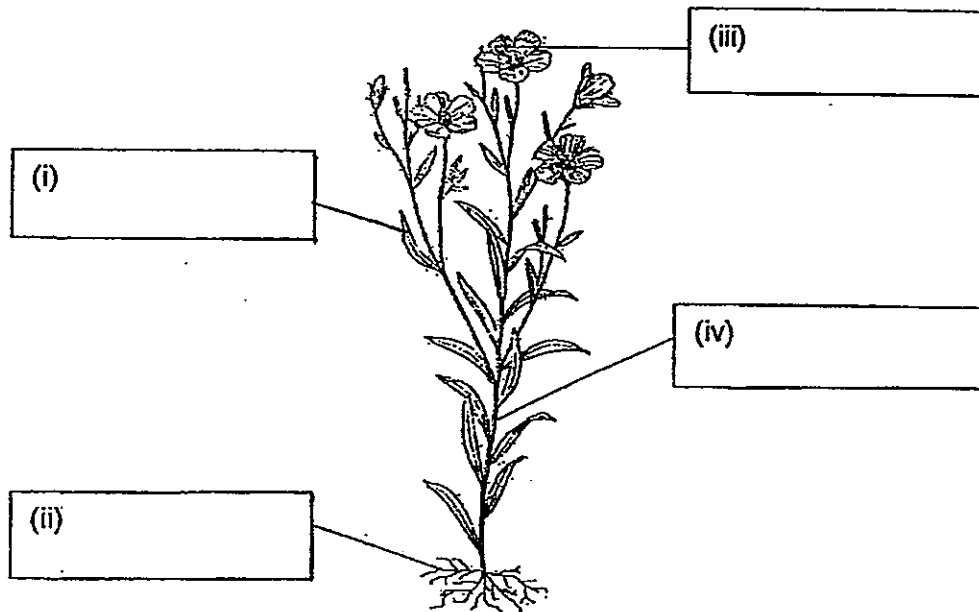


Complete the classification chart above by identifying suitable headings for A, B, C, D, E and F. [3]

Unknown	Heading
A	
B	
C	
D	
E	
F	



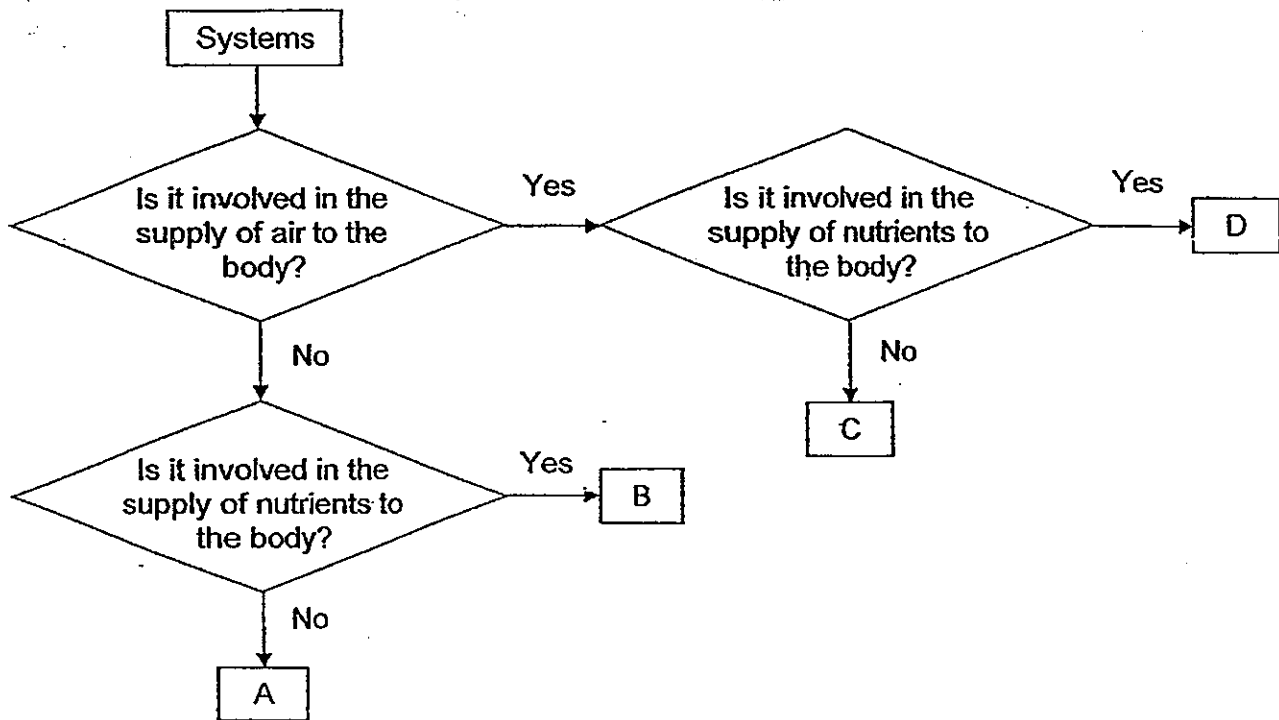
32. The diagram below shows a plant.



Identify the parts of the plant by filling in the blanks (i), (ii), (iii) and (iv) in the diagram above. [2]



33. Study the flowchart below on the various body systems.



(a) Base on the flowchart above, which system(s) can be represented by A? [1]

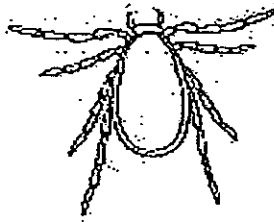
(b) Which system(s), A, B, C or D, do the following organs belong to? [1]

Heart: _____

Blood Vessels: _____



34. The diagram below shows an organism. Cherie states that the organism is an insect.

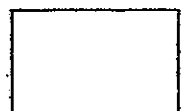


Based on what is observable in the above diagram, give two reasons why Cherie has made a wrong conclusion.

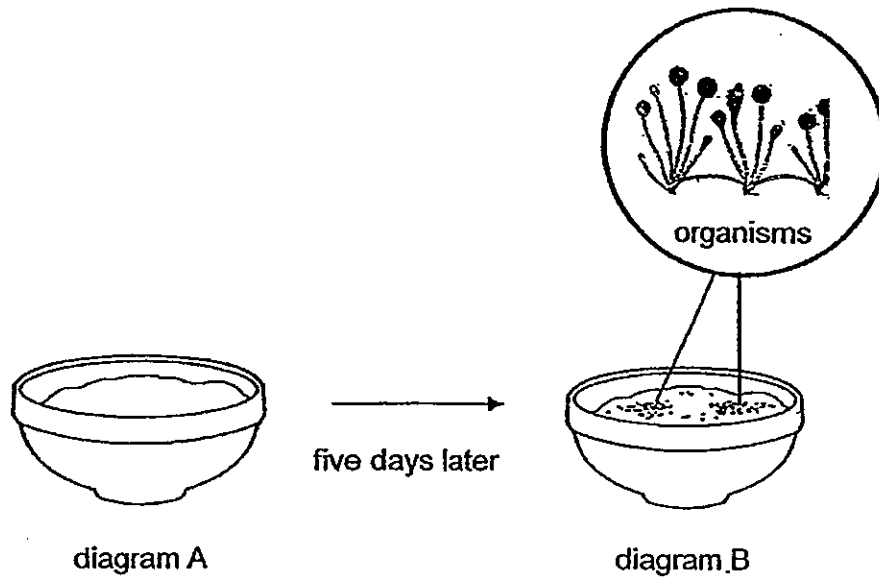
[2]

(a) _____

(b) _____



35. A bowl of porridge was left on a table as shown in diagram A. Some organisms were seen growing on the bowl of porridge after five days as shown in diagram B.



- (a) What were the organisms that were observed growing on the bowl of porridge after five days? [1]

- (b) Name three conditions that were present that allow the organisms to grow on the bowl of porridge. [3]

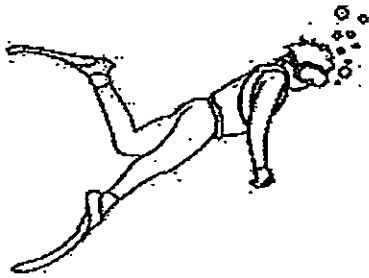
(i) _____

(ii) _____

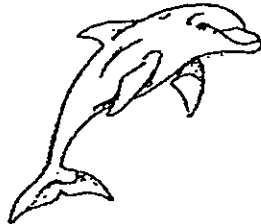
(iii) _____



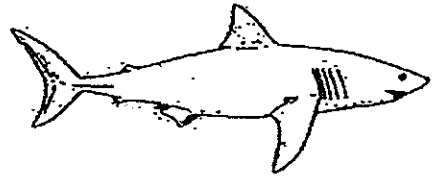
36. The diagram below shows three organisms.



man



dolphin



shark

(a) Which two organisms have the same breathing organ?

[1]

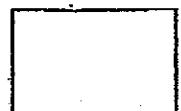
(b) Name the animal group that each of the above three organisms belongs to.

[3]

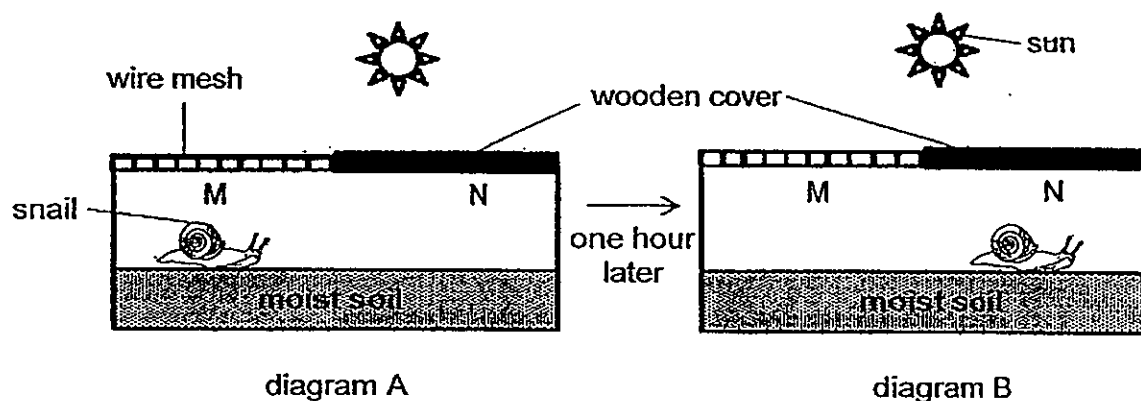
(i) Man: _____

(ii) Dolphin: _____

(iii) Shark: _____

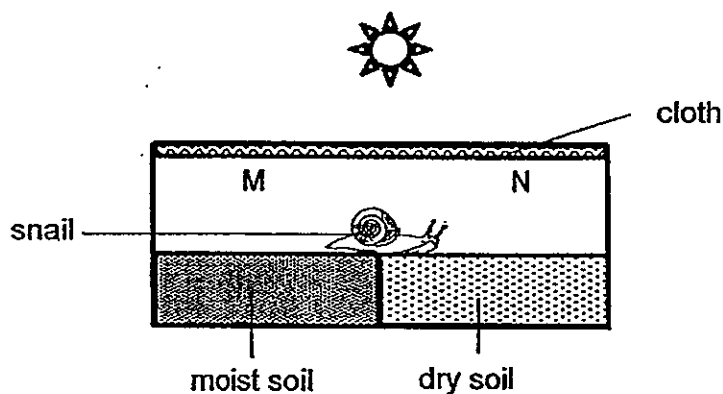


37. Jane set up an experiment in her garden to find out if snails prefer a bright and warm environment or a shaded and cool environment. She placed a snail on side M of the container as shown in diagram A. She observed that the snail moved to side N of the container after an hour as shown in diagram B.



- (a) Based on the diagram above, what conclusion can she draw about the snail's preference of its environment? [1]

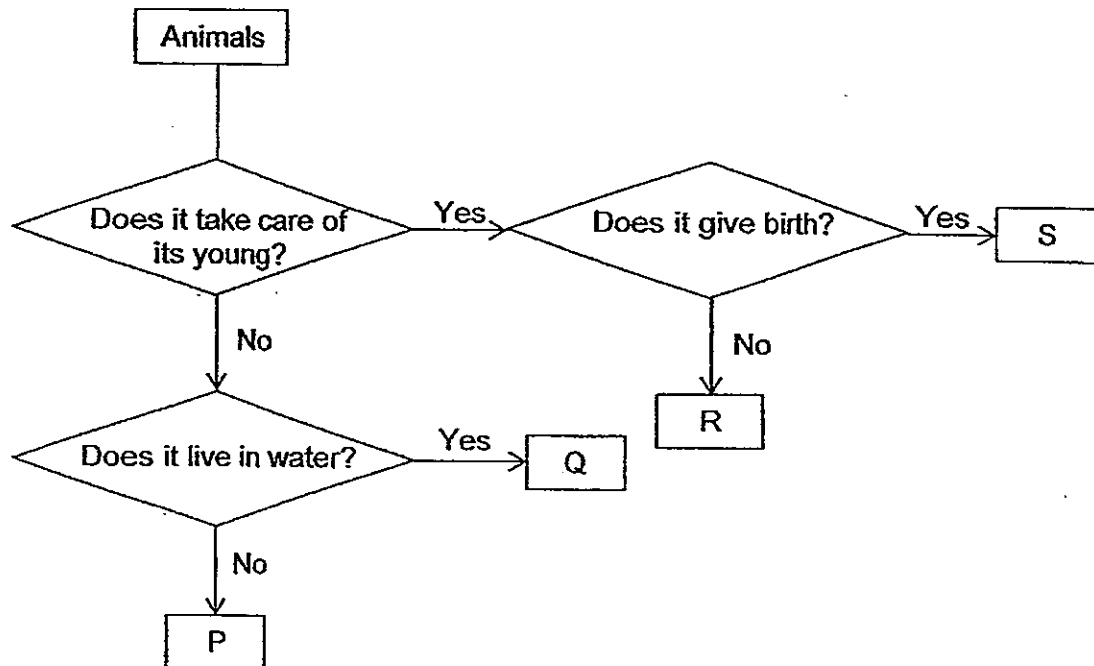
Jane took another container and placed an equal amount of moist soil and dry soil in it before placing a snail in the middle of the container as shown below.



- (b) Based on the experimental set-up above, what is the aim of the experiment? [1]

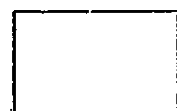
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38. The flowchart below shows how animals P, Q, R and S have been classified.

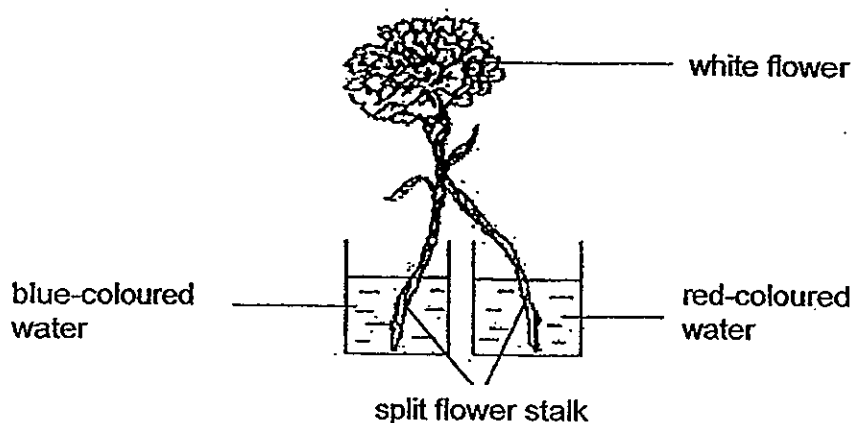


- (a) Based on the information in the above flowchart, state the similarity between animal R and S. [1]

- (b) Based on the information in the above flowchart, state the difference between animal P and Q. [1]

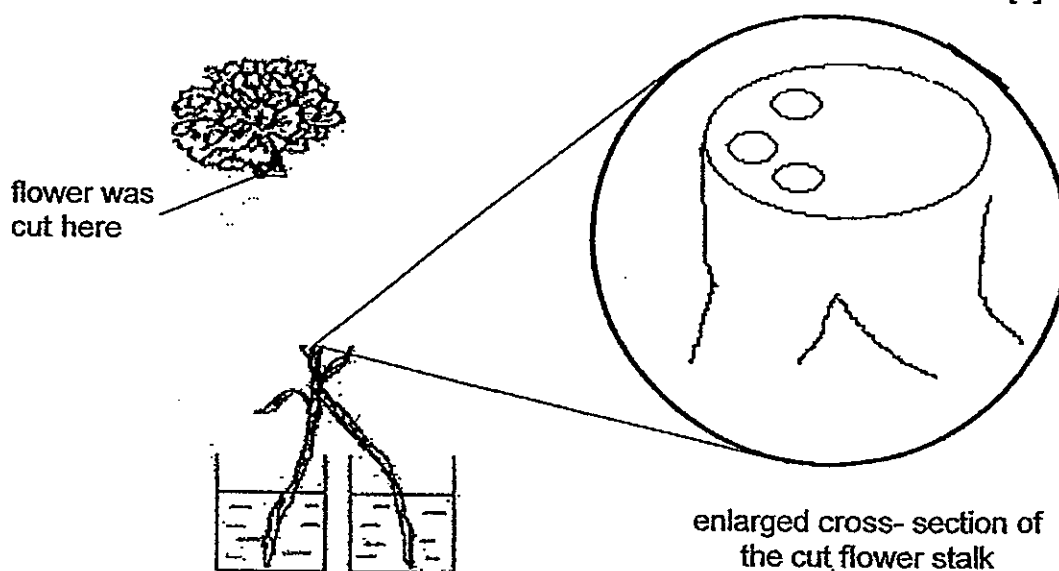


39. Stella split the stalk of a flower into two and set up an experiment as shown below.

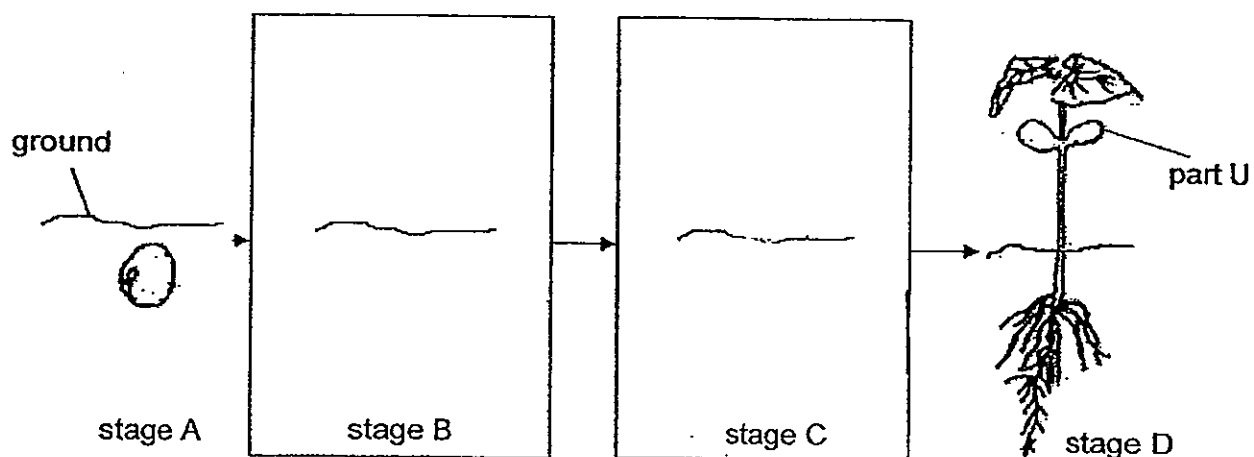


- (a) Stella observed that the flower turned both red and blue in colour after one day. Suggest a reason for her observation. [2]

- (b) Stella then cut and removed the flower as shown below. In the enlarged cross-section of the cut flower stalk, shade the part of the cross-section that was stained RED. [1]



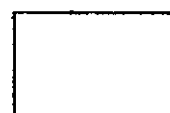
40. The diagram below shows the stages in the growth of a bean seed.



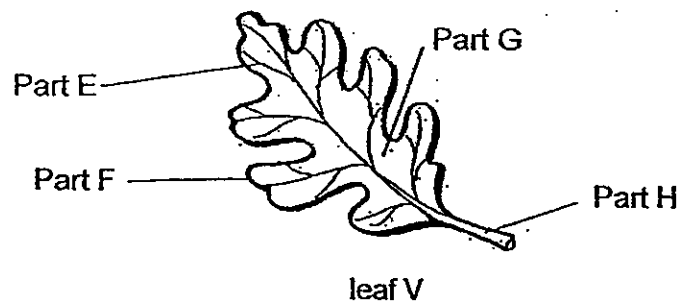
(a) Draw the growth of the seed in stage B and C. [2]

(b)(i) Identify part U shown above. [1]

(ii) What is the function of part U? [1]



41. The diagram below shows a leaf.



(a) Identify the following parts of the leaf.

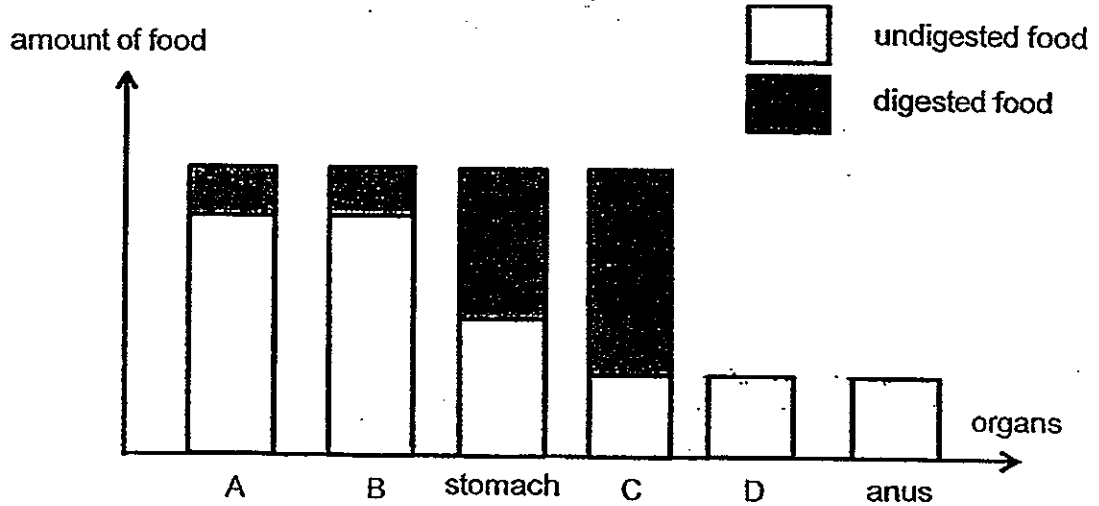
[2]

Part E	
Part F	
Part G	
Part H	

(b) What will happen to a plant if its leaves are continuously removed over two months? [2]



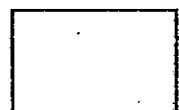
42. The bar graph below shows the amount of digested and undigested food found in different parts of the digestive system as food passes through them one after another.



- (a) Name the organs represented by A, B, C and D. [2]

Letter	Organ
A	
B	
C	
D	

- (b) What happens to the digested food in organ C? [1]



43. The table below shows the properties of materials E, F and G.

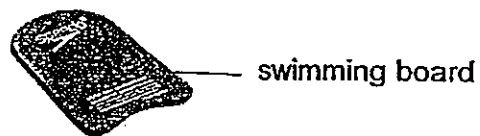
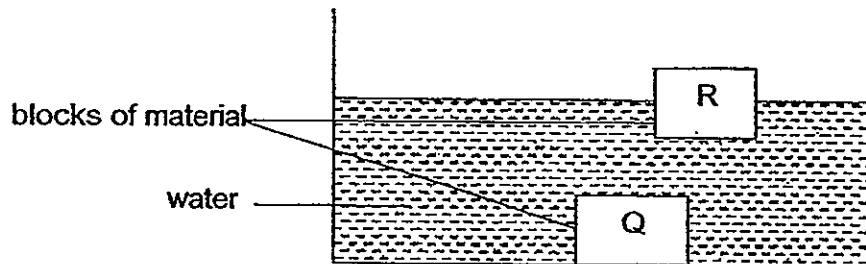
Property	E	F	G
Heavy	✓		
Flexible			✓
Waterproof	✓	✓	✓
Transparent		✓	
Breaks easily		✓	

Based on the table above, identify the materials E, F or G that is most suitable for making the following objects. [3]

Objects	Materials
Fish bowl	
Padlock	
Rubber band	



44. Justine placed two similarly sized blocks Q and R, each made of a different material, into a tank of water and the diagram below showed what she observed.



- (a) Based on the results of the above experiment, which material, Q or R, is more suitable to be used to make a swimming board for children to learn swimming? [1]

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

End of Paper



Answer Ke

EXAM PAPER 2013

SCHOOL : CHIJ ST NICHOLAS GIRLS' SCHOOL

SUBJECT : PRIMARY 3 SCIENCE

TERM : SA2

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

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

Section B

Q31)

Unknown	Heading
A	Plants
B	Animals
C	Fungi
D	Non-flowering
E	Mammal
F	Insect

Q32

- i) Leaf
- ii) Roots
- iii) Flower
- iv) Stem

Q33

- a) Skeletal and muscular system
- b) Heart: D

Blood Vessels: D

Q34

- a) An insect has 3 body parts while this organism does not have three body parts
- b) An insect has 6 legs while this organism has eight legs

Q35

- a) They were fungi
- b) i) It had warmth
 - ii) It had food
 - iii) It had moisture

Q36

- a) Man and dolphin
- b) i) Man: Mammal
 - Dolphin: Mammal
 - Shark: Fish

Q37

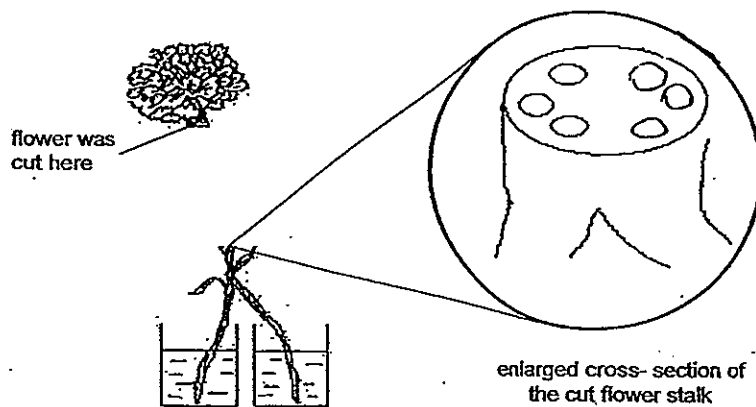
- a) The snail prefers a shaded and cool environment to a bright and warm environment
- b) The aim was to see if the snail preferred wet sand or dry sand

Q38

- a) Both animal R and S takes care of its young
- b) Animal Q lives in the water while animal P does not live in water

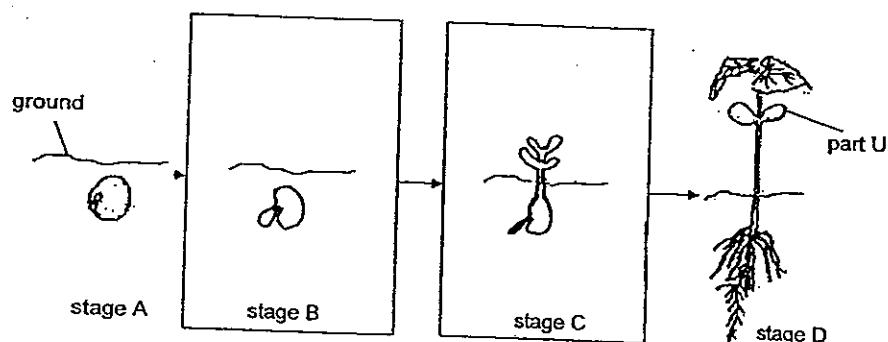
Q39

- a) The stem absorbed the coloured water and the xylem tubes which carry the water is taken to the flower
- b)



Q40

a)



b) i) The seedleaf

ii) Part U provides the seedling with food when the seedling has not grown any leaves yet and thus cannot make its own food

Q41

a)

E	Leaf vein
F	Leaf Edge
G	Leaf blade
H	Leaf stalk

b) The plant will wither. The leaves of a plant help it to make food. If the leaves are continuously removed, the plant will not have any food and hence will die.

Q42

a)

Letter	Organ
A	Mouth
B	Gullet
C	Small intestine
D	Large intestine

b) The digested food will be absorbed through the intestinal walls into the blood vessels

Q43

Objects	Materials
Fish bowl	F
Padlock	E
Rubber band	G

Q44

a) Material R

b) The swimming board is to be used by the children to learn swimming, hence it should float so as to support the children.