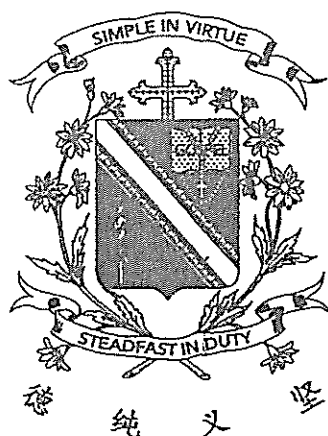


Name: _____ ()

Class: Primary 3 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL



Primary 3

Semestral Assessment 2 – 2014

SCIENCE

Booklet A

30th October 2014

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

24 Questions

48 Marks

Do not open this booklet until you are told to do so.

Follow all instructions carefully.

Answer all questions.

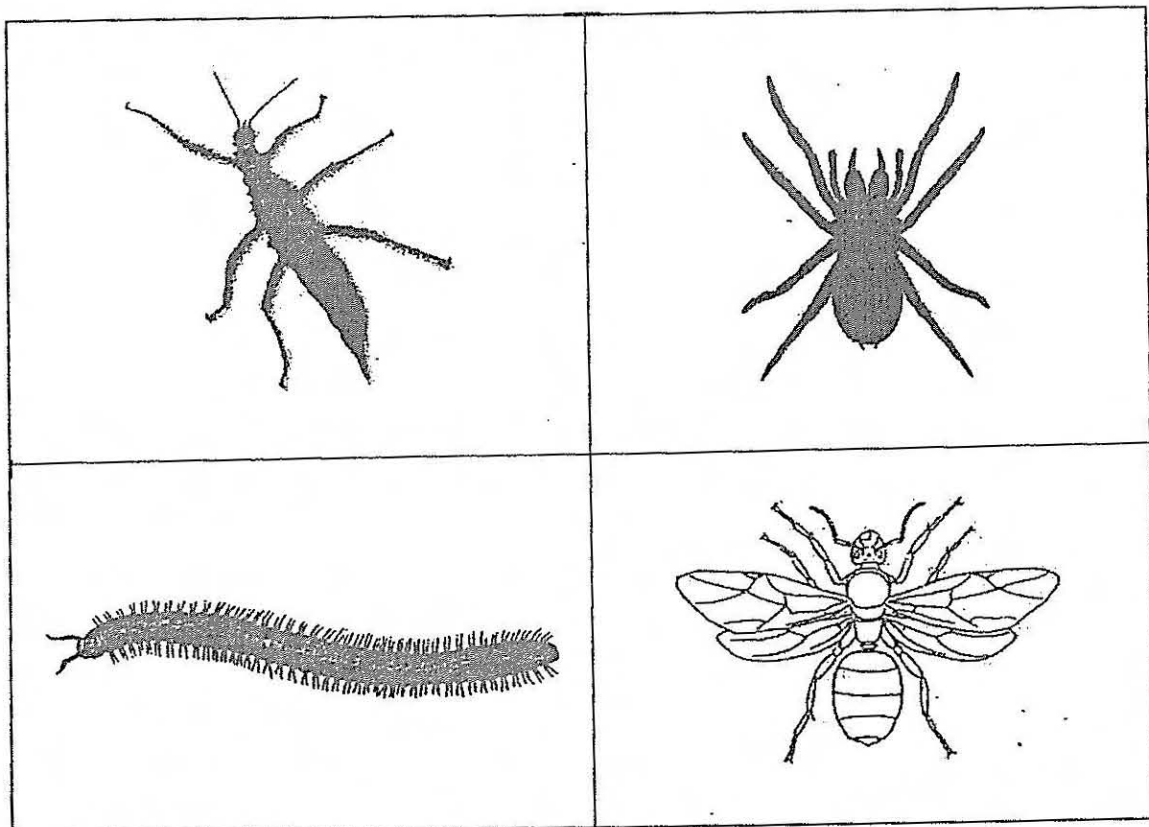
Shade your answers in the Optical Answer Sheet (OAS) provided.

This paper consists of 18 printed pages including this cover page.

SECTION A (MULTIPLE-CHOICE QUESTIONS) [24 x 2 marks = 48 marks]

For each question from 1 to 24, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet (OAS) provided.

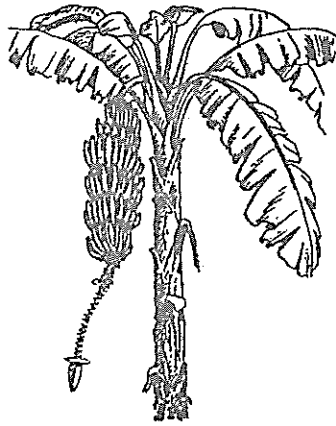
1. The diagram below shows 4 organisms.



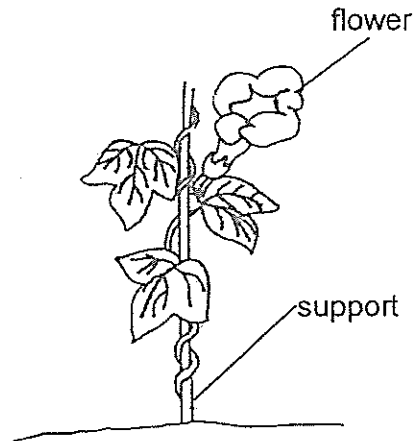
Sharon wants to classify the above animals into 2 groups with only 2 organisms in each group, which one of the following sets of headings will not be appropriate?

	Group 1	Group 2
(1)	Have more than 6 legs	Have 6 legs
(2)	Insects	Non-insects
(3)	Have more or less than 3 body parts	Have 3 body parts
(4)	Have wings	Do not have wings

2. The diagram below shows two plants.



Banana plant



Morning glory plant

Based only on what is **observable** in the diagram above, how is the banana plant similar to the morning glory plant?

- A Both have roots
- B Both have fruits.
- C Both have stems.
- D Both have leaves.

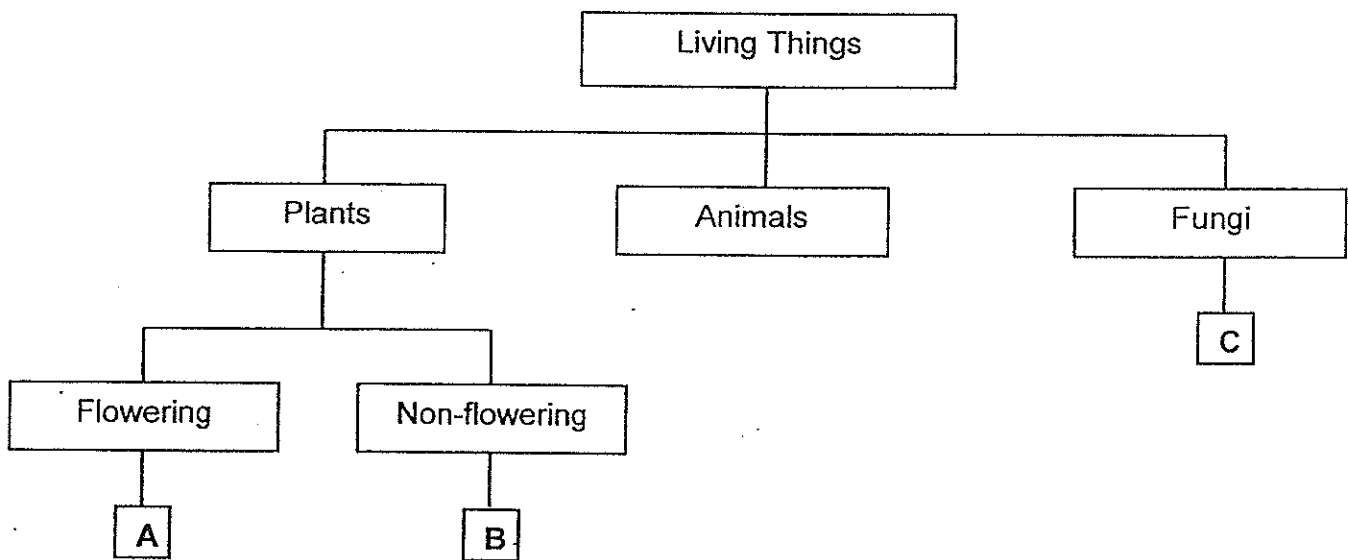
- (1) A and B only
- (2) C and D only
- (3) A, C and D only
- (4) A, B, C and D

3. Which of the following statements are true of all living things?

- A They are able to grow.
- B They can move freely from place to place.
- C They reproduce by giving birth to live young.
- D They can respond to changes in the environment.

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

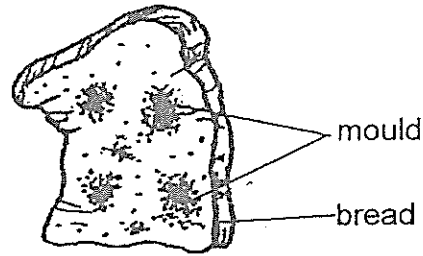
4. The classification chart below shows how organisms, A, B and C, have been classified.



Which one of the following identifies A, B and C correctly?

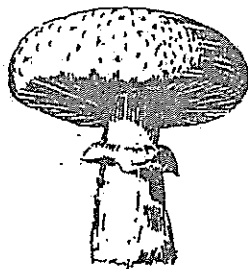
	A	B	C
(1)	papaya tree	balsam plant	yeast
(2)	rain tree	toadstool	moss
(3)	sunflower plant	staghorn fern	mushroom
(4)	bracket fungus	bread mould	staghorn fern

5. Harry placed a piece of bread on the dining table. After one week, he observed mould growing on the bread as shown below.

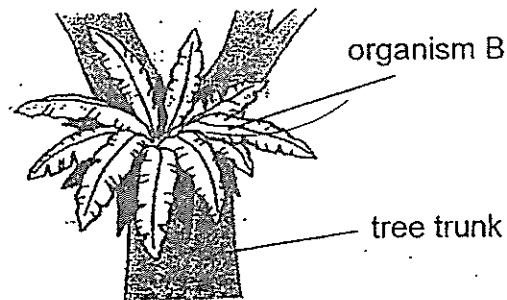


What can Harry do to slow down the growth of mould on his bread?

- (1) Add water to the bread.
 - (2) Place the piece of bread in the fridge
 - (3) Cover the piece of bread with a cloth.
 - (4) Place the piece of bread in the cupboard.
6. The diagram below shows two organisms, A and B.



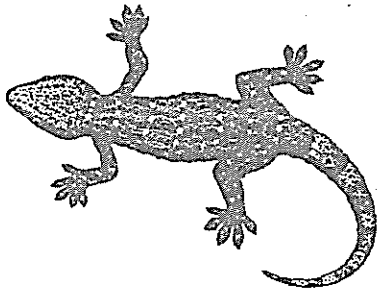
organism A



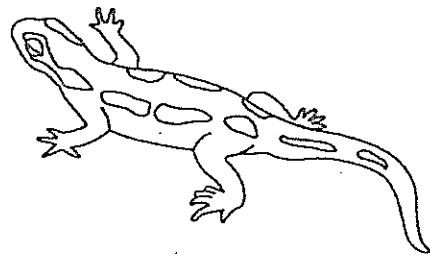
Based only on your observation of the above diagram, which one of the following statements about organisms A and B is correct?

- (1) Organisms A and B have stems.
- (2) Organisms A and B reproduce from spores.
- (3) Organism A has no leaves but organism B has leaves.
- (4) Organism A is an adult plant but organism B is a young plant.

7. The diagram below shows two animals, a lizard and a salamander.



Lizard

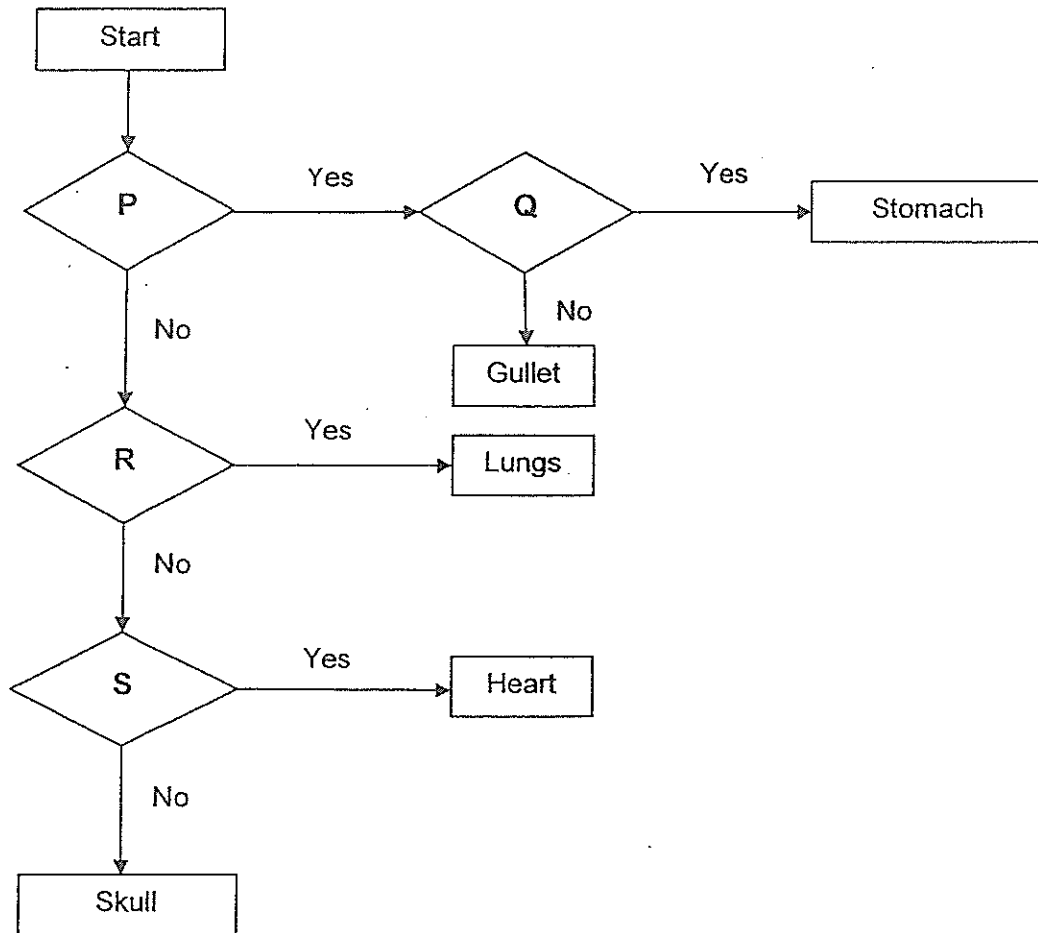


Salamander

Which of the following statements about the above animals are incorrect?

- A Both reproduce by laying eggs.
 - B Both breathe through their skin.
 - C The lizard lives on land but the salamander lives only in water.
 - D The lizard's dry skin is covered with scales but the salamander has moist skin.
-
- (1) A and D only
 - (2) B and C only
 - (3) A, B and D only
 - (4) A, C and D only

8. Study the flowchart below carefully.



With reference to the above flowchart, which one of the following best represents P, Q, R and S?

	P	Q	R	S
(1)	Is it part of the circulatory system?	Does it break down food?	Is it part of the human body system?	Is it part of the respiratory system?
(2)	Is it part of the human body system?	Is it part of the digestive system?	Is it part of the circulatory system? /	Is it part of the respiratory system? /
(3)	Does it break down food? /	Is it part of the digestive system? /	Is it part of the respiratory system?	Is it part of the circulatory system?
(4)	Is it part of the digestive system? /	Does it break down food? /	Is it part of the respiratory system?	Is it part of the circulatory system?

9. The classification table shows some animals grouped according to their animal groups.

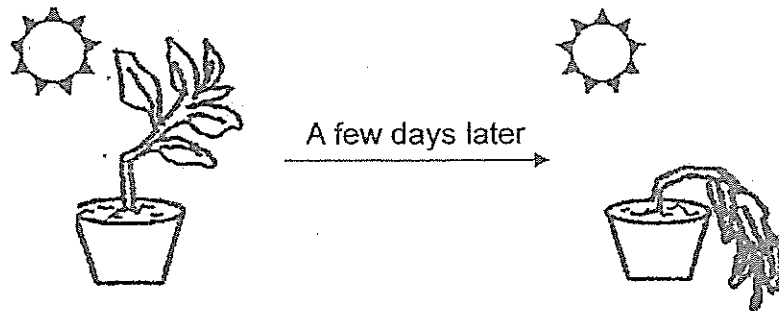
Animals		
Group A	Group B	Group C
bear	ant	salmon
rabbit	bee	whale
dolphin	cockroach	goldfish

Which one of the above animals has been grouped wrongly?

- (1) bee
 - (2) whale
 - (3) dolphin
 - (4) cockroach
10. Alan draws up a classification table as shown below. Which one of the following sets is not correct?

	Living things	Non-living things
(1)	Deer	Paper
(2)	Breadmould	Plastic bottle
(3)	Wooden chair	Chalk
(4)	Rose plant	Pencil

11. The diagram below shows a plant whose stem was accidentally bent while it was being planted in a pot. The plant was watered daily and it was placed at a sunny spot in the garden. It was observed that the plant died a few days later.



Which one of the following statements best explains why the plant died after a few days?

- (1) The plant was not held firmly to the soil.
 - (2) The plant was not held upright to receive sunlight.
 - (3) The stem was not able to transport water to other parts of the plant.
 - (4) The roots did not take in enough mineral salts and water from the soil.
12. Charlene observed four organisms, A, B, C and D, during an excursion to the zoo and recorded her observations in the table below. A tick (✓) shows the characteristic that the organism has.

Characteristic	Organisms			
	A	B	C	D
It lays eggs.	✓	✓		✓
It has scales.		✓		✓
It feeds its young with milk.			✓	
It breathes through lungs.	✓	✓	✓	

Which one of the above organisms is most likely a swordfish?

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

13. Which one of the following statements best describes bacteria?

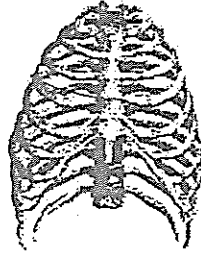
- (1) Bacteria are all harmful.
- (2) Bacteria reproduce by spores.
- (3) Bacteria do not come in different shapes.
- (4) Bacteria can only be seen under a microscope.

14. Which of the following are characteristics of all birds?

- A They can fly.
- B They lay eggs.
- C They have a beak.
- D They are covered with feathers.

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

15. The diagram below shows part of the skeletal system.

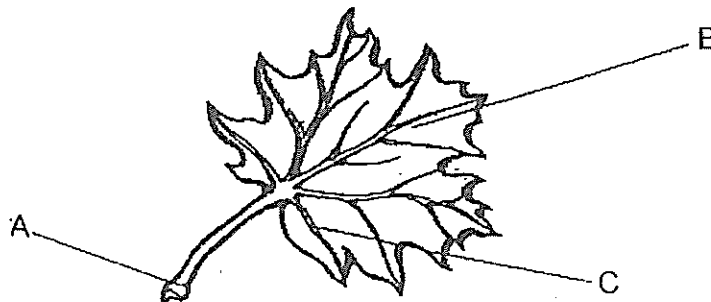


Which of the following organs is/are protected by the above part?

- A brain
- B lungs
- C heart
- D small intestines

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

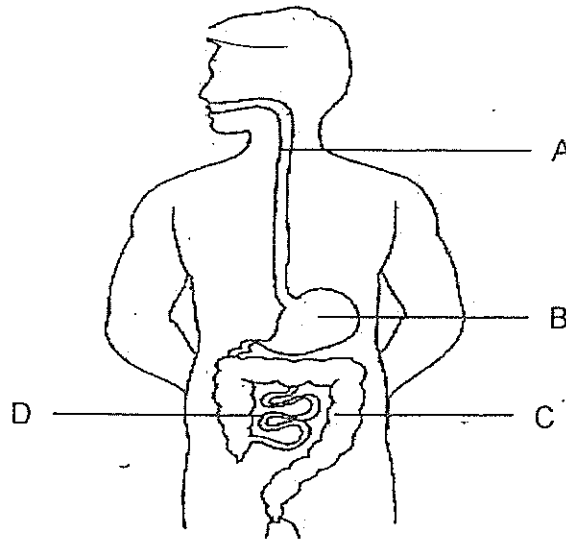
16. The diagram shows a leaf.



Which one of the following correctly identifies parts A, B and C of the leaf given above?

	Part A	Part B	Part C
(1)	Leaf vein	Leaf stalk	Leaf blade
(2)	Leaf stalk	Leaf blade	Leaf vein
(3)	Leaf stalk	Leaf vein	Leaf blade
(4)	Leaf vein	Leaf blade	Leaf stalk

17. The diagram below shows the human digestive system.



Which one of the following shows the incorrect function of the parts, A, B, C or D?

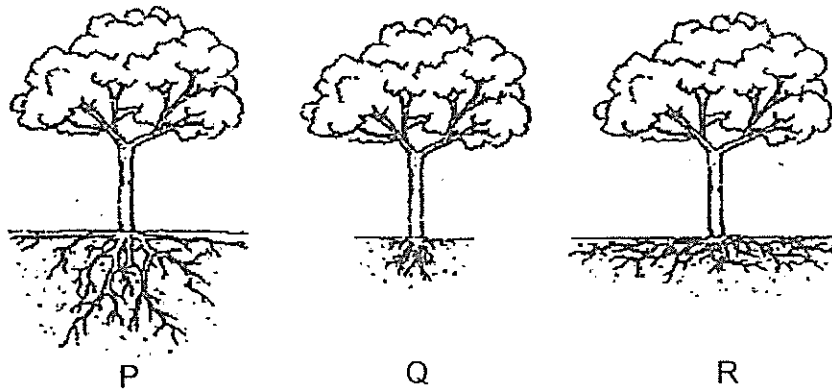
	Parts	Functions
(1)	A	Contract and expand to push food down into the stomach
(2)	B	To completely digest the food
(3)	C	To remove water from the undigested food
(4)	D	To absorb digested food into the bloodstream

18. Laura planted a kang kong plant and observed it over a period of three weeks. The kang kong plant was 8cm tall at the beginning. She recorded the height of the plant at the end of each week in a table shown below.

Number of weeks	Height of plant (cm)
1	12
2	16
3	20

Based on the results in the table above, Laura can conclude that the kang kong plant has _____.

- (1) grown
 - (2) reproduced
 - (3) become an adult plant
 - (4) responded to changes
19. The diagram below shows 3 similar trees P, Q and R.

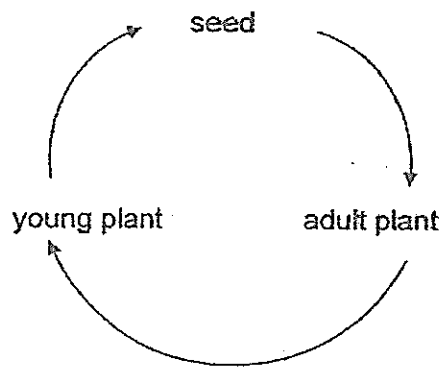


Based on observation of the root system of the trees, which of the above trees is/are likely to be uprooted in a storm?

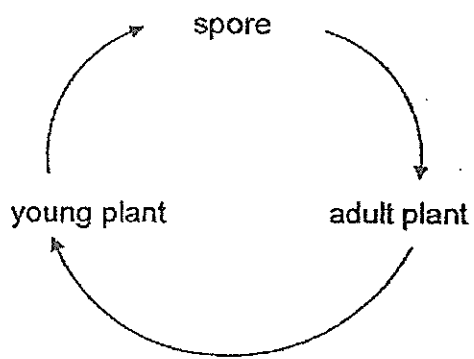
- (1) Q only
- (2) R only
- (3) Q and R only
- (4) P, Q and R

20. Which one of the following diagram shows the life cycle of a flowering plant?

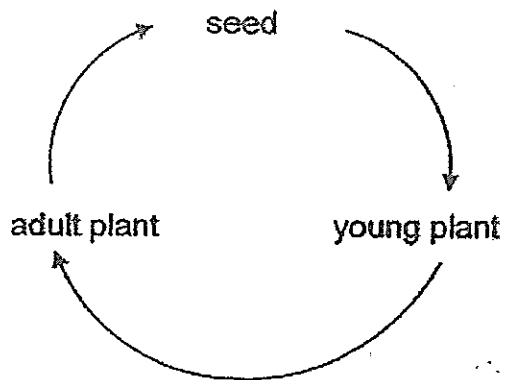
(1)



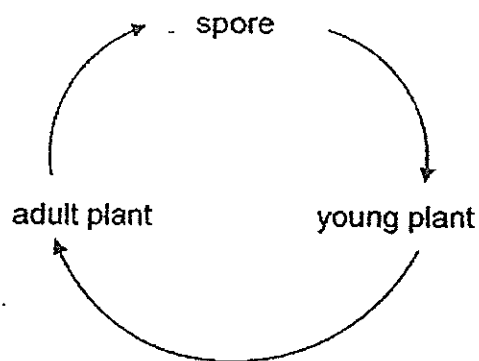
(2)



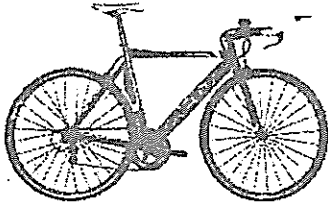
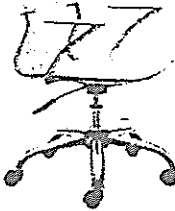
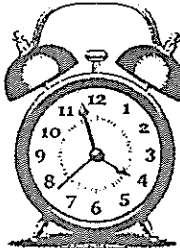
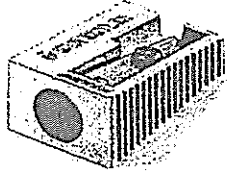


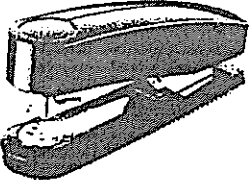
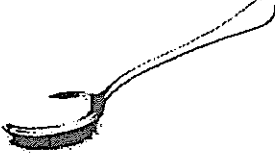
(3)



(4)



21. Which one of the following pairs of objects correctly shows a system and a non-system?

	System	Non-system
(1)		
(2)		
(3)		
(4)		

22. Sheila has boxes of 3 different sizes, large, medium and small, that can be used to pack Christmas gifts. The table below shows the maximum weight each box can hold before it breaks.

Size of box	Maximum weight (g)
Small	300
Medium	500
Large	900

Sheila bought three gifts for her friend, Joe. The gifts can be packed together or separately depending on the weight the box can hold. The gifts weigh 500g, 400g and 200g respectively.

Which one of the following combinations of boxes should she use so that all three gifts are packed?

- (1) 1 large-sized box
- (2) 3 small-sized boxes
- (3) 1 large-sized box and 1 small-sized box
- (4) 1 medium-sized box and 2 small-sized boxes

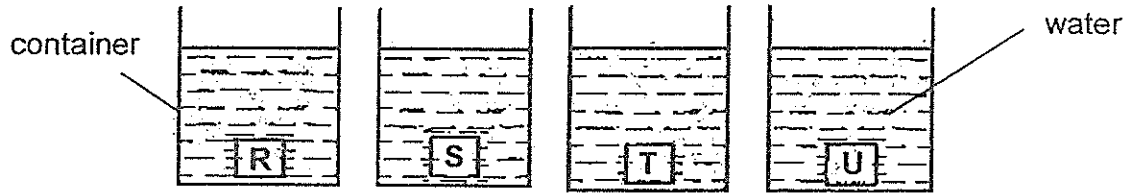
23. The properties of three objects are recorded in the table as shown below.

	Objects			
Characteristics	Window pane	Towel	Wooden chopsticks	Gloves
Waterproof	Yes	No	No	No
Flexible	No	Yes	No	Yes
R	No	No	Yes	No

Which one of the following is characteristic R?

- (1) Float
- (2) Stiff
- (3) Strong
- (4) Transparent

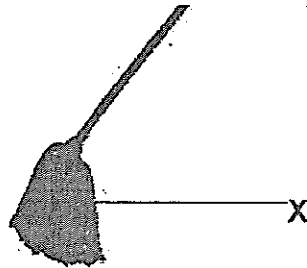
24. David weighed four different materials R, S, T and U, of the same size before putting each of them into a container containing the same amount of water as shown below.



He then weighed the materials after removing them from the water. The table below shows the results of his experiment.

Materials	Mass of materials (g)	
	Before soaking in water	After soaking in water
R	50	90
S	90	100
T	100	150
U	150	180

Based on the results in the above table, which material R, S, T or U is most suitable for making part X of the mop shown below?



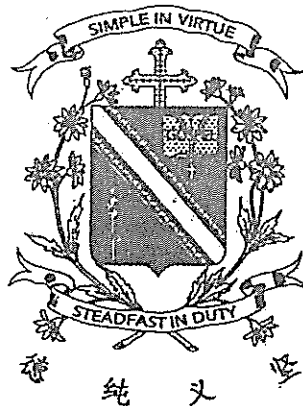
- (1) R
- (2) S
- (3) T
- (4) U

END OF BOOKLET

Name: _____ ()

Class: Primary 3 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL



Primary 3

Semestral Assessment 2 – 2014

SCIENCE

Booklet B

30th October 2014

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

10 Questions

32 Marks

Do not open this booklet until you are told to do so.

Follow all instructions carefully.

Answer all questions.

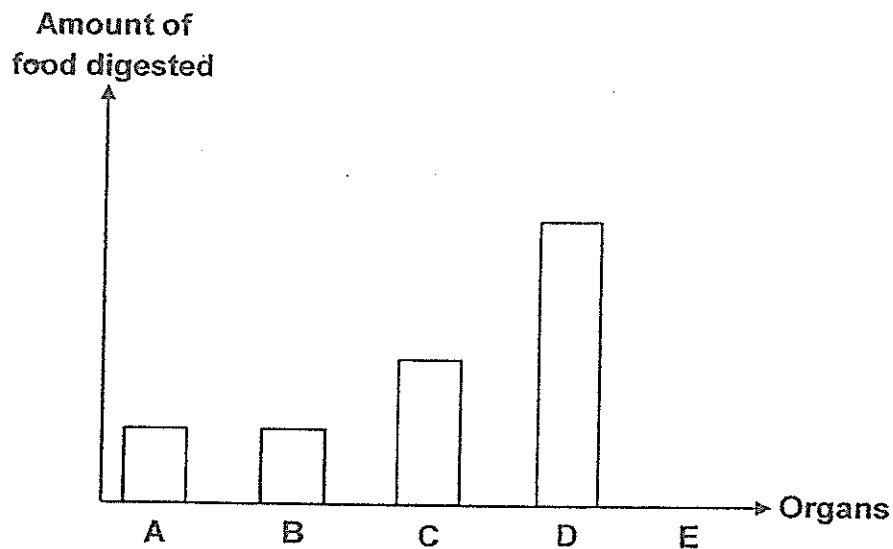
This paper consists of 11 printed pages including this cover page.

Booklet A	48
Booklet B	32
Total	80
Parent's Signature / Date	

SECTION B (OPEN-ENDED QUESTIONS) [32 marks]

For questions 25 to 34, write your answers in this booklet. The number of marks available is shown in the brackets [] at the end of each question or part question.

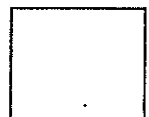
25. Sam ate a hamburger during lunch. The graph below shows the amount of food digested as it moves through organs, A, B, C, D and E, of Sam's digestive system.



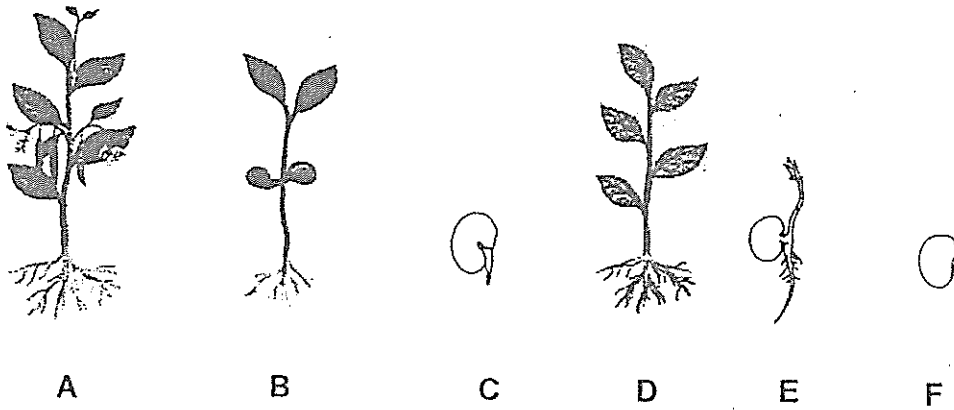
- (a) Based on the graph above, which organ, A, B, C, D or E best represents the small intestines? Give a reason for your answer. [2]

- (b) Give a reason why the amount of digested food in B remains the same as in A. [1]

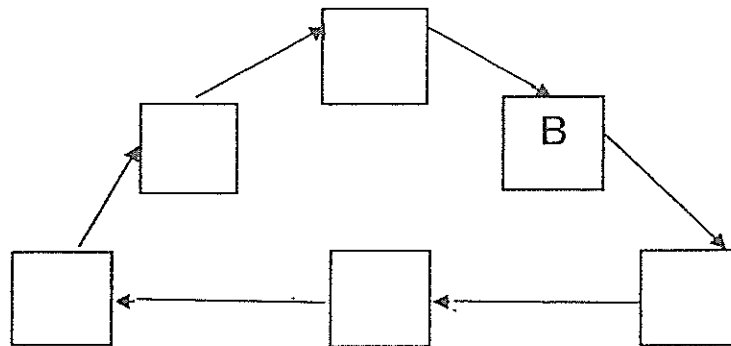
- (c) What is the function of organ E of the digestion system? [1]



26. The diagram below shows a pea plant at different stages of its life cycle.

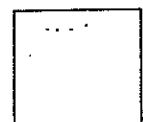


(a) Fill in the boxes in the diagram below with A, C, D, E and F to show the stages of the life cycle in the correct order. [1]

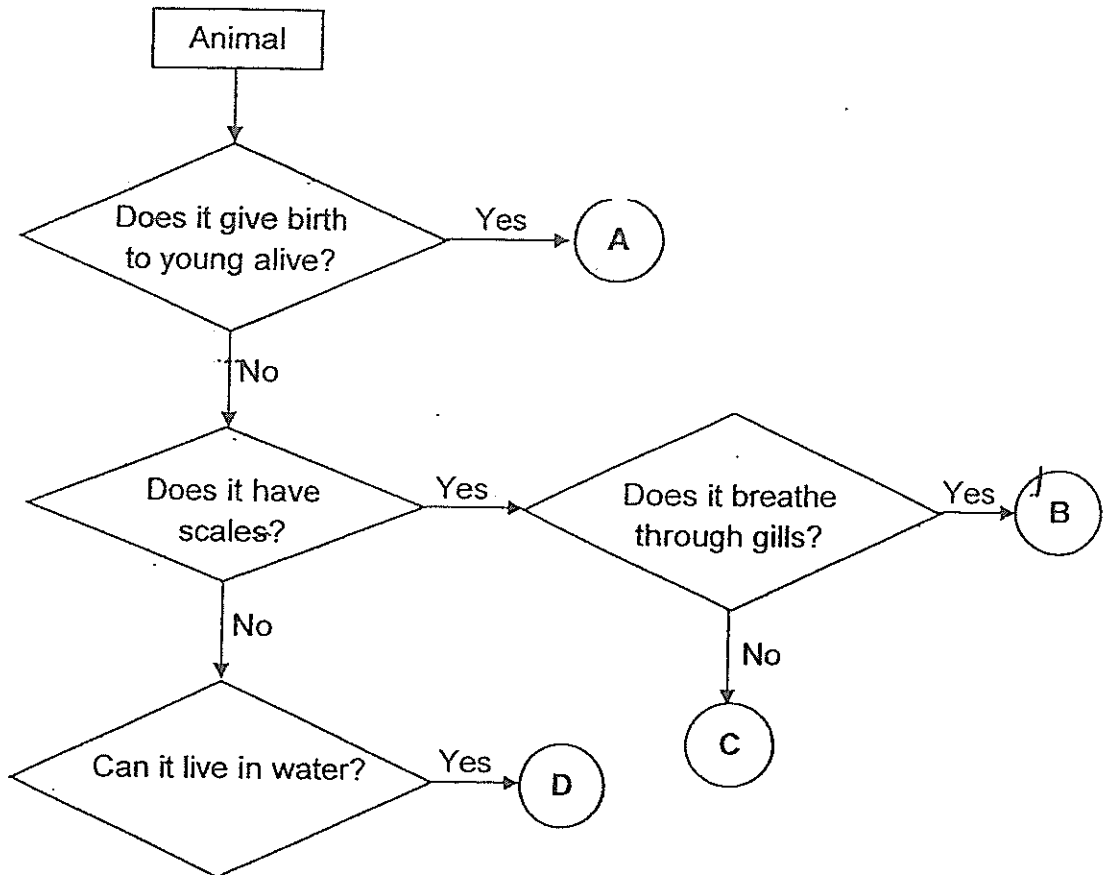


(b) Is the pea plant at stage E able to make its own food? Give a reason for your answer. [1]

(c) Suggest a reason why the roots in stage C grow downwards. [1]

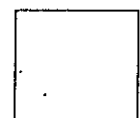
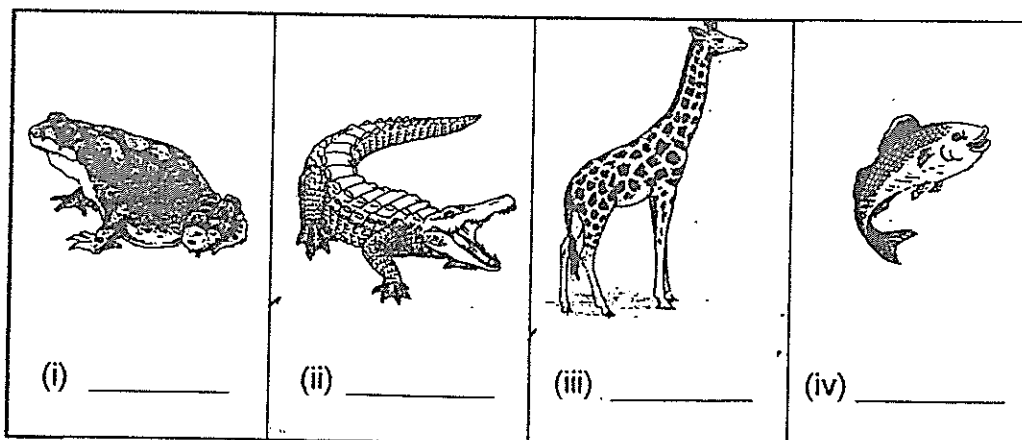


27. Study the flowchart given below.



(a) Based on the flowchart above, state the similarity between B and D. [1]

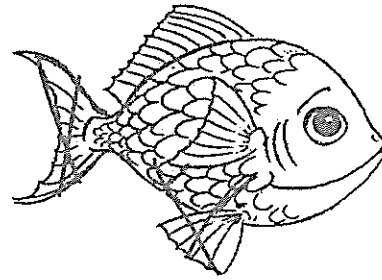
(b) Based on the flowchart above, which of the above letters, A, B, C or D, best represents the animals shown below? [2]



28. The diagram below shows animals X and Y.



Animal X



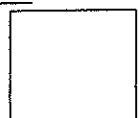
Animal Y

- (a) Based on your observation of the above diagram, how are the two animals different in terms of their body covering? [1]

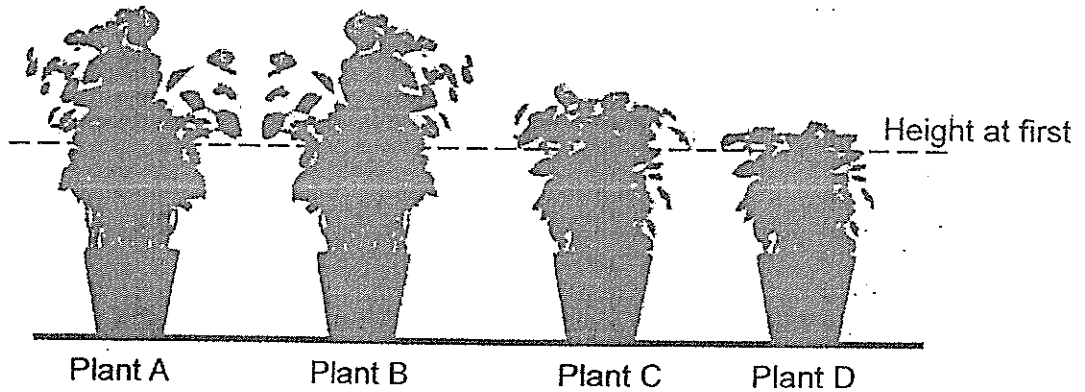
- (b) Suggest the difference in the breathing methods for animals X and Y. [1]

- (c) Which animal group does animal X belong to? Give a reason for your answer based on the observable characteristics of the animal in the above diagram. (Do not mention body covering.) [1]

- (d) On the diagram above, use crosses (X) to indicate two different parts of animal Y that helps it to swim in water. [1]



29. Lucy placed 4 pots of similar plants, A, B, C and D, in her garden. The diagram below shows her observation of the potted plants a month later.

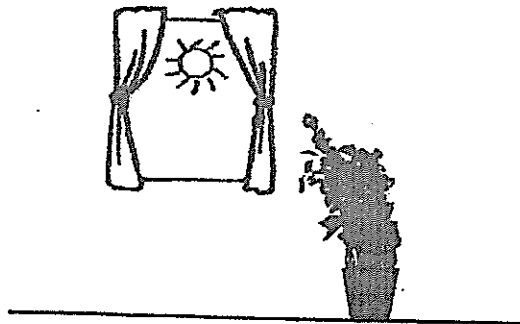


- (a) Based on observation of the above diagram, state the similarity between Plant A and Plant B in terms of their growth. [1]

- (b) After observing the plants for 3 months, Lucy concluded that plants, A, B, C and D, are flowering plants.

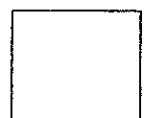
What observation do you think she has made to come to this conclusion? [1]

- (c) Lucy then placed plant A near her bedroom window. After a week, plant A grew in the direction as shown in the diagram below.

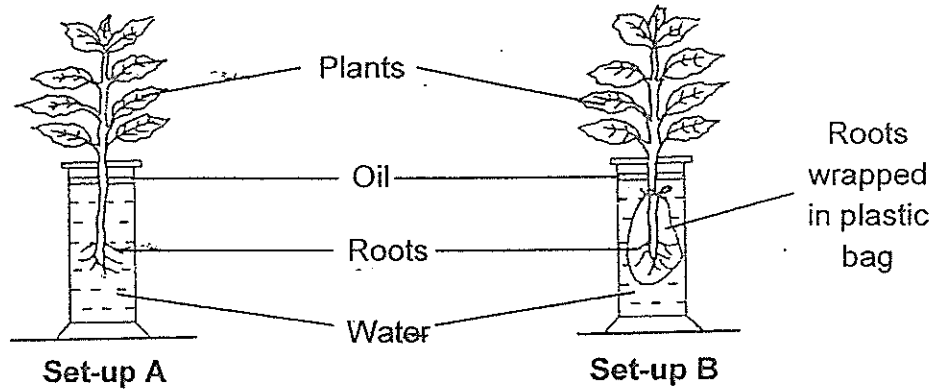


What characteristic of living things has Plant A shown?

[1]



30. Two similar plants were placed in 2 jars filled with 200ml of water each. In each set-up, a layer of oil covered the surface of the water. In Set-up A, the roots of the plant were left untouched. In Set-up B, the roots were wrapped in a plastic bag. The two set-ups were placed next to the window for 3 days.



At the end of the experiment, the volume of water in each jar was measured and recorded in the table below.

Set-up	Volume of water (ml)	
	Start of Experiment	End of Experiment
A	200	170
B	200	

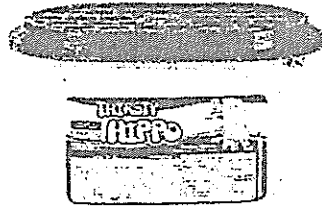
- (a) The volume of water in set-up A had decreased. Give a reason for this. [1]

- (b) Write in the table above to indicate the volume of water recorded at the end of the experiment for set-up B. [1]

- (c) Explain your answer for (b). [1]

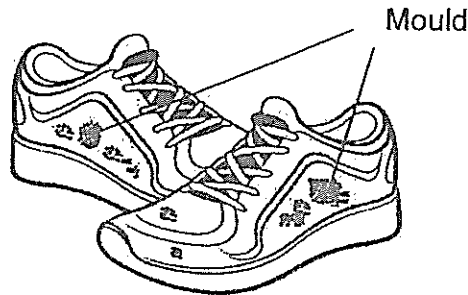


31. Harry placed two pairs of similar shoes in cupboards, A and B, respectively. He put a moisture absorber, as shown below, in cupboard A.



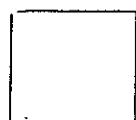
Moisture-absorber

After a month, he observed mould growing on one of the pairs of shoes as shown in the diagram below.



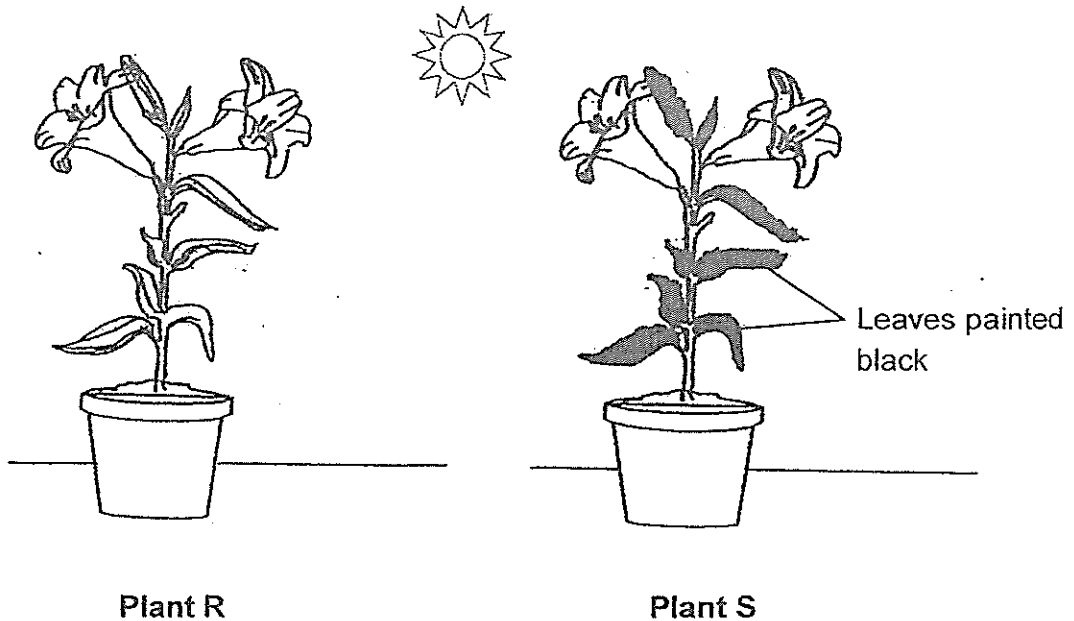
- (a) Based on his observation, in which cupboard, A or B, was the above pair of shoes placed? [1]

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



32. Rajesh placed 2 similar potted plants, R and S, in the garden as shown in the diagram below. He had painted all the leaves of Plant S black and both plants were given the same amount of water each day.

(Note: The black paint is not harmful to the plant.)



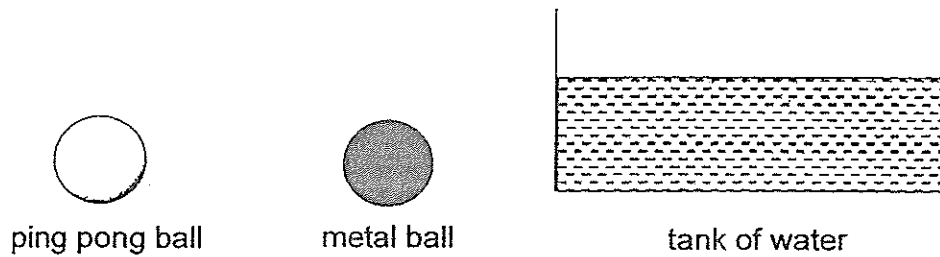
- (a) What do you think is the aim of the above experiment? [1]

- (b) Which plant, R or S, will more likely die after one week? [1]

- (c) Explain your answer in (b). [2]

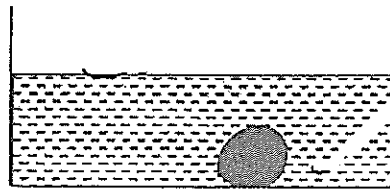


33. Daniel had two objects, a ping pong ball and a metal ball, as shown in the diagram below.

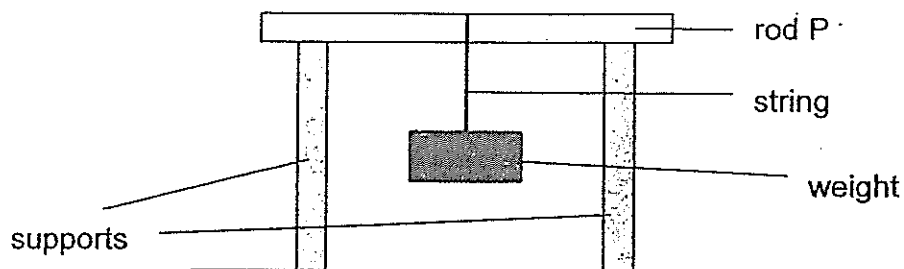


He dropped both objects into the tank of water.

- (a) Draw in the diagram below to show the positions of the ping pong ball and the metal ball after they have been dropped into the tank of water. [2]



Daniel has 4 rods, P, Q, R and S, made of different materials. He placed some weights on rod P, one at a time, as shown in the diagram below. He recorded the mass of the weights added before the rod broke. He then repeated the experiment using rods Q, R and S.



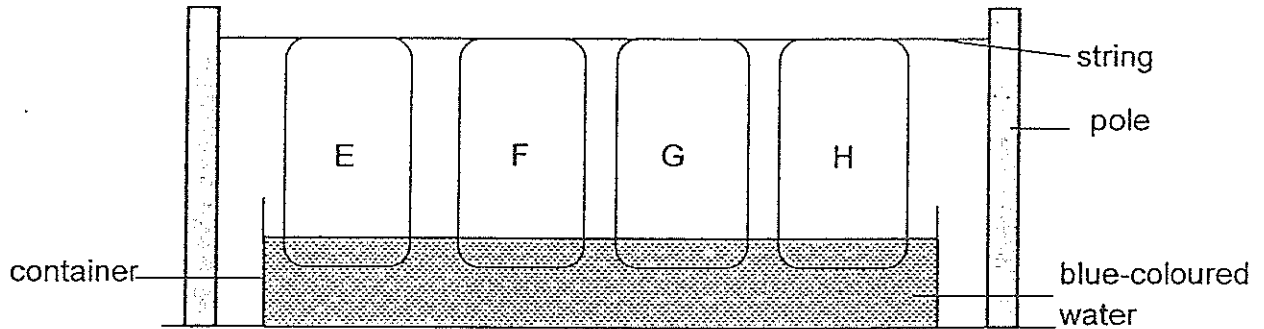
The table below shows the results of his experiment.

Rod	Mass of weight added before the rod broke (g)
P	1100
Q	300
R	650
S	810

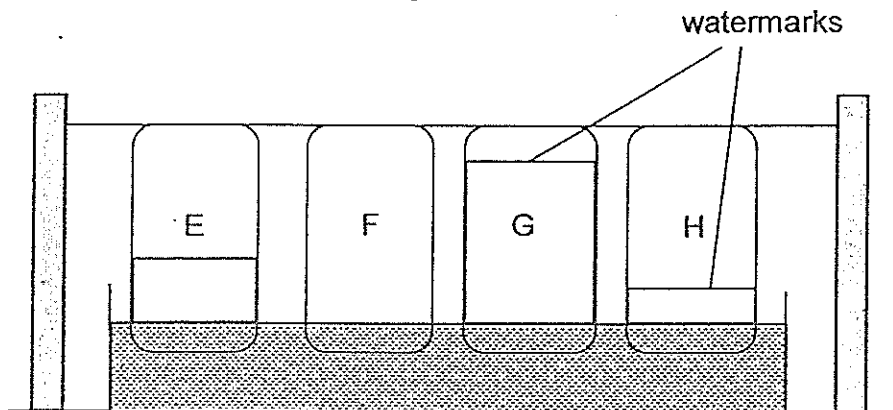
- (b) Based on the results recorded in the table above, which material, P, Q, R or S, is most suitable for making a bag used to carry 1kg of oranges? [1]



34. Catrina carried out an experiment by placing the ends of 4 pieces of different materials, E, F, G and H, into a container of water as shown in the diagram below. The materials were of the same size and shape.



After 10 minutes, Catrina observed the height of watermark on each of the four materials as shown on the diagram below.



- (a) Based on the results shown above, which material, E, F, G or H, is most suitable to be made into a bath towel? [1]

- (b) Explain your answer for (a) [1]

- (c) Suggest what material is F made of?

End of Paper





Year: 2014
 Level: P3
 School: CHIJ St Nicholas Girls' School
 Subject: Science
 Semester: SA2

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
1	3	1	3	2	2	1	4	2	3

Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
3	4	4	3	2	2	2	1	1	3

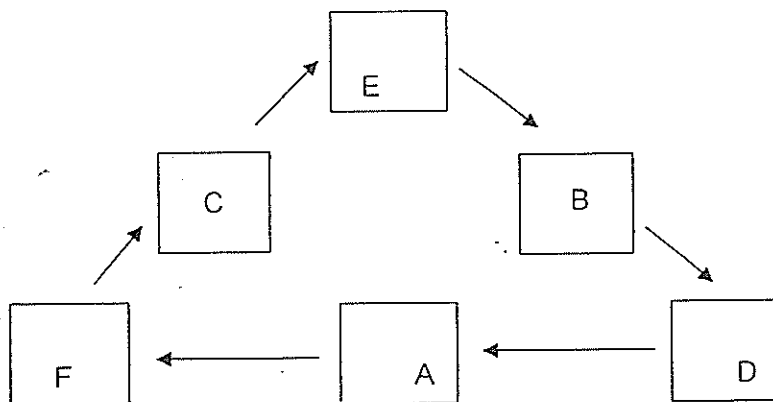
Q21	Q22	Q23	Q24
3	3	1	3

Q25a) D. The small intestines is where most chemical digestion take place as it contains most of the digestive enzymes.

Q25b) B is the oesophagus that does not have any enzymes to digest food.

Q25c) E absorbs all the water from the undigested food.

Q26a)



Q26b) The pea at stage E is unable to make its own food as it has not grown leaves which are necessary to photosynthesize to make food.

Q26c) Roots grow downwards into the soil to prevent uprooting of the plant and maximise water uptake.

Q27a) B and D both does not give birth to young alive.

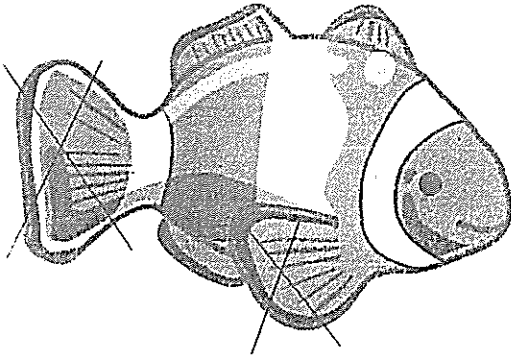
Q27b) i: D ii: C iii: A iv: B

Q28a) Animal X has feathers whereas animal Y has scales.

Q28b) Animal X breathe through lungs whereas animal Y breathe through gills.

Q28c) Animal X belongs to the birds group as it has a beak.

Q28d)



Q29a) Plant A and B have the same height.

Q29b) The plants produced flowers.

Q29c) Living things are affected by the changes in environment.

Q30a) Water in set-up A was absorbed by the roots of the plant.

Q30b) 200ml

Q30c) The water in set-up B did not decrease as the roots of the plant were wrapped in plastic bag, preventing the roots to absorb water.

Q31a) The above pair of shoes were placed in cupboard B.

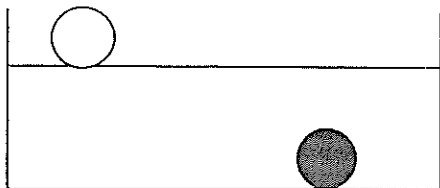
Q31b) Mould needs moisture to grow and reproduce.

Q32a) The aim of the above experiment is to find out whether plants require sunlight to photosynthesize.

Q32b) Plant S is more likely to die after one week.

Q32c) The leaves painted black are unable to absorb sunlight which is a condition for photosynthesis, when the plant does not make its own food, it will die.

Q33a)



Q33b) Rod P.

Q34a) Material G.

Q34b) Material G is most water absorbent.

Q34c) Material F is made of plastic.

