



## AI TONG SCHOOL

### 2017 END-OF-YEAR EXAMINATION PRIMARY THREE SCIENCE

DURATION: 1 hour

DATE: 31 OCTOBER 2017

#### INSTRUCTIONS

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

Name : \_\_\_\_\_ ( )

Class : Primary 3 \_\_\_\_\_

Parent's Signature : \_\_\_\_\_

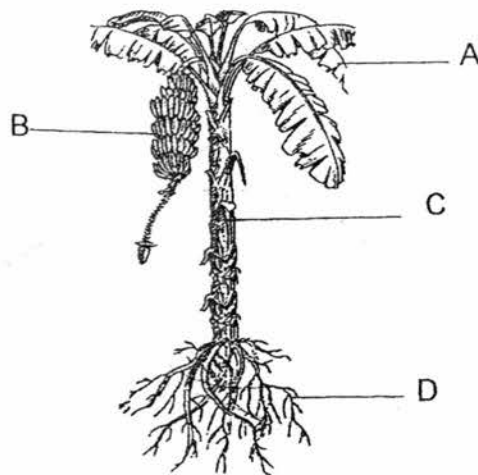
Date : \_\_\_\_\_

Booklet A	30
Booklet B	20
Total	50
Project Work	10
Total	60

Section A (15 x 2 marks)

For each question from 1 to 15, four options are given. One of them is the correct answer. Make your choice and shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.

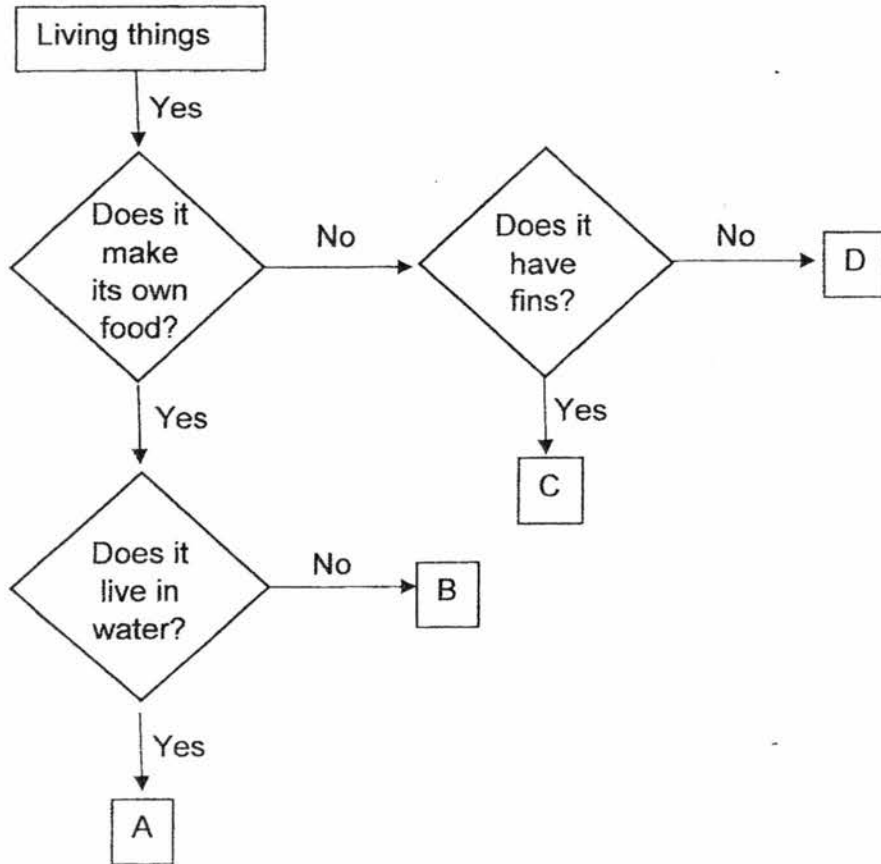
1. Which of the following is true about both fungi and bacteria?
  - (1) Both reproduce by spores.
  - (2) Both make their own food.
  - (3) Both can be useful or harmful to us.
  - (4) Both cannot be seen under a microscope.
  
2. Which of the following is not an example of a living thing responding to changes around them?
  - (1) A bird lays eggs in a nest.
  - (2) A snail hides itself in the shell when touch.
  - (3) A dog barks when a stranger approaches it.
  - (4) A plant grows toward the direction of the sunlight.
  
3. The diagram below shows a plant.



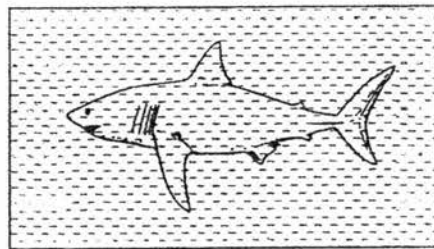
Which part of the plant tells you that it is a flowering plant?

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

4. Study the chart below.



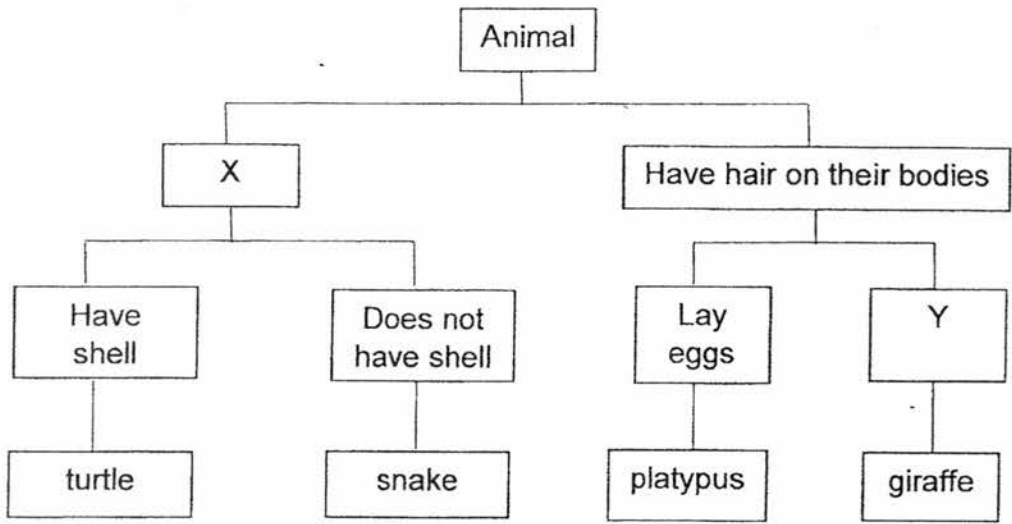
The diagram below shows living thing P.



Based on the chart above, which of the following correctly represents living thing P?

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

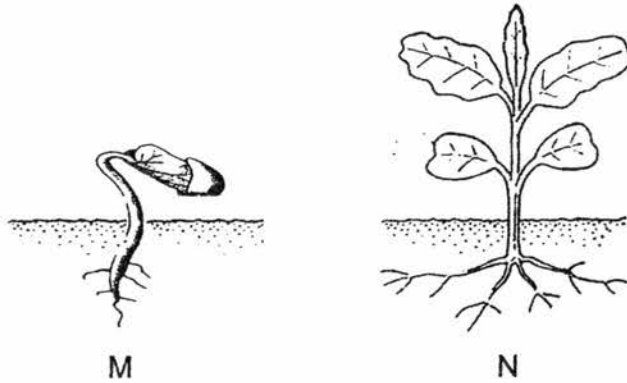
5. Study the classification chart below.



Which one of the following best represents X and Y?

	X	Y
(1)	Have dry skin covered with scales	Give birth to young
(2)	Have feathers on their bodies	Live on land
(3)	Have bodies divided into 3 parts	Breathe through their moist skin
(4)	Have a hard outer covering	Does not have shell for protection

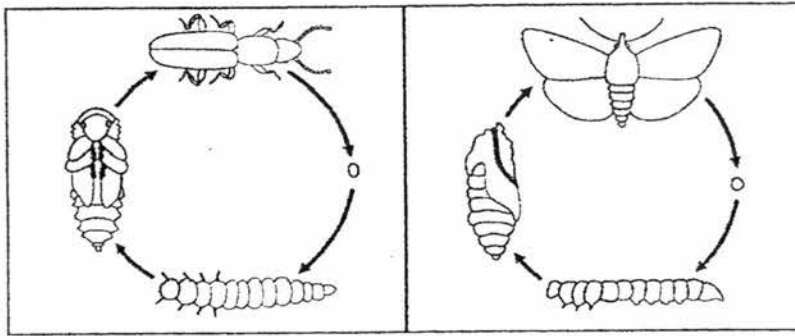
6. The diagram below shows two different stages, M and N, in the life cycle of a plant.



Based on the diagram above, which one of the following statements is correct?

- (1) The plant has roots in both stages.
- (2) The plant makes food in both stages.
- (3) The plant does not take in water at stage M.
- (4) The plant only needs food to grow at stage N.

7. The diagram below shows the life cycle of living things P and Q.



Life cycle of living thing P

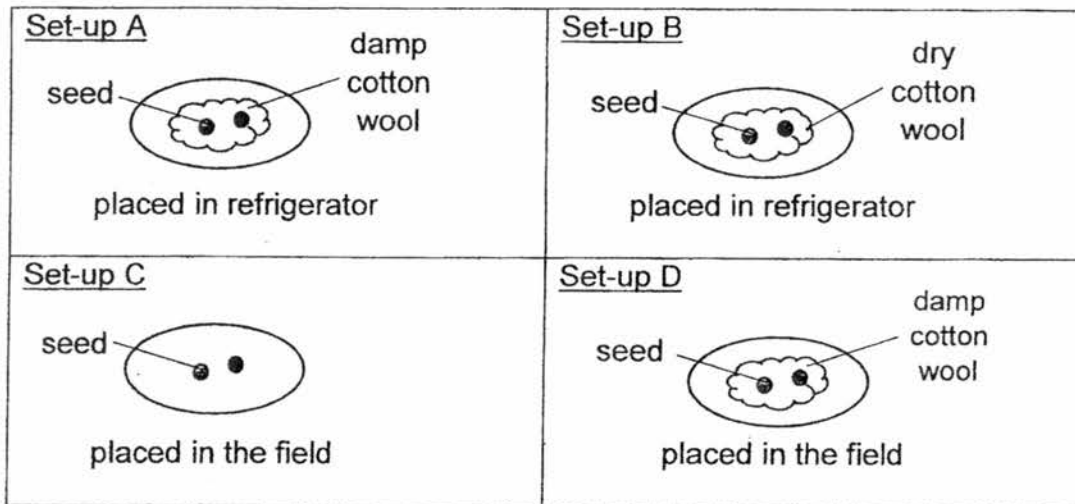
Life cycle of living thing Q

Based on the diagram above, which of the following correctly states the similarities between the life cycles of P and Q?

- A Their young look like their adults.
- B They have 4 stages in their life cycles
- C Both life cycles have the nymph stage.
- D Their eggs take the same amount of time to hatch after they are laid.

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

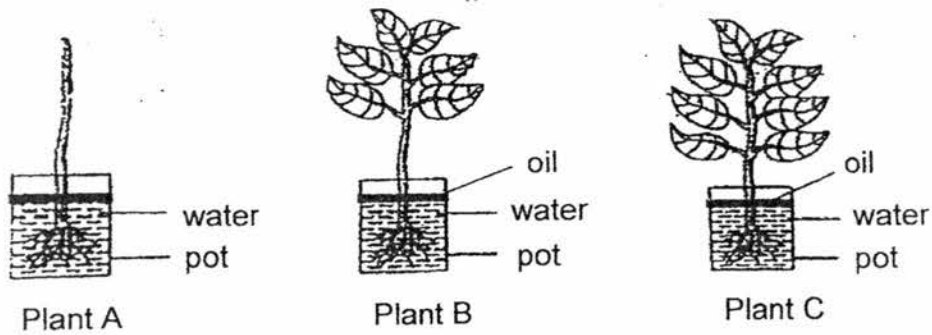
8. Fredric wanted to find out if temperature affects the germination of seeds.



Which two set-ups should he use?

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

9. Ahmad conducted an experiment with three similar plants, A, B and C. He cut off all the leaves from plant A and only some leaves from plant B. No leaves were cut from plant C.



Ahmad then placed each plant in a pot containing 500 ml of water. The plants were placed at the same location. A layer of oil was added to prevent water loss to the surrounding air.

After ten hours, he recorded the volume of water left in each pot.

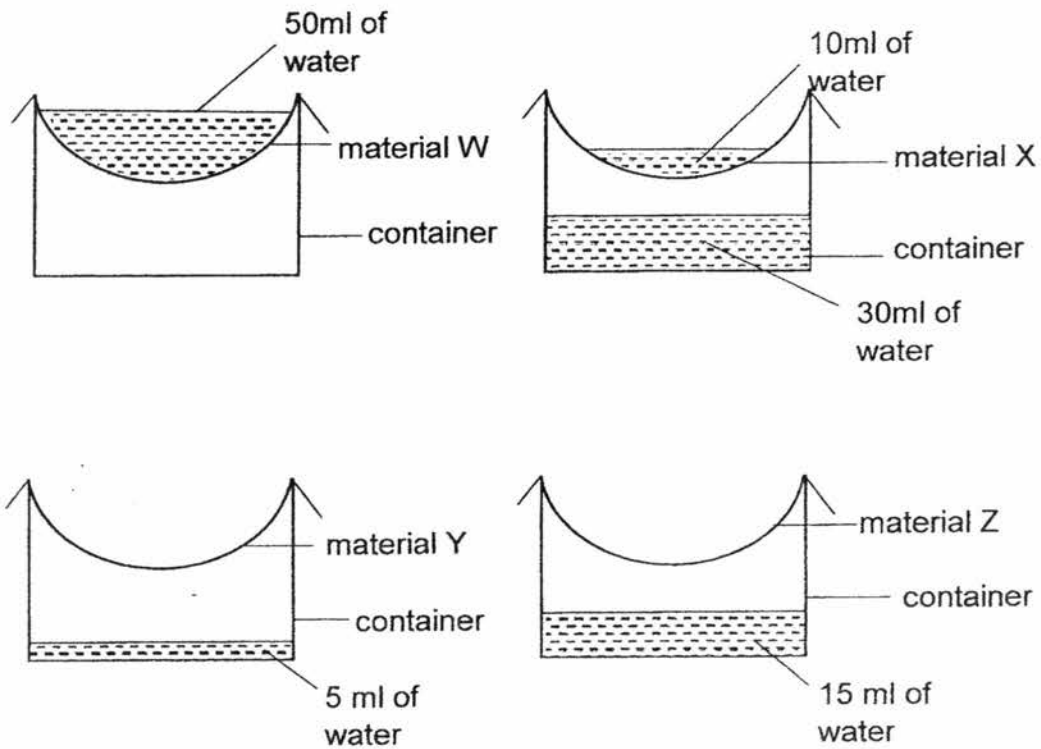
Plant	Volume of water left in the pot after ten hours (ml)
A	500
B	300
C	200

What was the aim of the experiment?

- (1) To find out if the roots of a plant absorb water.
- (2) To find out if the stem of a plant transports water
- (3) To find out if the type of plant affects the volume of water taken in by the plant.
- (4) To find out if the number of leaves affects the volume of water taken in by the plant.



10. Jimmy carried out an experiment with four sheets of different materials, W, X, Y and Z. The materials are of the same size. He put each sheet over a container as shown below and poured 50 ml of water onto each of them. Five minutes later, he observed the following.

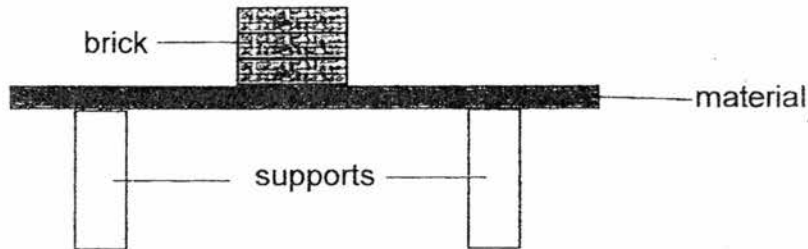


Based on the results of his experiment, which material is most suitable for making part L of a camping tent.



- (1) W
- (2) X
- (3) Y
- (4) Z

11. Roy carried out an experiment using four different materials, E, F, G and H. Material E was first placed over two supports as shown in the diagram below. Bricks, weighing 1kg each, were then stacked on material E, one at a time, until it broke.



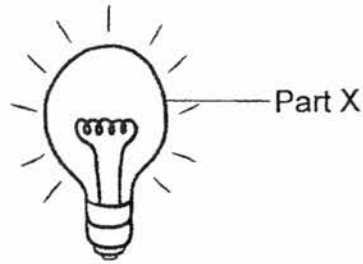
He recorded the number of bricks needed to break material E in the table below and repeated his experiment with materials F, G and H.

Material	Number of bricks needed to break the material
E	2
F	6
G	3
H	10

Based on the information above, which materials should Roy choose if he wanted to make a box that would be able to hold a weight of 5kg?

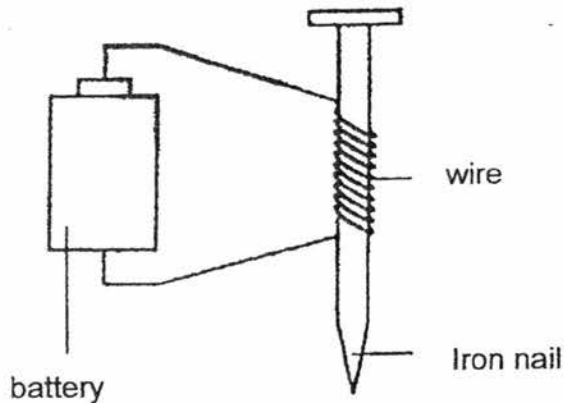
- (1) E and G only
- (2) F and H only
- (3) E, G and H only
- (4) E, F, G and H

12. Part X of a light bulb is usually made of **glass**. What is the most important physical property the material used to make part X must have?



The material must \_\_\_\_\_.

- (1) float on water
  - (2) be broken easily
  - (3) allow light to pass through
  - (4) be able to bend without breaking
13. The set-up below shows how a magnetic material can be made into an electromagnet.

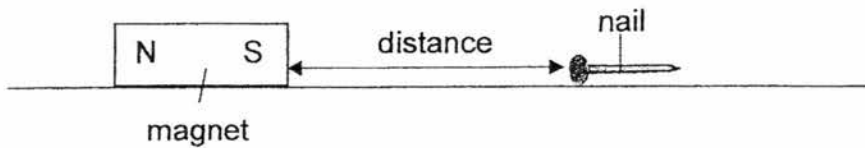


Which of the following methods would make the electromagnet stronger?

- (1) Add more batteries to the circuit.
- (2) Increase the size of the iron nail.
- (3) Hit the magnetic material with a hammer a few times.
- (4) Decrease the number of coils of wire around the iron nail.

14. Judy wanted to compare the magnetic strength of four different bar magnets, A, B, C and D. She placed magnet A and a nail on the table 10cm apart from each other. She then slowly moved the magnet closer to the nail until it could attract the nail.

She recorded the distance moved by the magnet in the table below and repeated the experiment with magnets B, C and D.

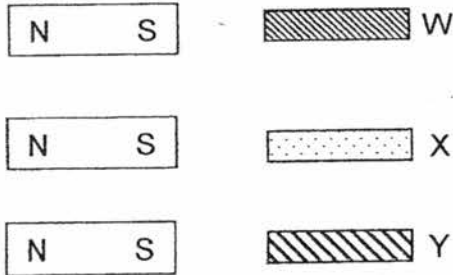


Magnet	A	B	C	D
Distance moved by the magnet (cm)	6	8	2	4

Based on the above results, arrange the magnets according to their magnetic strength, starting with the weakest magnet.

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

15. Tim had three objects, W, X, and Y. He wanted to find out if they were magnets. He brought a bar magnet close to both ends of each object and recorded his observations below.



	W	X	Y
Observations	Both ends did not get attracted to or repelled by the bar magnet.	One end was attracted to the magnet. The other end was repelled by the bar magnet.	Both ends were attracted to the bar magnet.

Based on the above observations, which one of the following could objects W, X and Y be?

	Object W	Object X	Object Y
(1)	wooden ruler	steel spoon	magnet
(2)	magnet	steel spoon	wooden ruler
(3)	steel spoon	magnet	wooden ruler
(4)	wooden ruler	magnet	steel spoon

END OF SECTION A

Name: \_\_\_\_\_

Class: 3 \_\_\_\_\_

EOY 2017

**Section B: 20 marks**

Read the questions carefully and write down your answers in the spaces provided.

16. Lucas was forgetful and left a piece of bread in a plastic bag in his school bag for a week. When he remembered about it, he observed that there were some black spots on the piece of bread which were not there previously. His teacher told him that the bread had turned bad and should not be eaten.



Diagram 1

- (a) What are the black spots found on the bread? [1]

\_\_\_\_\_

Lucas decided to keep the bread for another week to observe what would happen to it. The diagram below shows the bread after a week.

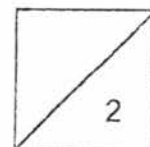


Diagram 2

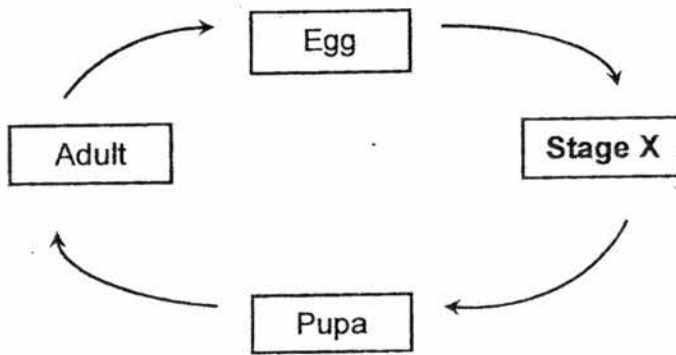
- (b) Comparing diagrams 1 and 2, what characteristic of living things is shown? [1]

[1]

\_\_\_\_\_



17. The diagram below shows the stages in the life cycle of a mosquito.



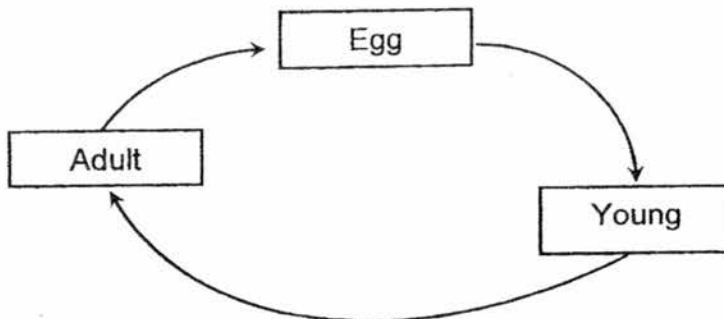
(a) Name stage X. [1]

Stage X: \_\_\_\_\_

(b) State the physical characteristic that the adult mosquito has that allows the adult mosquito to move in a different way from its young. [1]

The adult mosquito has \_\_\_\_\_ which its young does not have.

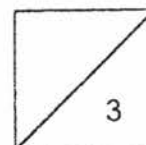
(c) The diagram below shows the life cycle of a chicken.



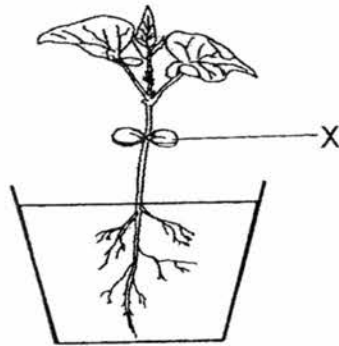
State one difference between the life cycle of a chicken and the life cycle of a mosquito. [1]

\_\_\_\_\_

\_\_\_\_\_



18. Mr Ng planted one bean seed in a pot of soil and placed it near the window. He watered the soil daily. The diagram below shows the seedling after one week.



- (a) What is the name of part X of the seedling? [1]

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- (b) What is the function of part X of the seedling? [1]

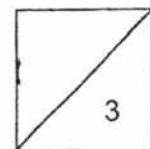
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- (c) If Mr Ng now removes part X from the seedling, will the seedling continue to grow? Explain your answer. [1]

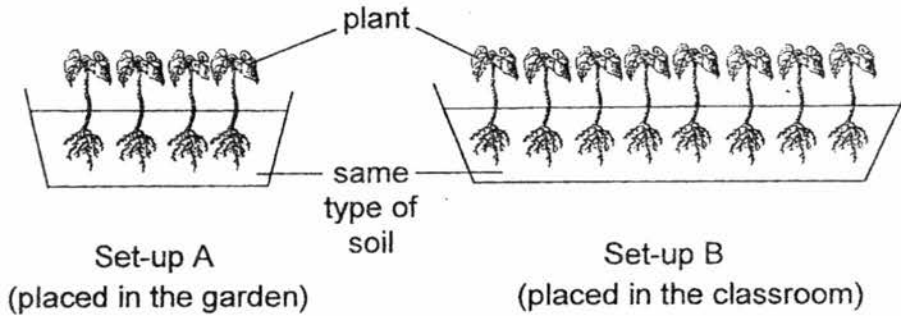
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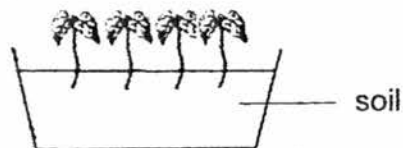
19. Adam set up the following experiment to find out if the amount of soil affects the growth of the plants. The same amount of water was given to the plants daily.



- a) Adam's experiment is not a fair one. Which two changes can he make to set-up B to make it a fair test? [2]

Change	Tick (✓) the correct answer
Remove four plants.	
Change the type of soil.	
Use a larger container.	
Place the set-up in the school field.	
Place the set-up in the garden	

Adam had another set of plants similar to set-up A. He made the following changes to the plants in this set-up as shown in the diagram below.

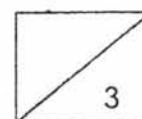


- (b) Although Adam also watered these plants daily, all the plants withered after a few days. Explain why. [1]

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20. Jay Jay conducted some tests on materials P, Q and R. The results of the tests are shown in the table below. A tick (✓) indicates that the material has the property.

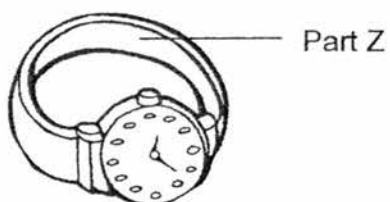
Property	P	Q	R
Allows most light to pass through		✓	
Floats on water	✓	✓	✓
Flexible	✓		
Waterproof	✓	✓	

- (a) Based on the results table above, state two properties of material R. [2]

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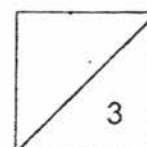
- (b) The diagram below shows a watch with part Z labelled.



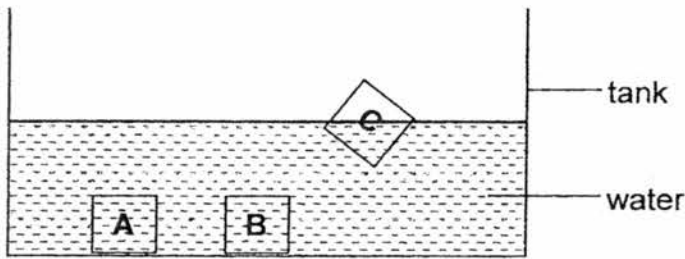
- Based on the results table above, which material, P, Q or R, is most suitable to make Part Z? Explain your answer. [1]

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21. Nicole puts three objects of the same size, A, B and C, into a tank of water as shown below.



- a) Based on the results above, can Nicole conclude that objects A and B are made of the same material? Give a reason for your answer. [1]

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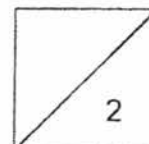
- b) The diagram below shows a girl swimming with a float.



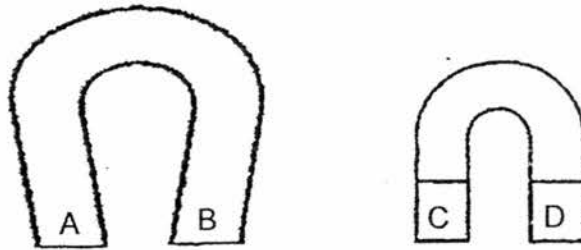
- Based on the results above, which material, A, B or C, is most suitable for making the float? Give a reason for your answer. [1]

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- 22 Mary had a horseshoe magnet and a u-shaped magnet. She labelled parts of both magnets as shown in the diagram below.



She dipped both the magnets into a container of iron nails and counted the number of nails attracted to parts A, B, C and D of the magnets. She then recorded the results in the table below.

Parts	Number of iron nails attracted
A	6
B	5
C	12
D	10

- (a) Fill in the blank below with a suitable word. [1]

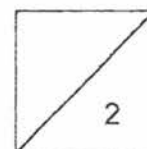
Parts A and B are called the \_\_\_\_\_ of the horseshoe magnet.

- (b) Based on the results table above, what can Mary conclude about the difference in strength between the horseshoe magnet and the u-shaped magnet? [1]

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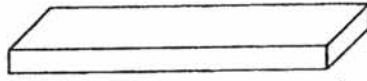
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Question 22 continues on the next page.



Question 22 continues.

Mary was given a metal bar as shown below.



metal bar

- (c) What could Mary do to find out if the metal bar is made of a magnetic material? [1]

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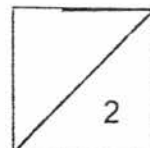
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- (d) What would she observe when she carries out the step in (c) if the metal bar is really made of a magnetic material? [1]

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End of Paper



# ANSWER KEY

YEAR : 2017  
 LEVEL : PRIMARY 3  
 SCHOOL : AI TONG  
 SUBJECT : SCIENCE  
 TERM : SA2

## Booklet A

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

## Booklet B

16	(a) Bread mould.
	(b) Living things reproduce.
17	(a) Stage X: <u>Larva</u>
	(b) The adult mosquito has <u>wings</u> which its young does not have.
	(c) The chicken has 3 stages in its life cycle but the mosquito has 4 stages in its life cycle.
18	(a) <u>Seed leaf</u> (Seed leaf)
	(b) Part X provides food for the seedling.
	(c) Yes. The plant has leaves to make its own food.
19	(a) Remove four plants ✓ Place the set-up in the garden ✓
	(b) The plants have no roots to absorb water from the soil.

20	(a)	Material R is not flexible and can float on water.
	(b)	Material R. It is flexible but the rest are not.
21	(a)	No. There is more than one material which can sink in water.
	(b)	Material C. It is the only material that can float on the water.
22	(a)	Parts A and B are called the poles of the horseshoe magnet.
	(b)	U-shaped magnet is stronger.
	(c)	Mary should use a magnet and bring it near to the metal bar.
	(d)	The metal bar would be attracted and move towards the magnet.

End