



**AI TONG SCHOOL**  
**2019 END-OF-YEAR EXAMINATION**  
**PRIMARY THREE SCIENCE**

**(BOOKLET A)**

**24 OCTOBER 2019**

**Total time for booklets A and B : 1 h**

**INSTRUCTIONS**

**Do not turn over this page until you are told to do so.**

**Follow all instructions carefully.**

**Answer all questions.**

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

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

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

<b>Booklet A</b>	<b>30</b>
<b>Booklet B</b>	<b>20</b>
<b>Total</b>	<b>50</b>



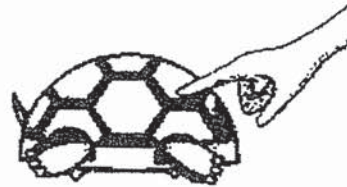
Section A (15 x 2 marks)

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. A tortoise hides in its shell when touched.



Before it was touched



After it was touched

Which of the following characteristics of living things is shown above?

- (1) Living things grow.
  - (2) Living things reproduce.
  - (3) Living things respond to changes.
  - (4) Living things need air to stay alive.
2. The pictures below show two living things.



fern



mushroom

Which of the following statements about both the fern and mushroom is correct?

- (1) Both bear flowers.
- (2) Both reproduce by spores.
- (3) Both can make their own food.
- (4) Both can move from place to place.

3. Ariel saw an animal near a pond. She wanted to find out if it was an amphibian.

What must Ariel do to find out if the animal was an amphibian?

- (1) Check if the animal has gills.
- (2) Check if the animal has scales.
- (3) Check if the animal has moist skin.
- (4) Check if the animal has a pair of wings.

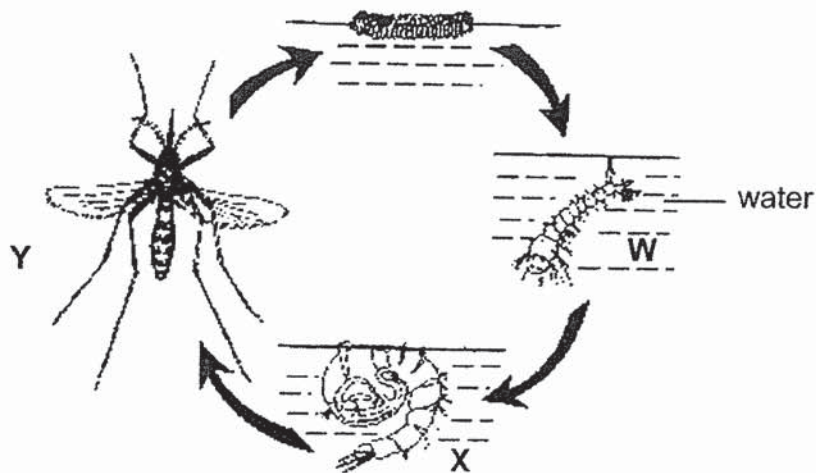
4. The table below shows the characteristics of animals P, Q and R. A tick ( ✓ ) shows that the animal has the characteristic.

Characteristic	Animal		
	P	Q	R
lays eggs		✓	✓
has six legs			✓
has a pair of wings	✓	✓	✓
has hair on its body	✓		

Based only on the table above, which of the following are possible animal groups for P, Q and R?

	P	Q	R
(1)	bird	reptile	insect
(2)	mammal	bird	insect
(3)	insect	reptile	mammal
(4)	insect	bird	mammal

5. The diagram below shows the life cycle of a mosquito. W, X and Y represent three of the four stages in the life cycle.



The mosquito is considered as a pest to humans as it spreads diseases. Based on the diagram above, which is/are the stage(s) that is/are the easiest to get rid of the mosquito?

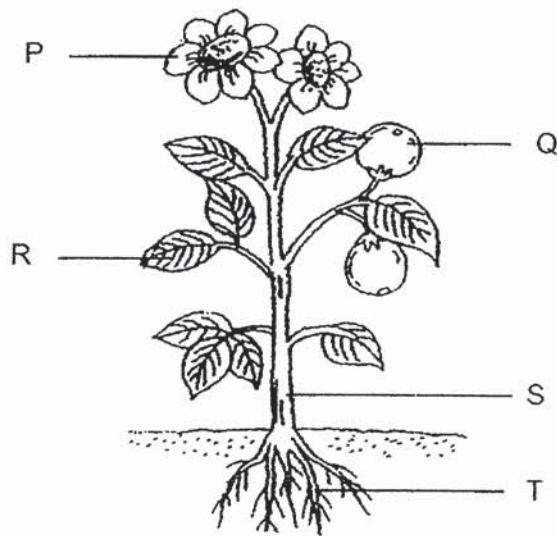
- (1) W only
  - (2) X only
  - (3) W and X only
  - (4) X and Y only
6. The following statements show different stages in the growth of a seed.

- A** The root appears.
- B** The seed leaf becomes smaller.
- C** The shoot grows out from the seed:
- D** The seed becomes bigger and the seed coat splits.

Which of the following shows the correct order of the stages of seed growth, starting with the earliest stage?

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

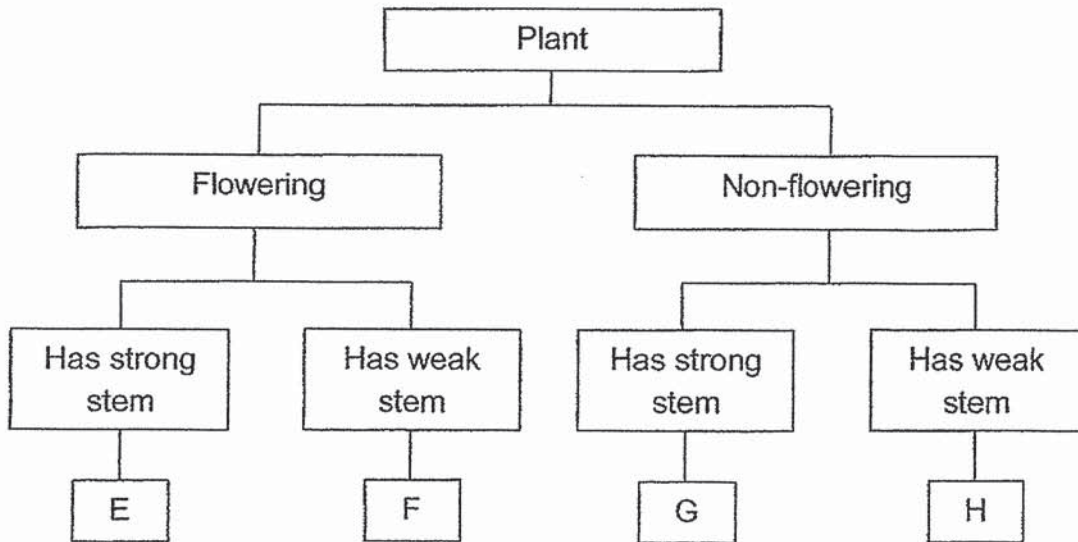
7. The diagram shows an adult plant.



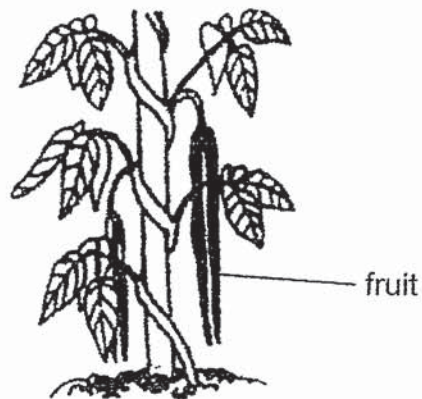
Which parts of the plant **cannot** be found in a young plant?

- (1) P and Q only
  - (2) P and R only
  - (3) Q and S only
  - (4) Q and T only
8. Elly wanted to find out if the number of leaves a plant has affects the growth of a plant after two weeks. She prepared three similar plants and conducted an experiment with them. Which of the following is a suitable measured variable for this experiment?
- (1) The location where the plants are placed
  - (2) The amount of water given to each plant daily
  - (3) The height of the plant at the end of the experiment
  - (4) The number of leaves each plant has at the start of the experiment

9. Study the classification chart below.

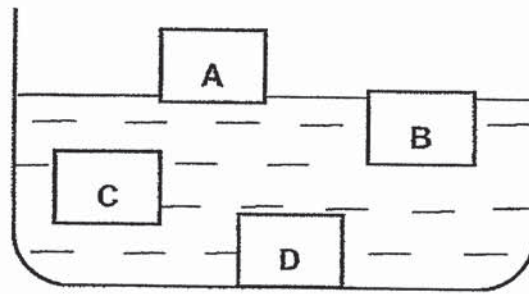


Based on the classification chart, which group does the plant shown below belong to?



- (1) E
- (2) F
- (3) G
- (4) H

10. Jovan put a metal block into a container of water.



At which position, A, B, C or D, would the block be found?

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

11. Charlotte found object X and recorded her observations about object X below.

- It is flexible.
- It absorbs water.
- It allows some light to pass through.

Which of the following could object X be?

(1)



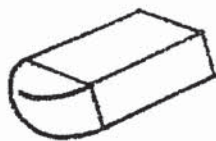
drinking straw

(2)



nail

(3)



eraser

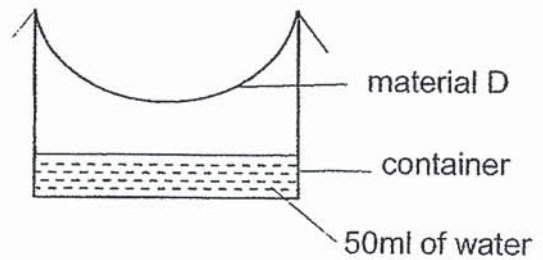
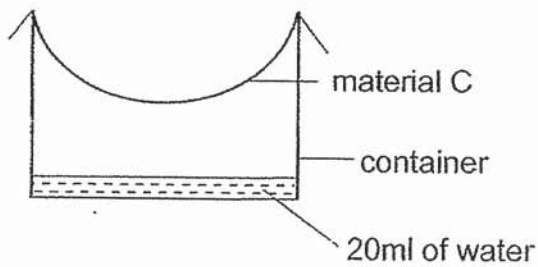
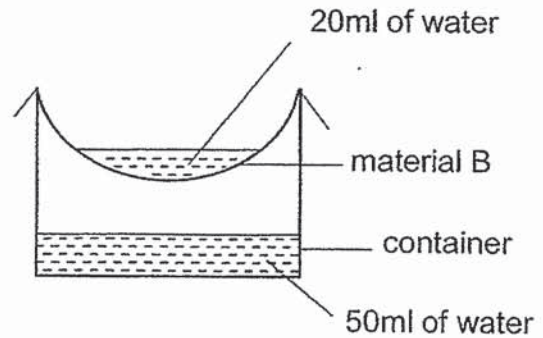
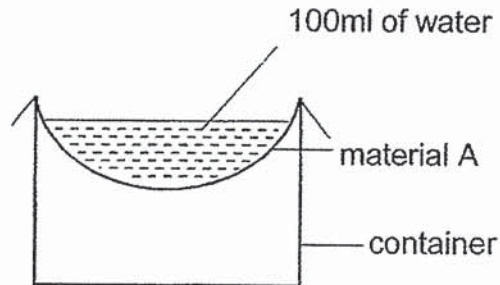
(4)



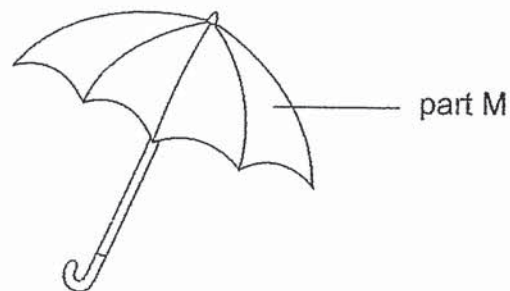
handkerchief



12. An experiment was carried out with four different pieces of material, A, B, C and D of the same size and thickness. Each piece of material was placed over a container and 100ml of water was poured onto each of them. Five minutes later, the following observations were made.



Based on the results of the experiment, which material is most suitable for making part M of an umbrella?



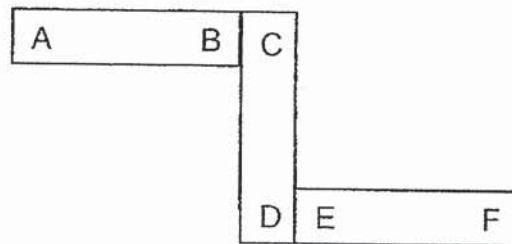
- (1) A
- (2) B
- (3) C
- (4) D

13. Two different objects were placed in each of the four containers, E, F, G and H, as shown in the table below.

In which container can the two objects be separated using a bar magnet?

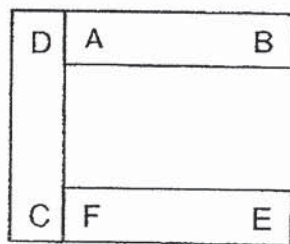
	Container	Objects
(1)	E	iron nails and steel balls
(2)	F	glass marbles and copper coins
(3)	G	steel balls and aluminium rods
(4)	H	copper coins and aluminium rods

14. Three bar magnets, AB, CD and EF, are arranged as shown below.

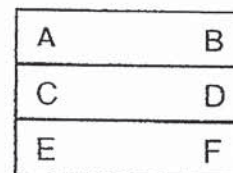


Which one of the following arrangements of the magnets is **not** possible?

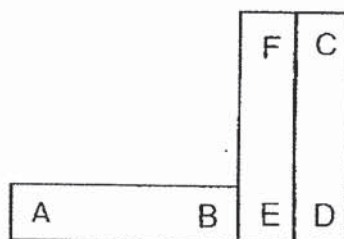
(1)



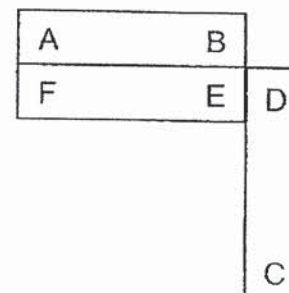
(2)



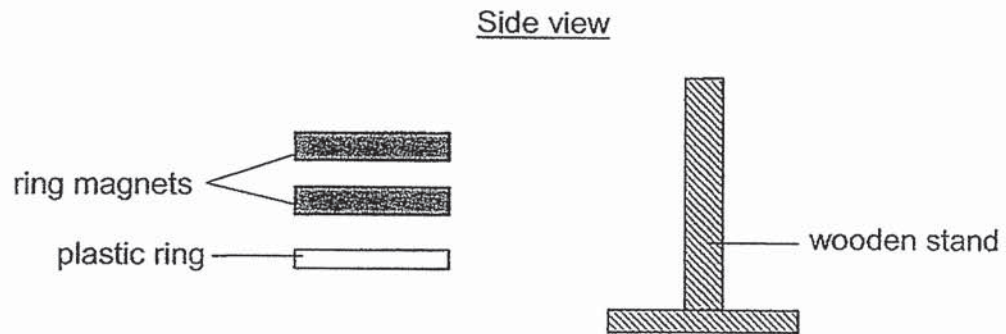
(3)



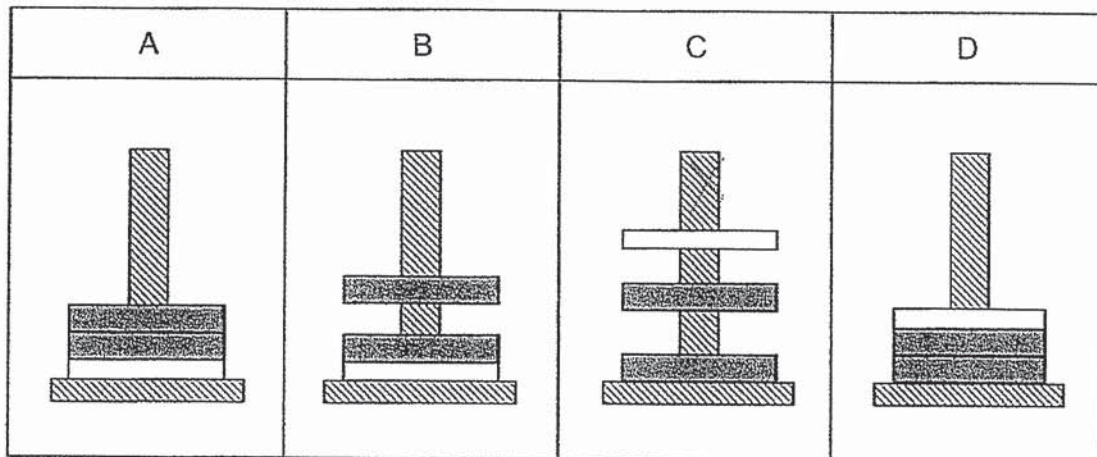
(4)



15. Kayden had two ring magnets and a thin plastic ring which he slotted through a wooden stand in various ways.



Which of the following observations is/are possible?



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

**END OF SECTION A**



## AI TONG SCHOOL

### 2019 END-OF-YEAR EXAMINATION PRIMARY THREE SCIENCE

(BOOKLET B)

24 OCTOBER 2019

Total time for booklets A and B : 1 h

#### INSTRUCTIONS

Do not turn over this page until you are told to do so.

Follow all instructions carefully.

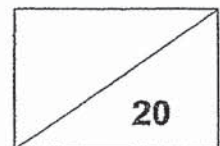
Answer all questions.

Write your answers in this booklet.

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

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

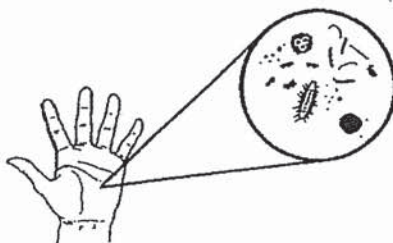
Parent's Signature : \_\_\_\_\_



**Section B: 20 marks**

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

16. Our hands contain bacteria as they come into contact with different objects.



Tony carried out an experiment to find out which hand soap would reduce the amount of bacteria on the hands after washing. He recorded the results in the table below.

Hand Soap	Amount of bacteria on the hands after washing (unit)
A	5
B	20
C	13

(a) Based on the results above, which hand soap, A, B or C, should Tony buy? Explain your answer. [1]

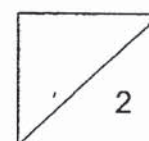
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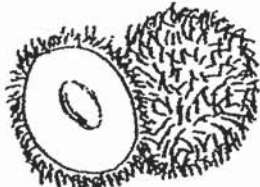
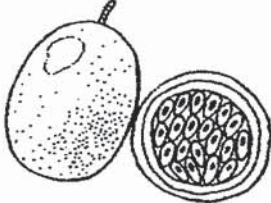


(b) Bacteria and plants are living organisms. How is bacteria different from plants in the way they obtain food? [1]

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17. Study the pictures in the table below.

Fruits	
A	B
 <p>rambutan</p>	 <p>passion fruit</p>
 <p>mango</p>	 <p>watermelon</p>

(a) Give a suitable heading for each group. [1]

Group A : \_\_\_\_\_

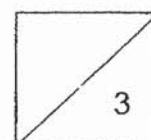
Group B : \_\_\_\_\_

(b) Based on the pictures, state one difference in the outer covering between the rambutan and mango. [1]

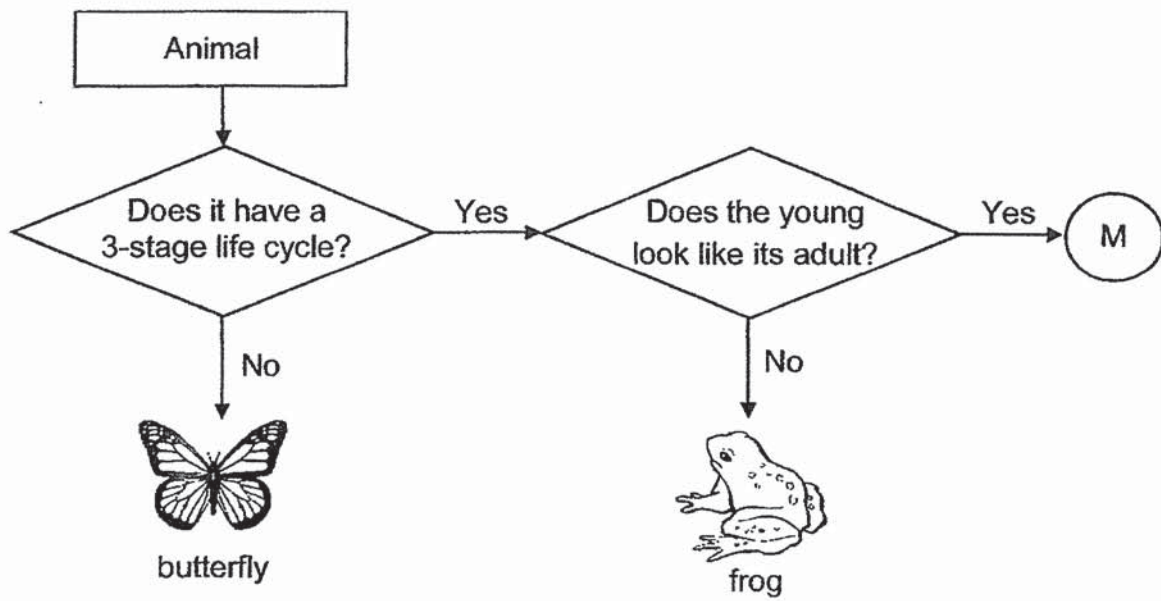
\_\_\_\_\_  
\_\_\_\_\_

(c) State how seeds in these fruits are useful to plants. [1]

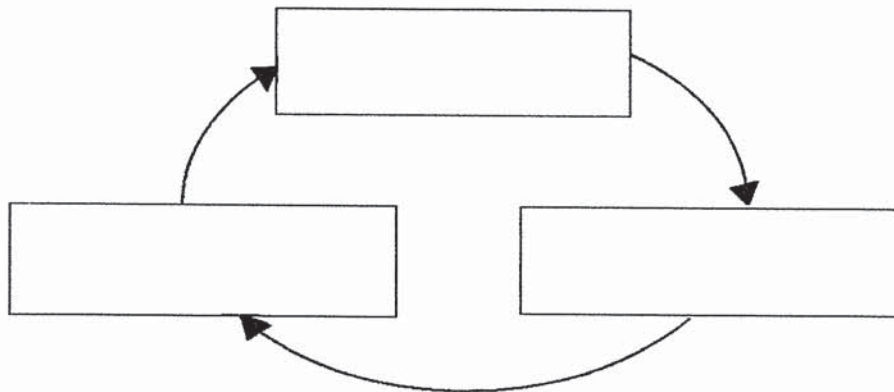
\_\_\_\_\_



18. Study the flowchart below.



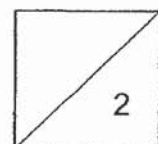
- (a) Animal M is an insect. Based on the flowchart above, write the names of the stages in animal M's life cycle in the boxes provided below. [1]



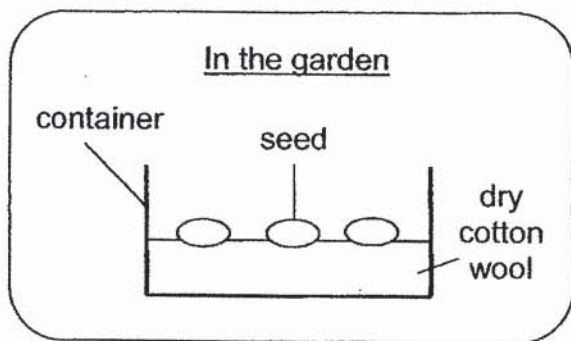
- (b) Write down one difference shown in the flowchart above between the life cycle of a butterfly and the life cycle of a frog. [1]

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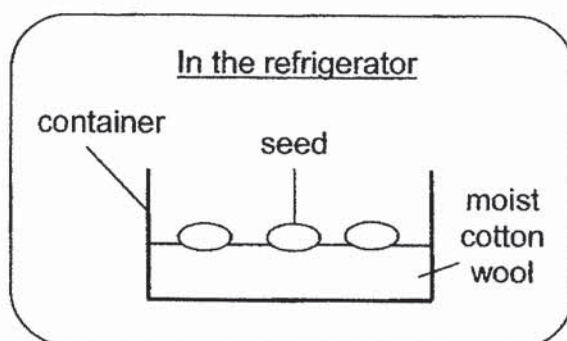
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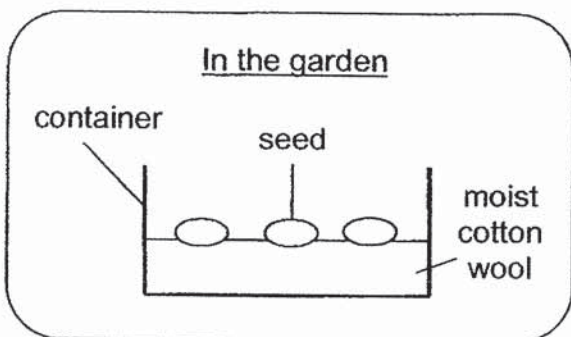
19. Cindy prepared four identical containers with three seeds of the same type and size in each container. She placed them at different locations as shown in the diagrams below.



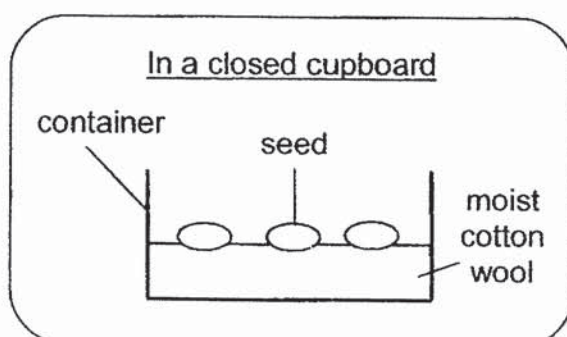
**Set-up W**



**Set-up X**



**Set-up Y**



**Set-up Z**

- (a) Cindy wanted to find out if seeds need warmth to germinate. Which two set-ups should she use in her experiment? [1]

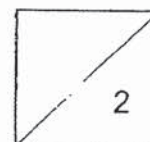
Set-up  and

- (b) A few days after the seeds germinated, Cindy noticed that the seed leaf on the young plant had become smaller. Explain why. [1]

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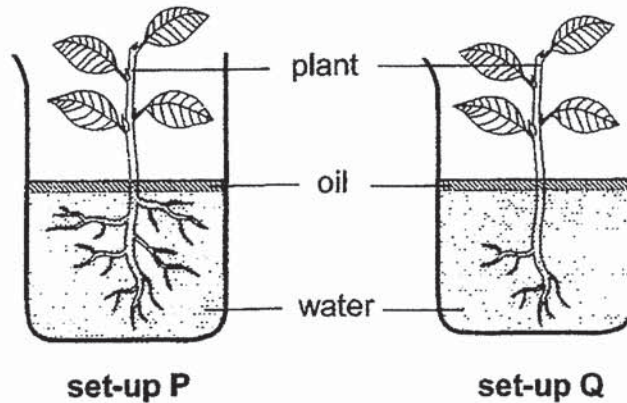


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20. Samuel conducted an experiment using the set-ups as shown. He left both set-ups in the classroom for one week.



- (a) What would Samuel observe about the amount of water left in each beaker after one week? Circle the correct answer in the bracket. [1]

After one week, the amount of water in set-up P was

( more than / the same as / less than ) the amount of water in set-up Q.

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

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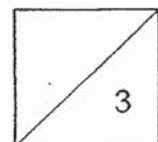
- (c) Samuel then removed the plants from the beakers and planted them in the garden behind his house. He made sure that the plant in set-up Q still had fewer roots than the plant in set-up P. The next night, there was heavy rain with strong winds. Samuel saw that the plant from set-up Q fell out of the soil but the plant from set-up P remained upright on the ground.

Based on his observation, what can Samuel conclude about the function of roots? [1]

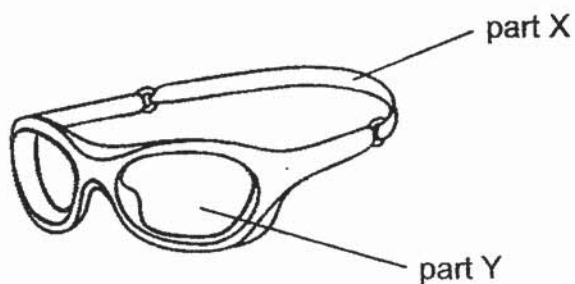
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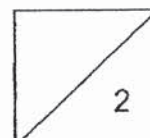


21. The picture below shows a pair of goggles that a swimmer uses when swimming in water.

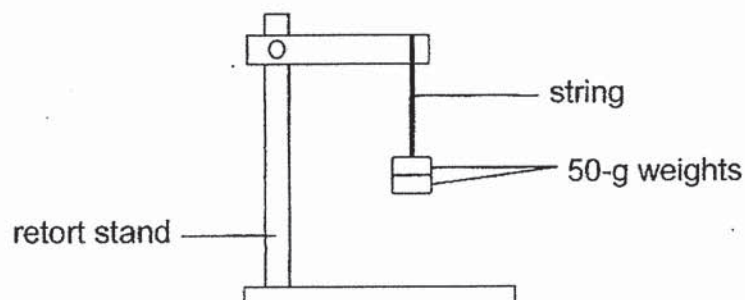


- (a) In the table below, name a waterproof material that is suitable for making parts X and Y. [1]
- (b) Other than being waterproof, write down one other reason for your choice of material for each part. [1]

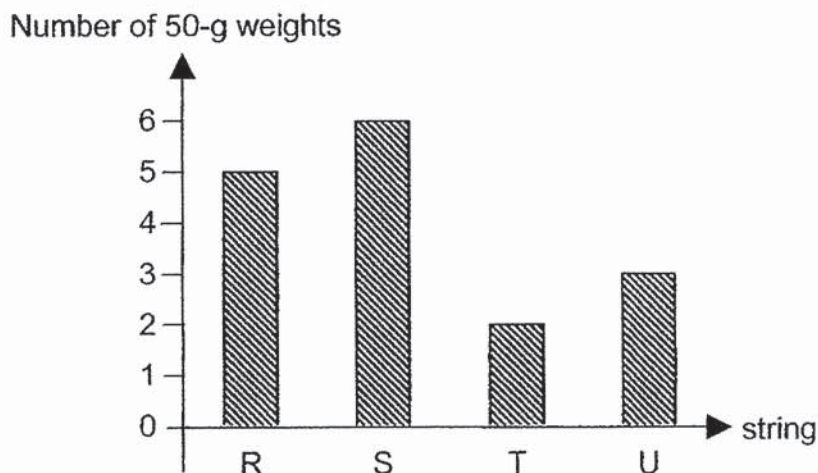
Part	A suitable material used to make the part	Reason
X		<hr/> <hr/> <hr/>
Y		<hr/> <hr/> <hr/>



22. Ashley carried out an experiment using the set-up below with four strings of the same length but made from different materials, R, S, T and U. She hung 50-g weights, one at a time, on each string until the string broke.



The following graph shows the number of weights needed to break each string.



- (a) What property of the string was Ashley testing? [1]

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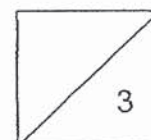
- (b) Based on the results from the graph above, which string, R, S, T or U, is the weakest? Explain your answer. [1]

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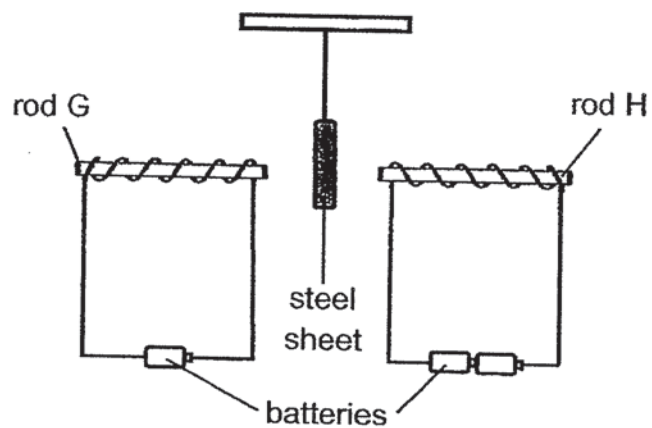
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- (c) What is the changed variable in this experiment? [1]

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23. Joey placed a steel sheet between rods G and H in the set-up shown below. Rods G and H are made of iron.



- (a) What would happen to the steel sheet? [1]

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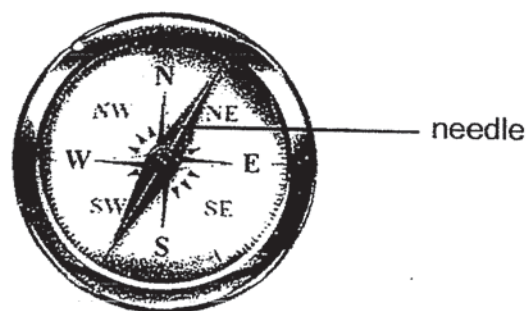
- (b) Explain your answer in (a). [1]

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- (c) The picture below shows a compass.



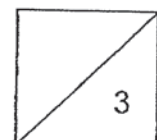
The needle of a compass is a magnet.

What property of magnets allows the compass to help us find directions?

[1]

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End of Paper





## ANSWER KEY

**YEAR : 2019**  
**LEVEL : PRIMARY**  
**SCHOOL : AI TONG SCHOOL**  
**SUBJECT : SCIENCE**  
**TERM : END-OF-YEAR EXAMINATIONS**

### BOOKLET A

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

### BOOKLET B

- Q16. (a) A. A had the least amount of bacteria on hands after washing.**  
**(b) Bacteria feeds on living thing dead or alive but plants do not.**
- Q17. (a) Group A: one seed**  
**Group B: many seeds**  
**(b) Mangos have smooth outer covering but rambutans do not.**  
**(c) The seeds help to reproduce.**
- Q18. (a) egg, nymph, adult**  
**(b) A life cycle of a frog has three stages but butterflies do not.**
- Q19. (a) Set up Y and X**  
**(b) Seedling take in the food in the seed leaf.**
- Q20. (a) less than**  
**(b) Set up P has more roots than set up Q so set up P absorb more water.**  
**(c) The roots hold the plants firmly to the ground.**

<b>Q2</b>	<b>(b)</b>	
<b>Pa</b>	<b>suitable material used to make the part</b>	<b>Reason</b>
<b>X</b>	<b>Rubber</b>	<b>Rubber because it is very flexible and it is waterproof.</b>
<b>Y</b>	<b>Glass</b>	<b>Glass because glass allows light to pass through thus being able to see through the glass.</b>

- Q22. (a) strength**  
**(b) String T because string T can carry the least amount of 50-grams weights.**  
**(c) The material of string.**

- Q23. (a) The steel sheet will be attracted to rod H**  
**(b) H has more batteries so it has greater magnetic strength.**  
**(c) The compass help us find directions by being freely suspended and will rest in the north south directions.**

2  
to D,