PRIMARY 3 END-OF-YEAR EXAMINATION 2017

Name . _____

Class : Primary 3 ( )

Parent's signature: _____

Date: 25 October 2017

Time: 8.00 a.m. - 9.30 a.m.

Duration: 1 hour 30 minutes

SCIENCE

BOOKLET A

INSTRUCTIONS TO CANDIDATES

1. Write your name, class and register number.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Shade your answers on the Optical Answer Sheet (OAS) provided.

Booklet A (22 x 2 marks)

For each question from 1 to 22, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and shade your answer on the Optical Answer Sheet.

(44 marks)

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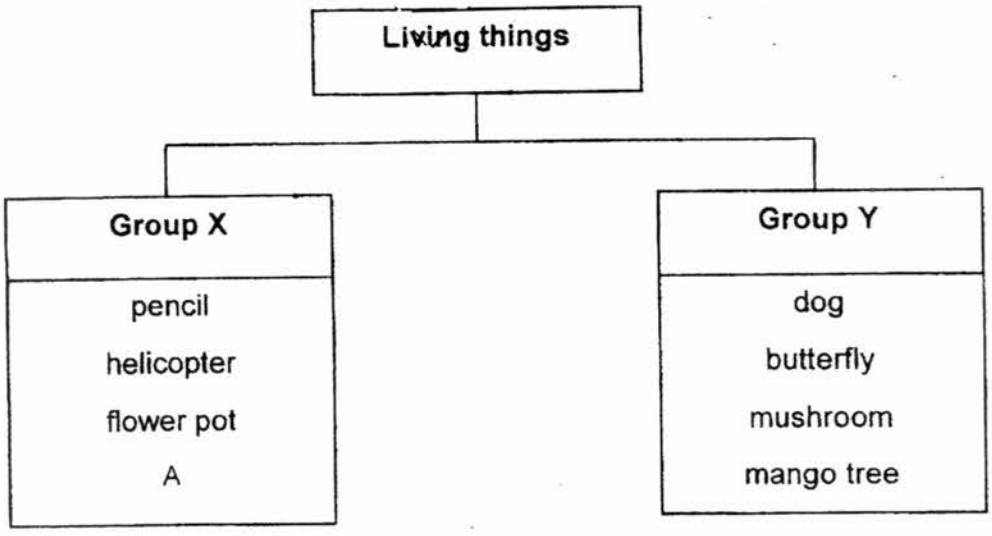
1. Study the classification chart below.



Which of the following best represents A?

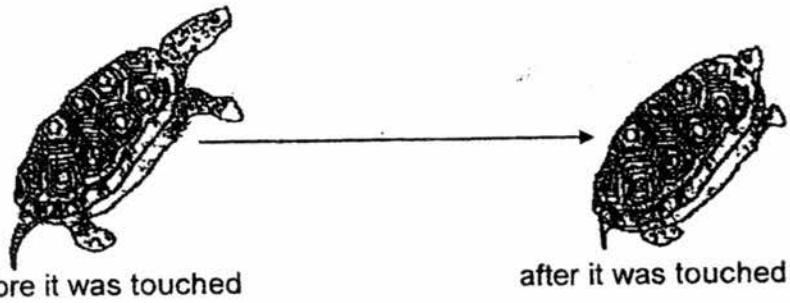
(1) fish

(2) bird

(3) comb

(4) bacteria

2. The diagram below shows a tortoise hiding in its shell when touched.



before it was touched

after it was touched

Which one of the following characteristics of living things does the tortoise show?

(1) Living things grow.

(2) Living things reproduce.

(3) Living things respond to changes around them.

(4) Living things need water, air and food to survive.

3. Cathy was given a 3-month old kitten that weighed 2 kg. After four months, her kitten now weighs 3 kg. This is because the kitten _____.

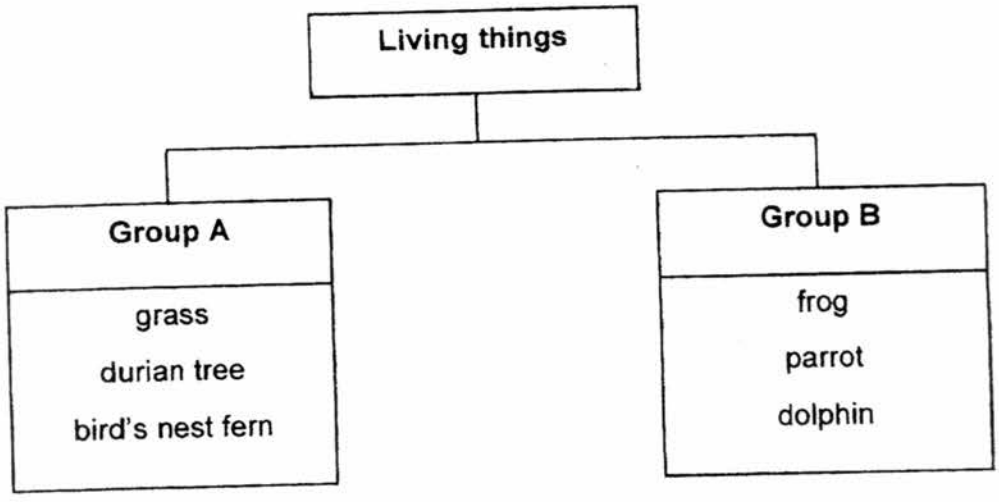
(1) can die

(2) can grow

(3) can reproduce

(4) can respond to changes around it

4. Study the classification chart below.



Which of the following correctly represent the headings for Group A and Group B?

	Group A	Group B
(1)	micro-organisms	fungi
(2)	plants	animals
(3)	fungi	micro-organisms
(4)	animals	plants

5. The diagram below shows two animals.

chicken bat

The above animals are classified into the same group because both of them _____.

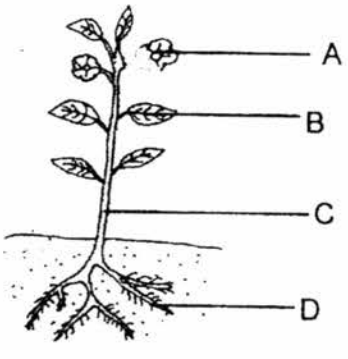
(1) lay eggs

(2) have wings

(3) have a beak

(4) have feathers

6. Which of the following plant parts, A, B, C or D, helps to keep the plant upright?



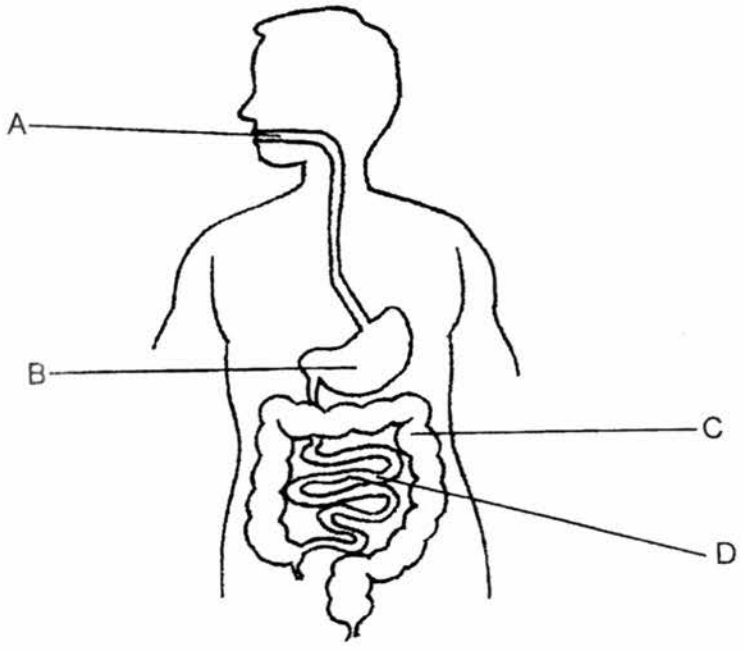
(1) A

(2) B

(3) C

(4) D

7. The diagram below shows the human digestive system.



Which one of the following statements is correct?

(1) Digestion ends at C.

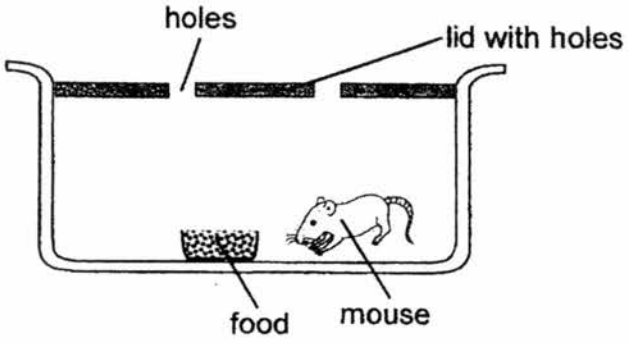
(2) Digestion begins at A.

(3) Digested food is absorbed into the body at B.

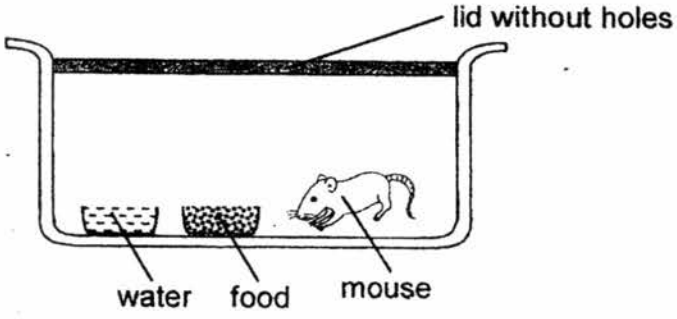
(4) Water from the undigested food is removed at D.

8. Jeremy placed a mouse in 4 different containers as shown in the diagrams below. In which container would the mouse live the longest?

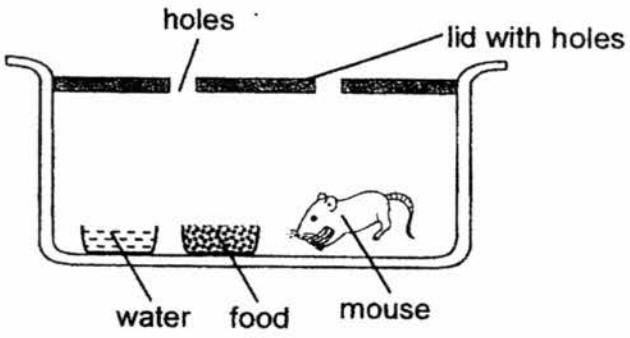
(1)



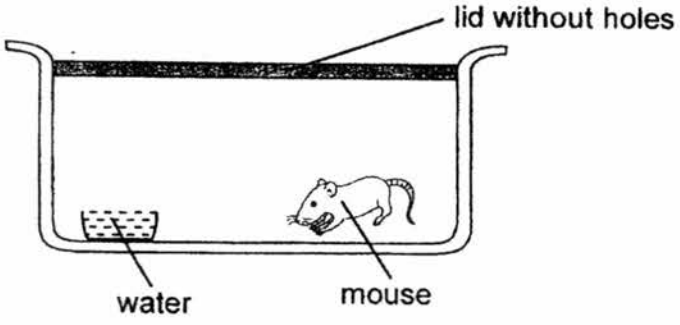
(2)



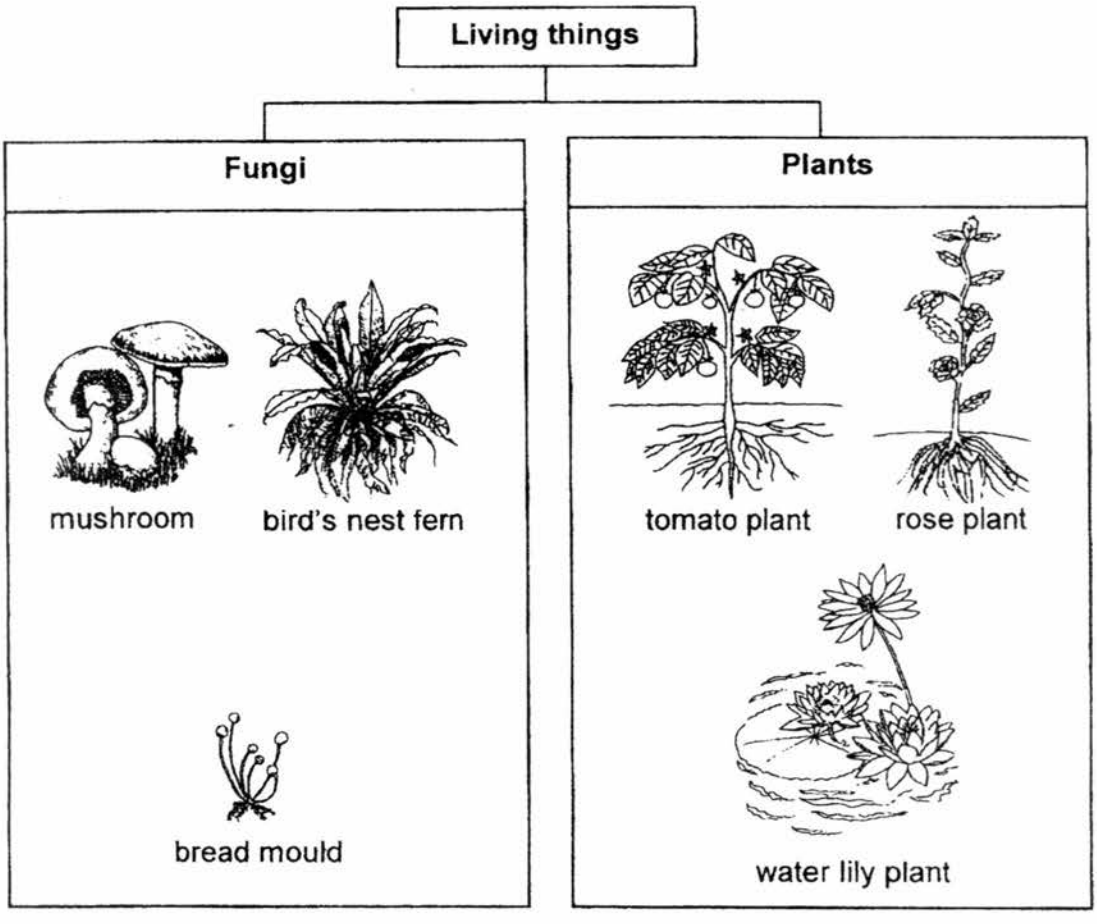
(3)



(4)



9. Cindy observed some living things in the garden and she grouped them in a classification chart as shown below.



Which of the above living things is <u>incorrectly</u> grouped?

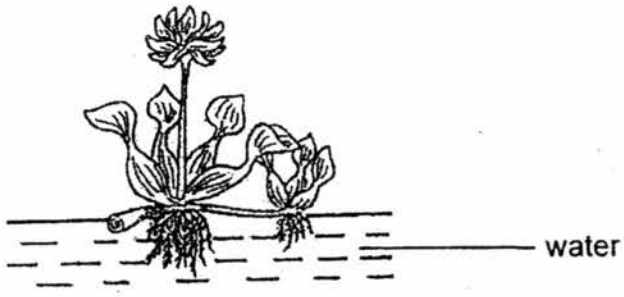
(1) rose plant

(2) mushroom

(3) tomato plant

(4) bird's nest fern

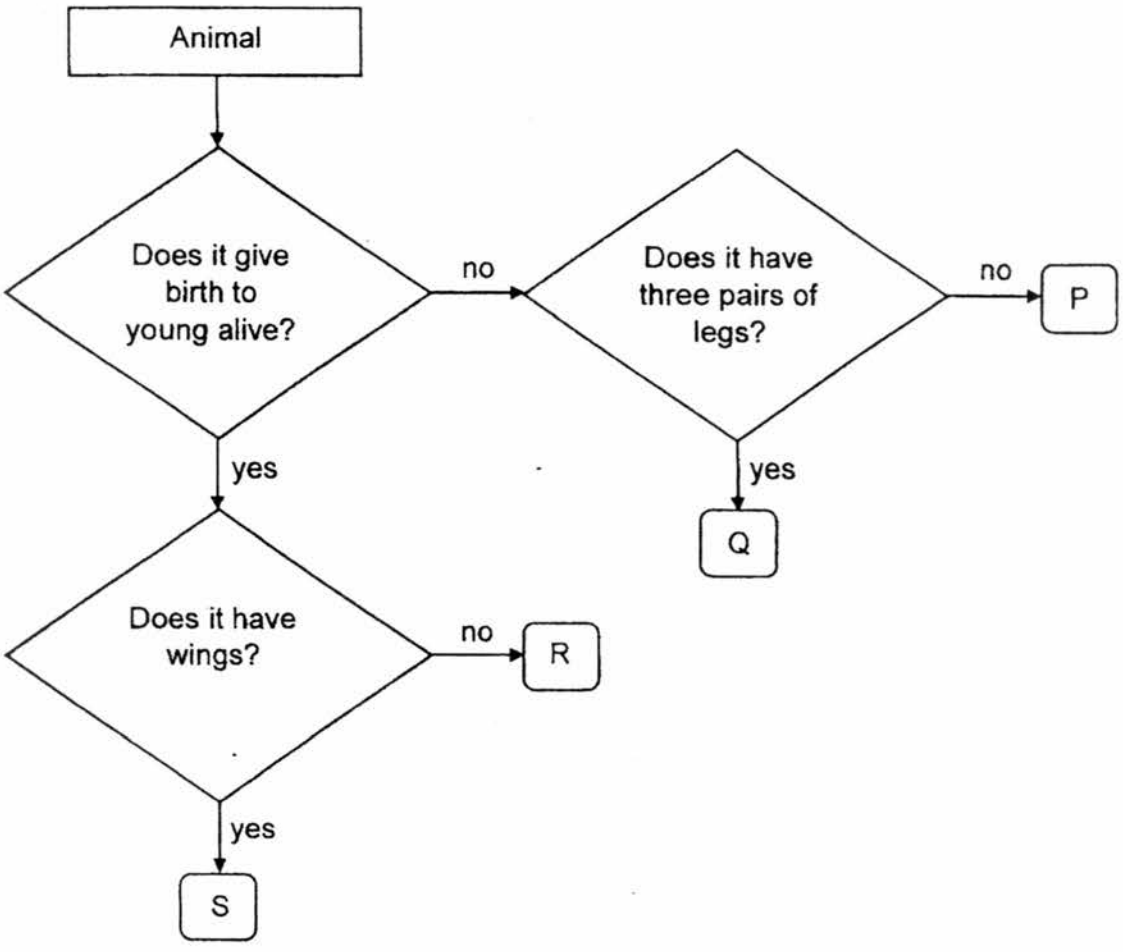
10. Below is a diagram of an organism found in Peter's pond.



Which of the following organisms, W, X, Y, Z, shown below represents the organism found in Peter's pond?

		A tick (✓) shows that the organism has that characteristic.		
		Characteristics		
		Has flowers	Makes its own food	Grows on land
(1)	W	✓	✓	✓
(2)	X		✓	
(3)	Y	✓	✓	
(4)	Z			✓

11. Study the flowchart shown below.



Which of the following could the animal, Q, be?

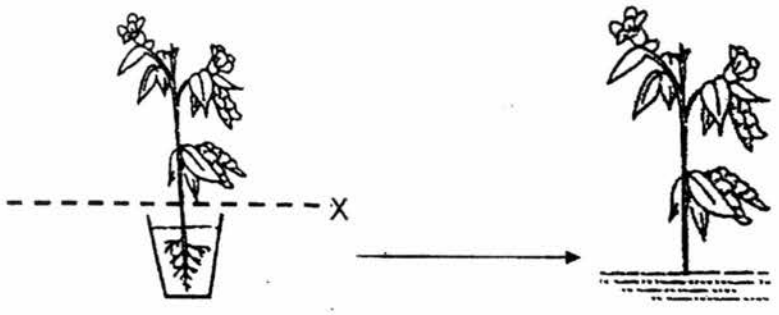
(1) bat

(2) cow

(3) snake

(4) mosquito

12. Gerald transferred his plant from a pot to his garden after cutting it at position X as shown below. He also cut off some of its leaves. He watered the plant daily.



However, the plant died after a week. Which one of the following is a most likely reason why the plant died?

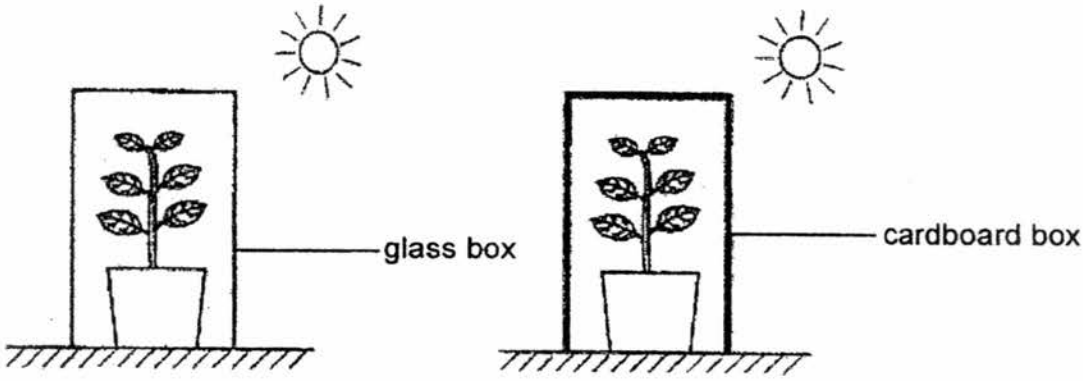
(1) The plant has no fruits.

(2) The plant cannot stand upright.

(3) The plant is not getting enough sunlight.

(4) The plant cannot absorb water and mineral salts.

13. Mary placed 2 similar plants in the set ups as shown below. She watered the plants daily with the same amount of water.



Set up A Set up B

She noticed that the plant in set-up A can survive longer. What is the reason?

(1) The plant in set-up A has more air than the plant in set-up B.

(2) The plant in set-up A has more leaves than the plant in set-up B.

(3) The plant in set-up A can take in water unlike the plant in set-up B.

(4) The plant in set-up A can make its own food unlike the plant in set-up B.

14. Jane is playing badminton with her friends.

Which organ systems are involved in helping her play badminton?

A Skeletal System

B Muscular System

C Circulatory System

D Respiratory System

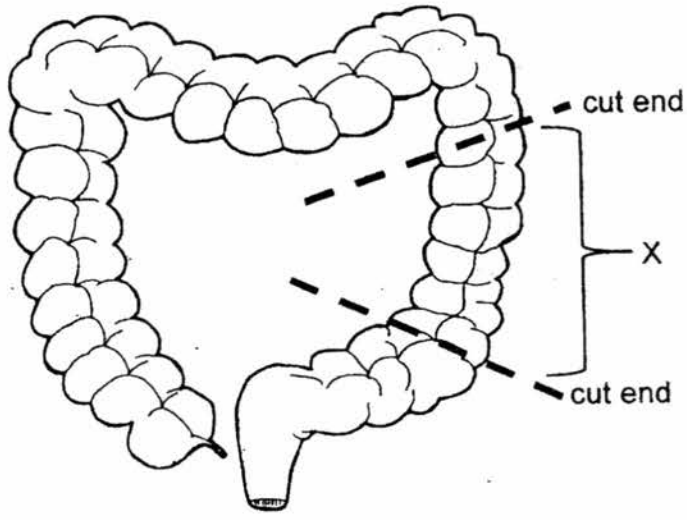
(1) A and B only

(2) B and C only

(3) A, B and D only

(4) A, B, C and D

15. Part X of John's large intestine has been removed and the cut ends are rejoined during surgery as shown below.



Which one of the following is likely to happen to John after this change in his digestive system?

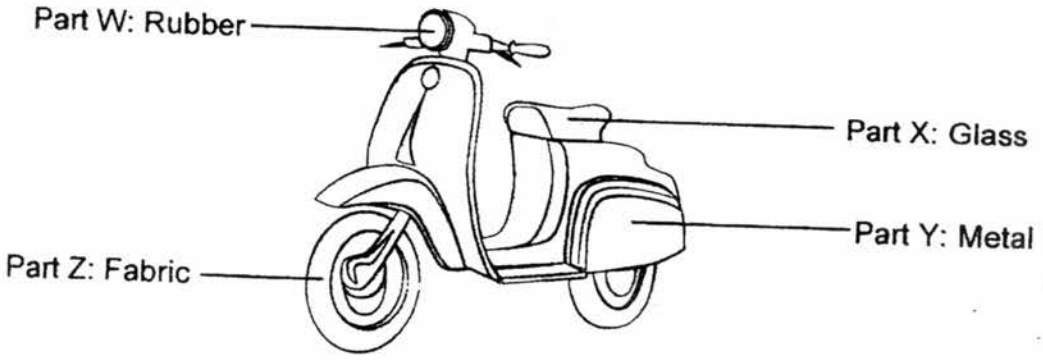
(1) Waste released would be hard.

(2) Less digested food is absorbed.

(3) Waste released would be watery.

(4) Food would take a longer time to digest.

16. The diagram below shows a scooter.



Which part of the scooter shown above is made of the correct material?

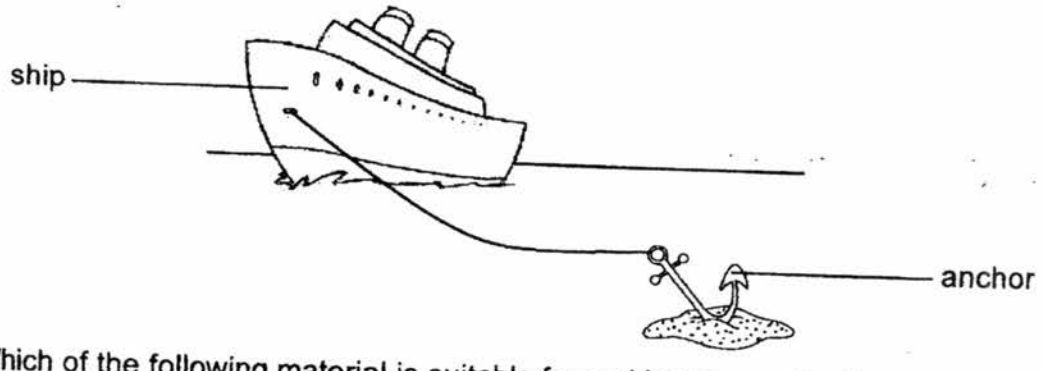
(1) W

(2) X

(3) Y

(4) Z

17. An anchor is used to keep a ship in one place.



Which of the following material is suitable for making the anchor?

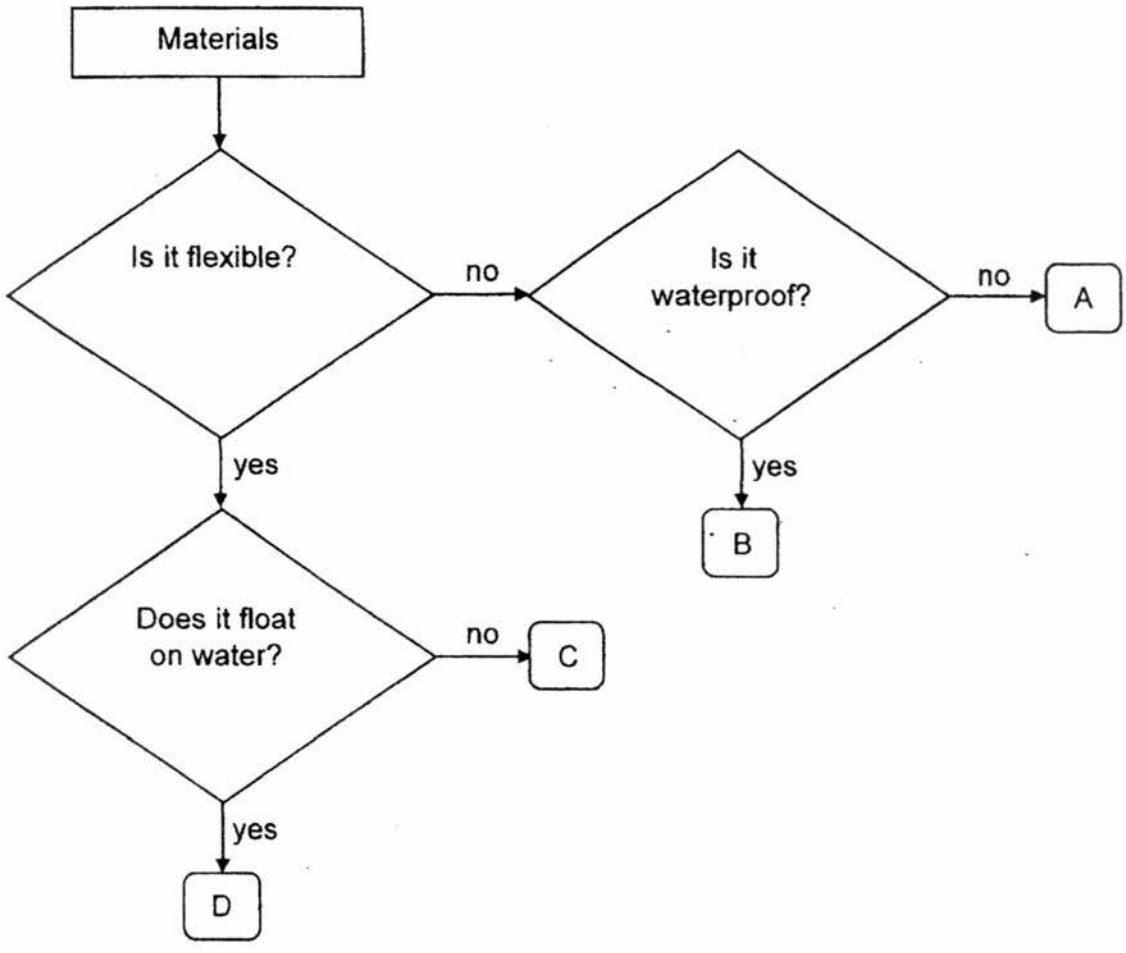
(1) glass

(2) metal

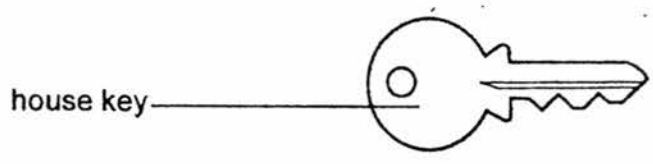
(3) wood

(4) plastic

18. Study the flowchart below.



Based on the flowchart above, which of the following materials, A, B, C or D, is used to make a house key?



(1) A

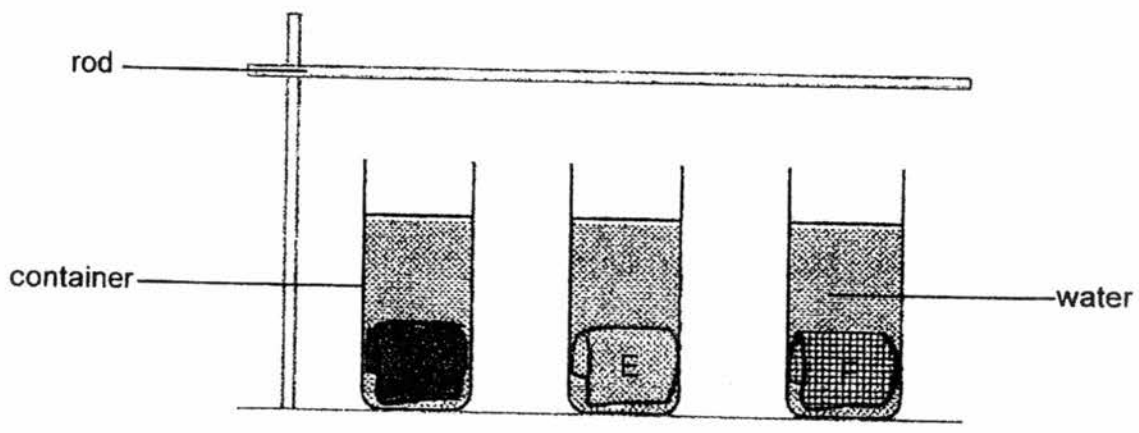
(2) B

(3) C

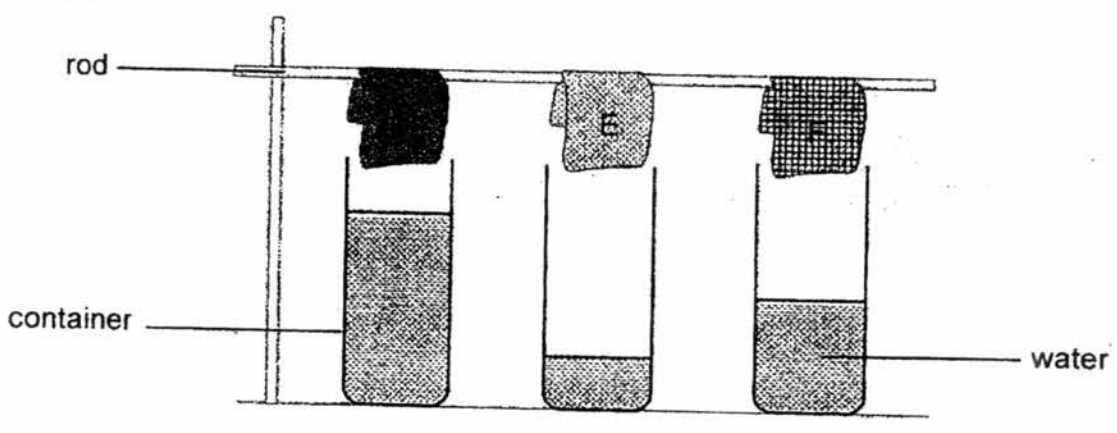
(4) D

19. Alvin placed three towels made of different materials, D, E and F, into three containers having the same amount of water. The towels are of the same size and thickness. After five minutes, he removed the three towels and hung them up as shown below. The amount of water left in the containers is shown in the diagram below.

Before:



After:



Which of the following shows the correct order of the towels starting with the one that absorbs the most water?

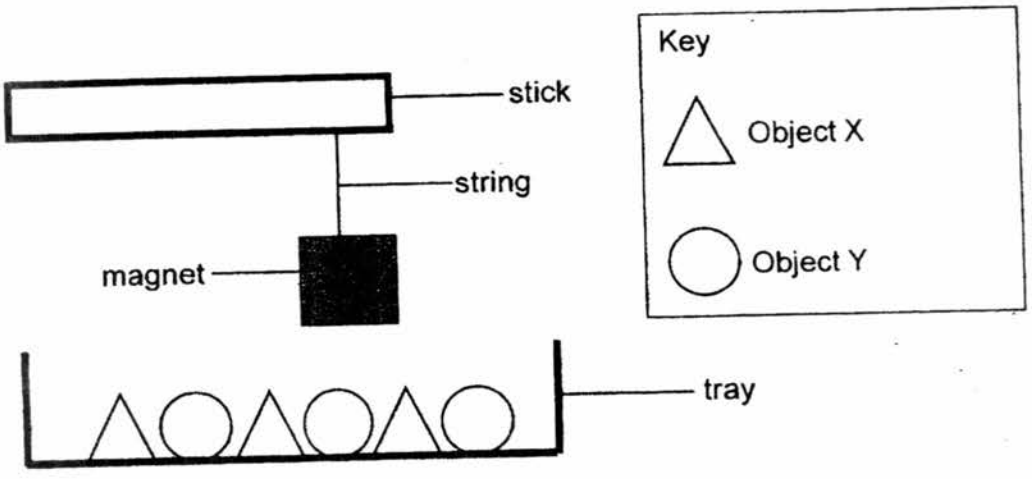
(1) D, E, F

(2) D, F, E

(3) F, E, D

(4) E, F, D

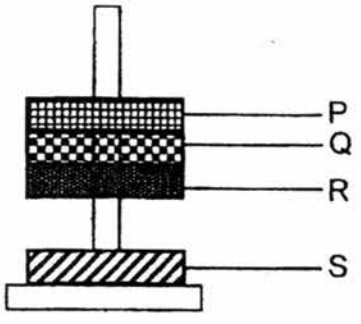
20. Ron and Kelly played a game as shown in the diagram below. They needed to use a magnet to pick up only object X and not object Y.



Which of the following shou object X and object Y be for the game to be played?

	Object X	Object Y
(1)	aluminum block	plastic block
(2)	iron block	steel block
(3)	plastic block	aluminum block
(4)	steel block	plastic block

21. Paul stacked four rings as shown below. Two of the rings are magnets while the other two rings are made of non-magnetic materials.



Which of the rings, P, Q, R and S, are magnets?

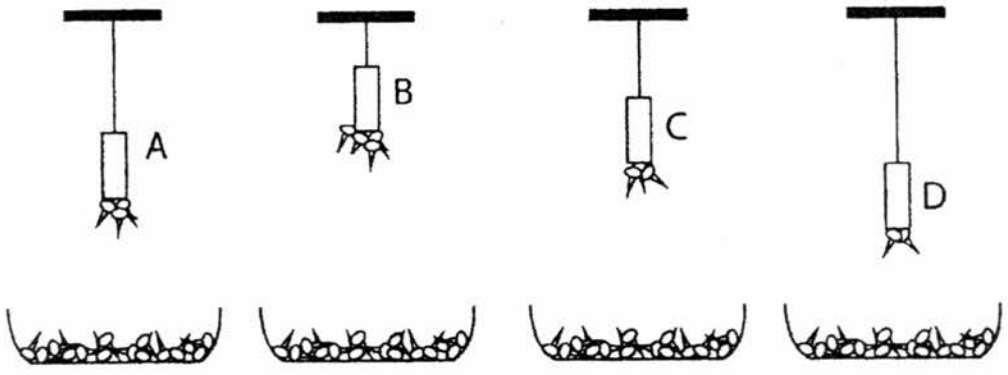
(1) P and Q

(2) P and R

(3) R and S

(4) Q and S

22. Kelly hung four different magnets, A, B, C and D above trays of identical iron pins. She noticed that the magnets could attract different number of iron pins from different distances as shown below.



Based on her observation, which magnet is the strongest?

(1) A

(2) B

(3) C

(4) D

End of Booklet A

TAO NAN SCHOOL 道南学校

SINCERITY & PERSEVERANCE

PRIMARY 3 END-OF-YEAR EXAMINATION 2017

Name : _____

Class : Primary 3

Date: 25 October 2017

Time: 8.00 a.m. – 9.30 a.m.

Duration: 1 hour 30 minutes

SCIENCE

BOOKLET B

INSTRUCTIONS TO CANDIDATES

1. Write your name, class and register number.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Write your answers in the booklet.

Booklet B (36 marks)

For questions 23 to 34, write your answers clearly in this booklet.

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

(36 marks)

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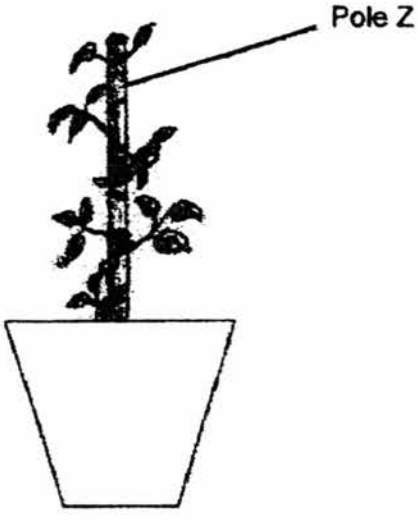
23. Jack found a plant growing up pole Z in the school garden as shown below.



(a) Based on the diagram, explain why the plant needs to climb up the pole as a support. [2]

_____

_____

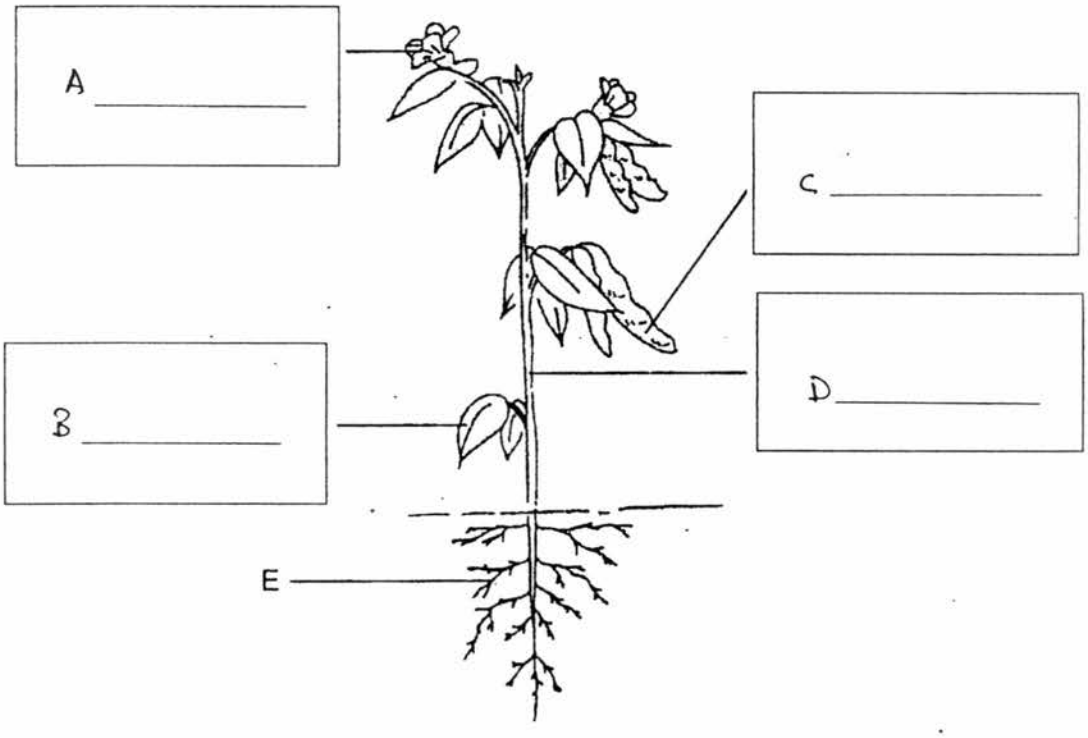
_____

(b) Jack painted the leaves of the plant with paint. A few days later, the plant died. Why did this happen? Explain your answer. [1]

_____

_____

24. Study the plant parts, A, B, C, D and E shown below.



(a) Label the plant parts, A, B, C and D, in the diagram above. [2]

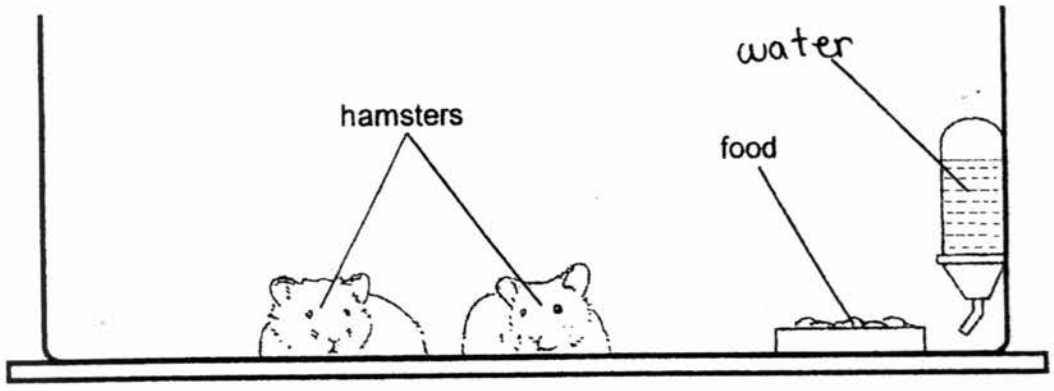
(b) State one function of the plant part, E. [1]

_____

_____

Score	/ 3

25. Cheryl put 2 hamsters in a large tank. The hamsters were given a bowl of food and a bottle of water daily.



She counted the number of hamsters in the tank at the end of every month and recorded the results in the table below.

Month	Number of hamsters
January	2
February	2
March	4
April	4
May	6
June	6
July	10
August	8
September	6
October	4

(a) What did she observe about the number of hamsters in the tank from January to July? [1]

_____

_____

Score	1

(b) If Cheryl did not put any new hamsters into the tank, give a possible explanation for her observation in (a). [1]

_____

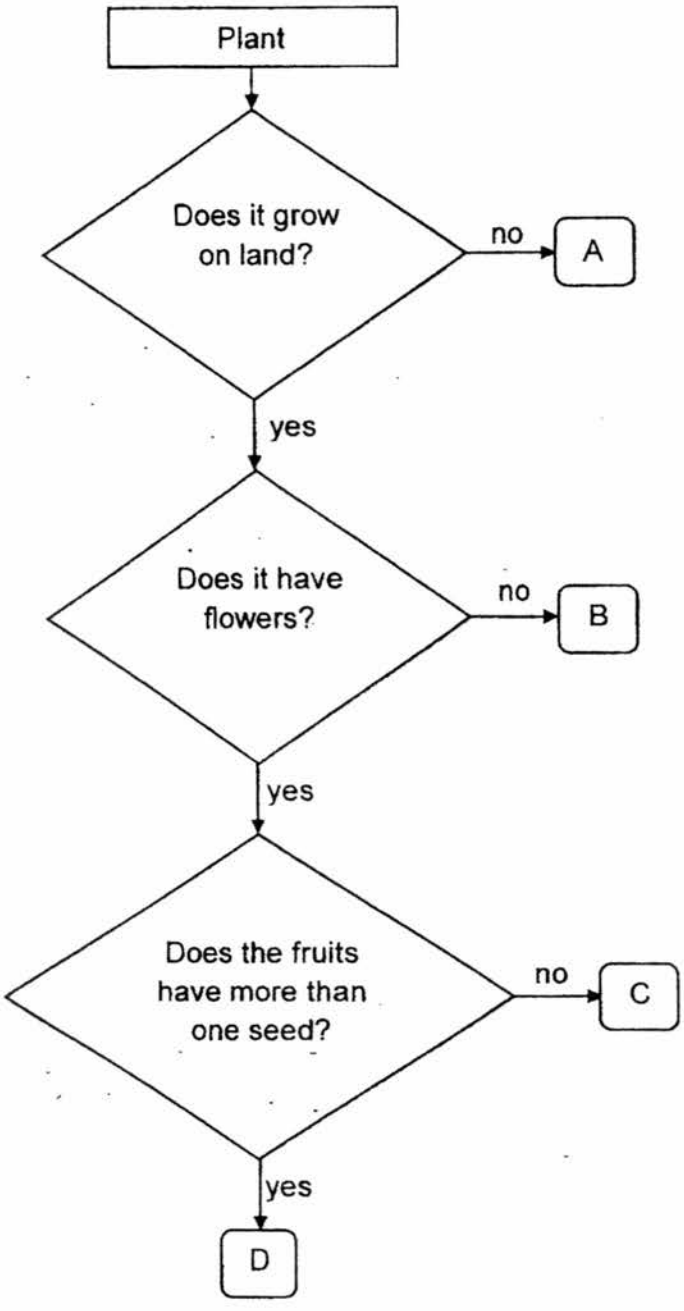
_____

(c) Cheryl observed that the number of hamsters changed from July onwards. Give a possible explanation for her observation. [1]

_____

_____

26. Study the flowchart below.



(a) Based on the flowchart, state two similarities between C and D. [1]

_____

_____

(b) Based on the flowchart, state a difference between A and D. [1]

_____

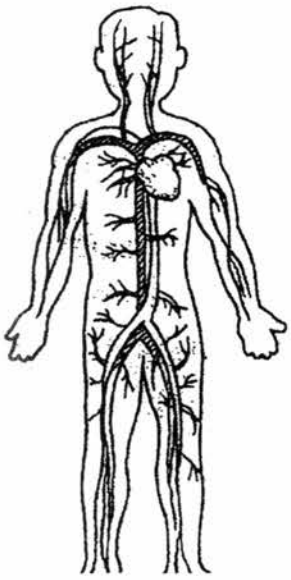
_____

(c) Based on the flowchart, which plant, A, B, C or D, can a papaya tree be? Explain why. [1]

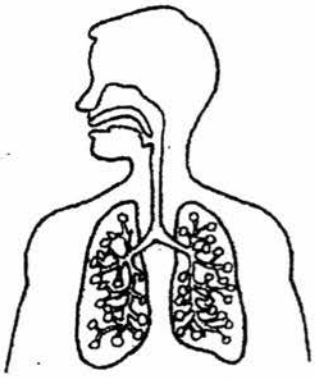
_____

_____

27. The diagram below shows 2 human organ systems.



Organ System A



Organ System B

(a) Name the two organ systems. [1]

Organ System A: _____

Organ System B: _____

(b) Describe a function of each of the organ systems shown. [2]

Organ System A: _____

_____

Organ System B: _____

_____

28. Andy left 4 similar pots of plants, A, B, C and D, under the sun for different numbers of hours a day. He watered them daily.

	A	B	C	D
Number of hours in the sun for each day	1	3	5	7
Height of plant (cm)	6	11	14	18

(a) From the table above, what is the relationship between the number of hours the plant is left in the sun daily and its height? [1]

_____

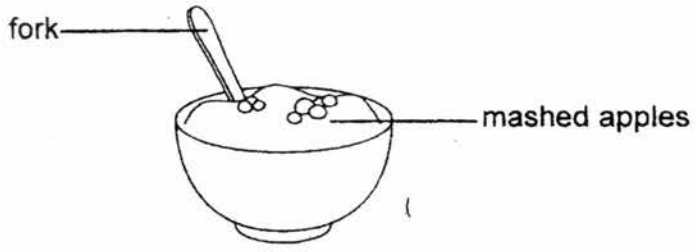
_____

(b) Explain how the number of hours the plant is left in the sun daily affects the plants' height. [2]

_____

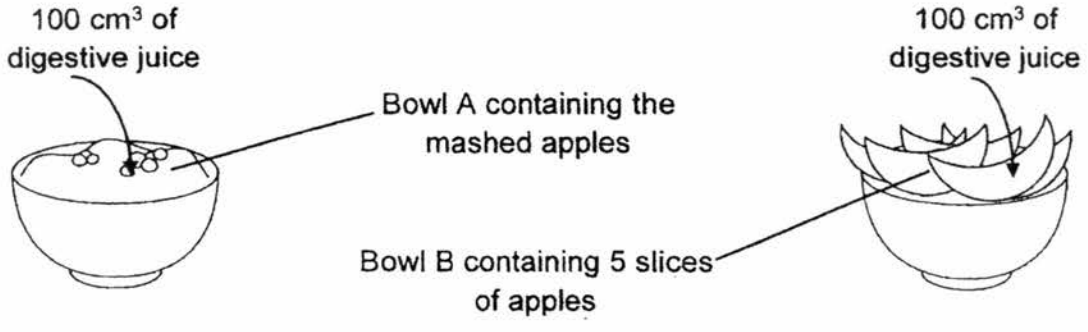
_____

29. Sarah used a fork to mash 5 slices of apple to make a pie as shown below.



(a) Which part in the mouth is similar to the fork? Give a reason for your answer. [1]

Sarah then poured 100 cm^3 of digestive juices into bowls, A and B, as shown below.



(b) Which bowl of apples, A or B, would have a greater amount of digested apples after 2 hours? Explain your answer. [1]

(c) In the human body, besides the stomach, where else does digestion takes place? [1]

30. The table below shows three materials, E, F and G. A tick (✓) shows that the material has that property.

	Properties of the materials			
	It is waterproof.	It is flexible.	It allows light to pass through.	It is strong.
E	✓	✓	✓	
F	✓		✓	✓
G		✓		

(a) Based on the information given in the table above, state any two properties of Material F. [1]

_____

_____

(b) Based on the information given in the table above, state one difference between Material E and Material F. [1]

_____

_____

(c) Based on the information given in the table above, which material, E or G, is more suitable to make a raincoat? Explain why. [1]

_____

_____

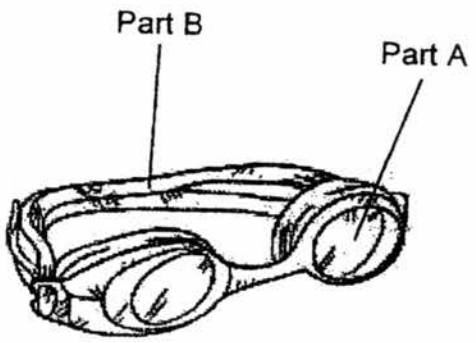
31. Annie conducted an experiment using a magnet. She placed the magnet close to 3 objects, X, Y and Z, and recorded her observations in the table below.

Objects	Is it attracted by the magnet?	Is it repelled by the magnet?
X	No	No
Y	Yes	Yes
Z	Yes	No

Based on her results, match the objects, X, Y, and Z, to the items they could be by drawing lines. (You can match an object to more than one item.) [3]

Object		Item
X	•	• magnet
Y	•	• iron paper clip
Z	•	• wooden stick
		• steel ring
		• aluminum rod

32. The diagram below shows a pair of swimming goggles.



(a) Part A is made of clear plastic. Explain why it is used [1]

_____

_____

(b) What is a suitable material used to make Part B, the straps of the swimming goggles such that it stretches around the swimmer's head? [1]

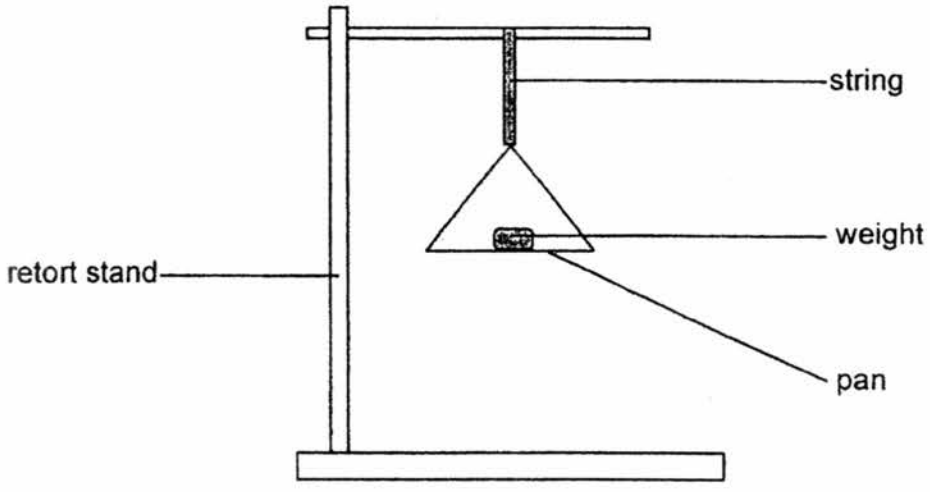
_____

(c) What is a suitable material to wipe off the water on the swimming goggles? Give a reason for your answer. [1]

_____

_____

33. Ben used the set-up below to compare the strength of two strings, X and Y.



He added weights, of equal mass, onto the pan until the string broke. His results are shown below.

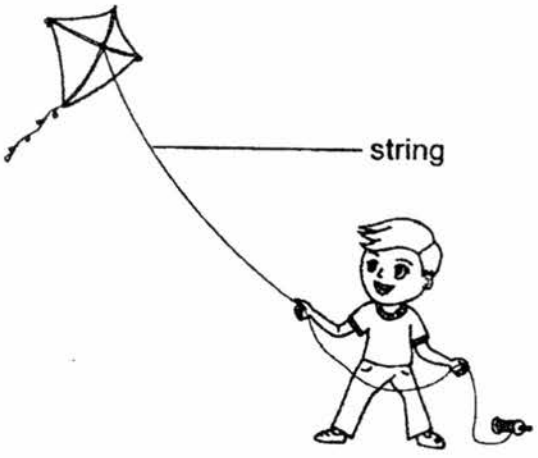
String	Minimum number of weights added to break the string
X	3
Y	9

(a) What must Ben do to make sure his results are reliable? [1]

_____

_____

(b) Ben wanted to string his kite.

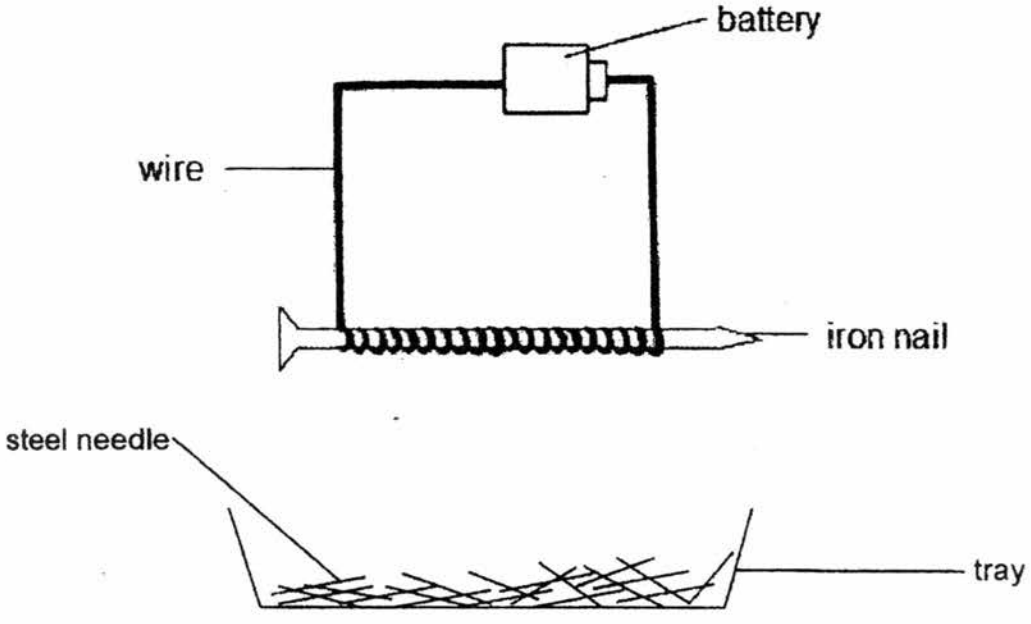


Which string, X or Y, should he choose if he does not want the string to break easily? Give a reason for your answer. [1]

(c) Ben noticed that the wind has become stronger. He connected 3 strings as shown below.

How does this arrangement of the strings allow the kite to be used in the strong wind? [1]

34. Raymond wanted to find out how the number of coils of wire around an iron nail affects the strength of an electromagnet using the set up shown below.



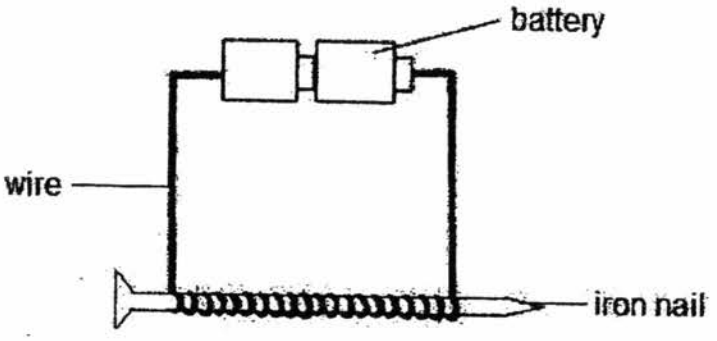
He recorded his observation in the table below.

Number of coils of wire around the iron nail	Number of steel needles attracted to the iron nail (electromagnet)
20	8
40	15
60	23

Fill in a suitable word in the blank for question (a) below. [1]

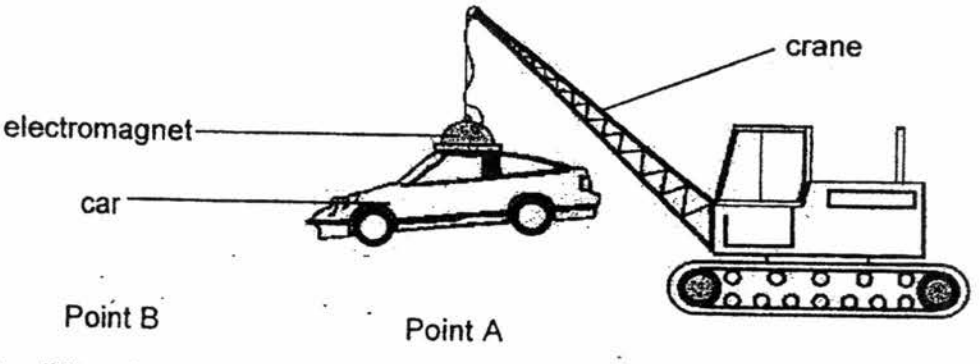
(a) Based on the results, increasing the number of coils of wire around the iron nail causes the strength of the electromagnet to _____.

Raymond added another battery to his set up with 60 coils of wire around his iron nail as shown.



(b) Would Raymond observe more, fewer or similar number of pins attracted by the iron nail (electromagnet)? Explain your answer. [1]

The diagram below shows a crane lifting a car using an electromagnet.



After lifting the car at Point A, the crane would need to lower and release it at Point B.

(c) Describe what needs to be done to allow the electromagnet to release the car at Point B. [1]

End of Paper

EXAM PAPER 2017

LEVEL : PRIMARY 3
SCHOOL : TAO NAN PRIMARY SCHOOL
SUBJECT : SCIENCE
TERM : END-OF-YEAR EXAM

BOOKLET A
Section A

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
3	3	2	2	2	3	2	3
Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16
4	3	4	4	4	4	3	3
Q17	Q18	Q19	Q20	Q21	Q22		
2	2	4	4	3	2		

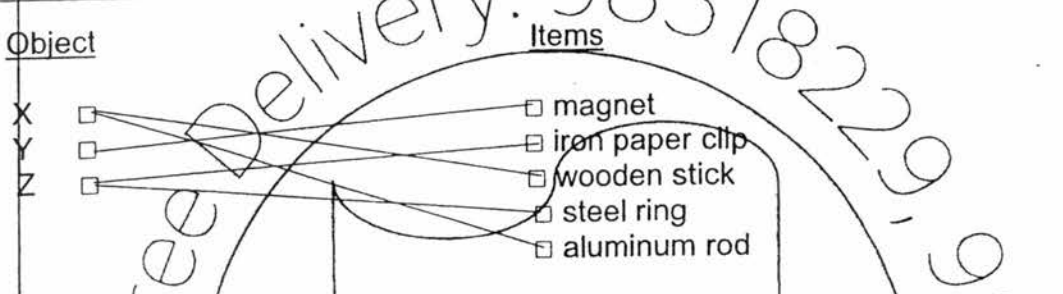
BOOKLET B
Section B

Q23. (a) The plant has a weak stem so it needs support so the leaves can trap more sunlight to make more food.
(b) The plant could not make food or do gaseous exchange. The paint is blocking the sunlight and air from getting to the plant's stomata

Q24. (a) A: Flower
B: Leaf
C: Fruit
D: Stem
(b) Part E helps the plant to absorb water and mineral salts.

Q25. (a) She observed that the number of hamsters in the tank increased.
(b) The hamsters reproduced.
(c) Some hamsters died due to old age.

Qn	Answer
23a)	The plant has a **weak stem** so it climbs up a support for the leaves to **trap more sunlight** in order to **make more food**.
23b)	The leaves were **unable to carry out gaseous exchange** as the **paint has blocked the tiny openings (stomata)**. Or The leaves were **unable to trap sunlight** so they **could not make food**.
24a)	A: Flower B: Leaf C: Fruit D: Stem
24b)	E **absorbs water** and mineral salts. Or E **holds** the **plant firmly to the ground.**
25a)	The **number of hamsters increased.**
25b)	The **hamsters had reproduced.**
25c)	**Some hamsters died** (effect) due to **insufficient enough food/ water** (cause).
26a)	Both Plant C and D **grows on land** and **have flowers**.
26b)	**D grows on land** but **A does not grow on land**.. (Compare)
26c)	Plant **D.** Papaya tree have **fruits with more than one seed just like Plant D**.
27a)	Organ System A: **Circulatory System** Organ System B: **Respiratory System**
27b)	Organ System A: **Carries digested food/water/air to all parts of the body**. Or **Carries waste materials/air from all parts of the body**. Organ System B: **Takes in air and removes air** from the body.
28a)	As **the number of hours the plant is left in the sun** daily **increases**, the **height of the plant increases**.
28b)	With more hours in the sun, the **plant is able to trap more light** to **make more food** (cause), resulting in **more growth** (effect).
29a)	**Teeth**. They help to **break food up into smaller pieces**.

29b)	Bowl **A**. The **smaller pieces of apples has greater surface area** (cause) for **faster digestion** (effect - state clearly on speed of digestion).
29c)	The **mouth** and **small intestine**.
30a)	Material F is **strong / waterproof/ not flexible/ allows light to pass through**. (any 2)
30b)	Material **E is flexible** but **Material F is not flexible**. Or Material **F is strong** but Material **E is not strong**.
30c)	Material **E** is most suitable to make a raincoat. E is **waterproof** (cause – property of material) so that it can **keep the user dry when it rains** (effect – relate to user).
31)	
32a)	Clear plastic **allows light to pass through** (cause), hence the **user is able to see through it when swimming**(effect). Or Plastic is **strong** (cause) so **it does not break easily**(effect). Or Plastic is **waterproof** (cause) so that **water does not get into the eyes of swimmer** (effect).
32b)	**Rubber** is used to make Part B.
32c)	**Fabric** is a suitable material as it is **absorbent to water/not waterproof**.
33a)	He must **repeat the experiment several times.**
33b)	He should choose material **Y**. Material Y is **stronger** (compare on strength).
33c)	This arrangement makes the string **stronger.** (compare against single string)
34a)	**Increase**
34b)	**More pins** would be attracted by the iron nail. Increasing the number of batteries causes an **increase in the magnetic strength of the electromagnet**.
34c)	**Turn off** the electrical **switch.**

End