PEI CHUN PUBLIC SCHOOL

PRIMARY 3

SEMESTRAL ASSESSMENT 2 2019

SCIENCE

SECTION A

Time: 1 h 20 min

Name: _____ ( )

Class: Primary 3 /( ) _____

Date: 25 October 2019

Science Teacher: _____

INSTRUCTIONS TO CANDIDATES

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.
FOLLOW ALL INSTRUCTIONS CAREFULLY.
ANSWER ALL QUESTIONS.
SHADE YOUR ANSWERS ON THE OPTICAL ANSWER SHEET (OAS) PROVIDED.

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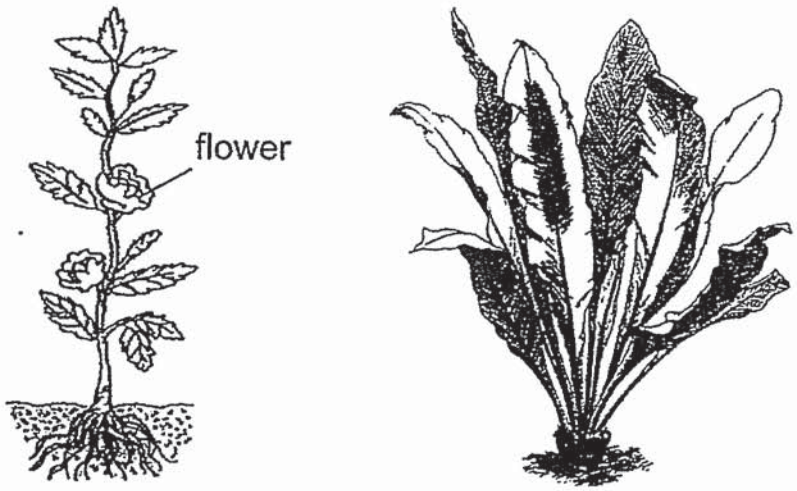
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Section A (24 × 2 marks)

For questions 1 to 24, choose the most suitable answer and shade its number (1, 2, 3 or 4) on the Optical Answer Sheet (OAS) provided.

1 The diagrams below show two living things, P and Q.



P
(flowering plant)

Q
(fern)

Which of the following statements is true about P and Q?

(1) Only P needs water to survive.
(2) Both P and Q reproduce by seeds.
(3) Only Q can respond to changes around it.
(4) Both P and Q can make food when there is sunlight.

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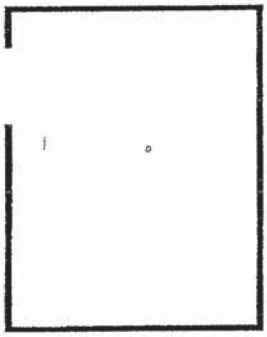
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2 Jamie placed a pot of plant in a black box with a hole. The diagram below shows what happened to the pot of plant one week later.

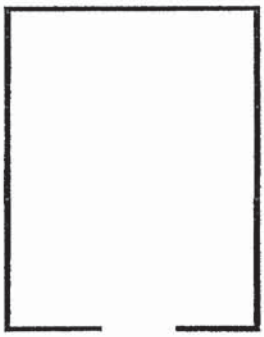


Which of the following correctly shows the black box that Jamie used to cover the pot of plant?

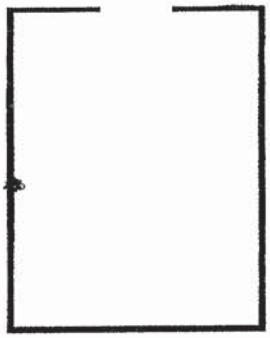
(1)



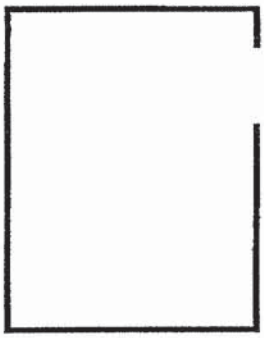
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(3)



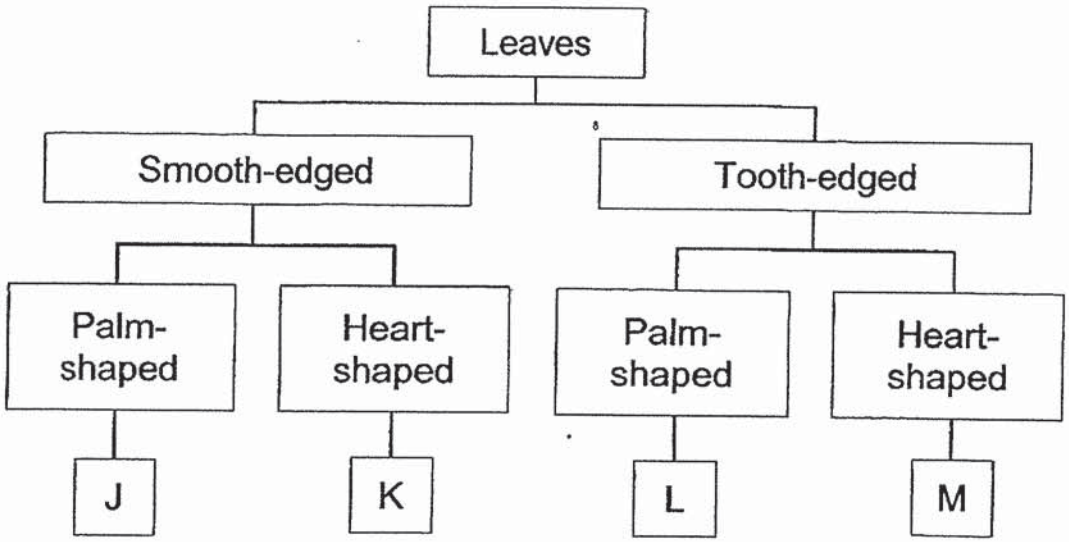
(4)



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3 Study the classification chart carefully.



Which letter, J, K, L or M, correctly represents the leaf below?



(1) J
(2) K
(3) L
(4) M

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4 The diagram below shows an animal found in the school garden.



Four children made the following observations about the animal.

P : It has six legs.

Q : It has a pair of eyes.

R : It has three body parts.

S : It has two pairs of wings.

Whose observation(s) could be used to show that the animal is an insect?

(1) R only

(2) P and R only

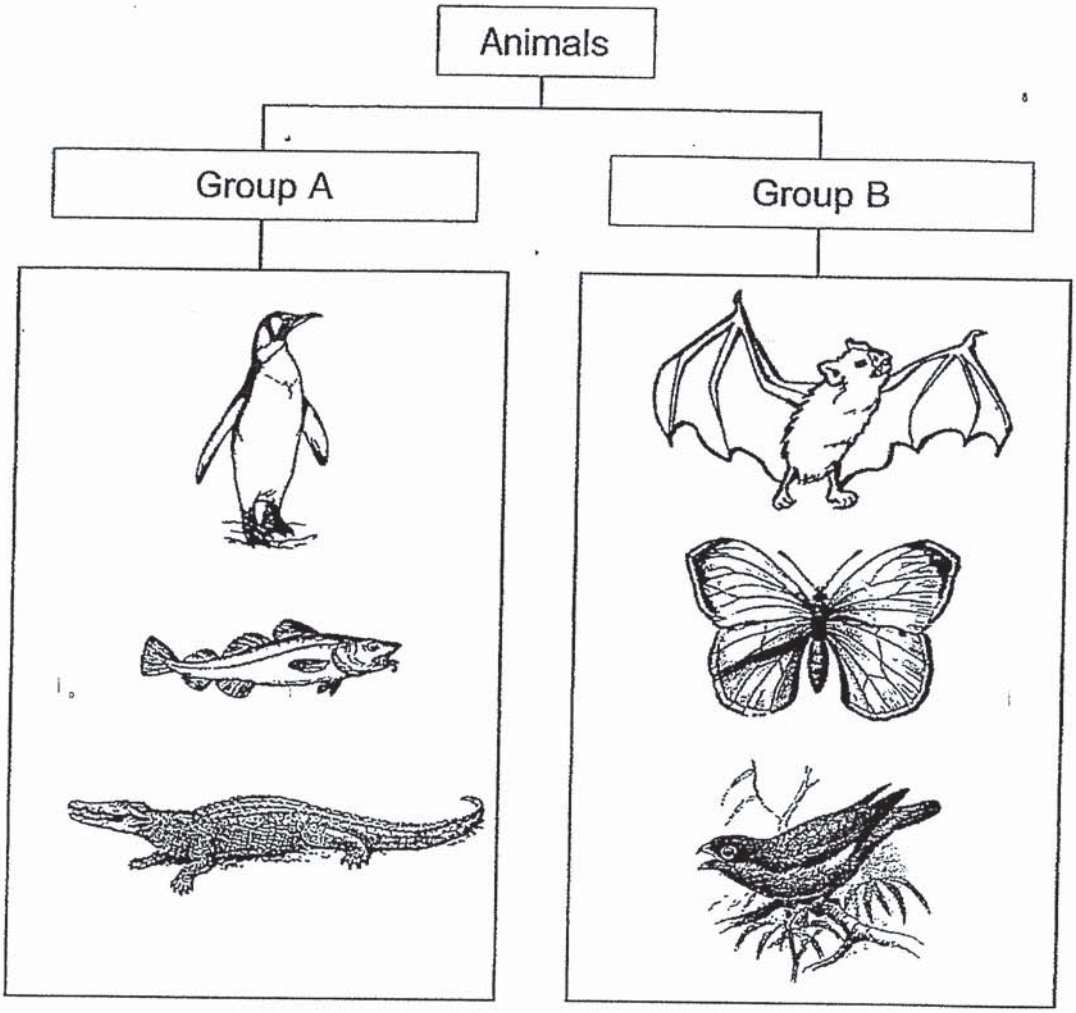
(3) Q and S only

(4) P, Q, R and S

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5 The diagram below shows how some animals are grouped.



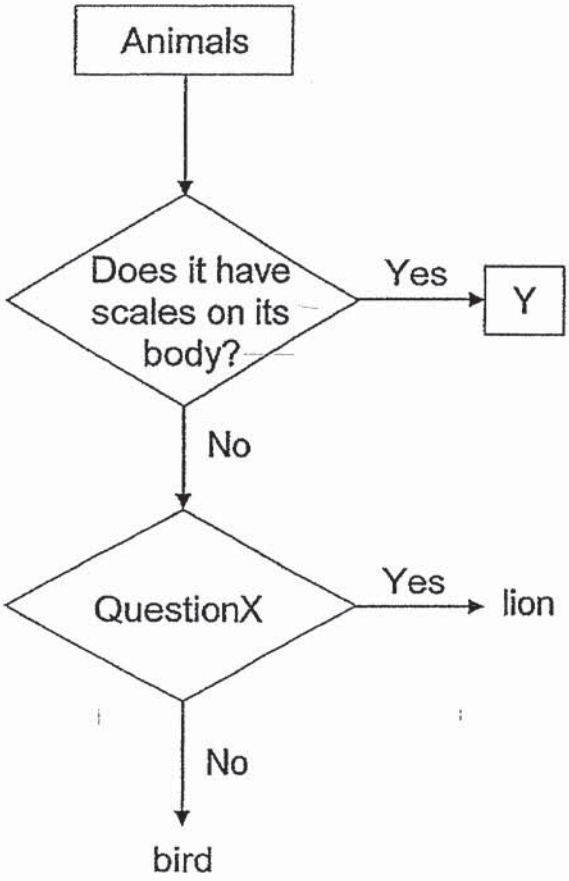
Which of the following shows the correct headings of how the animals are grouped?

	Group A	Group B
(1)	Has scales	Does not have scales
(2)	Has a tail	Does not have a tail
(3)	Cannot fly	Can fly
(4)	Lays eggs	Does not lay eggs

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6 Study the diagram below carefully.



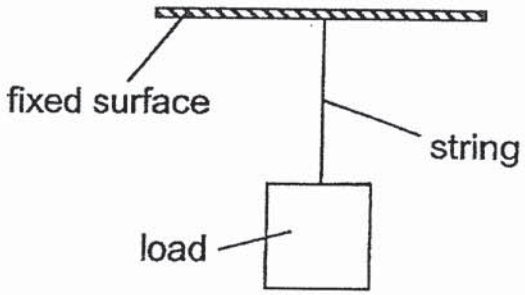
Which of the following is correct?

	Question X	Y
(1)	Does it have hair on its body?	ant
(2)	Does it have a beak?	fish
(3)	Does it have hair on its body?	snake
(4)	Does it have a beak?	crocodile

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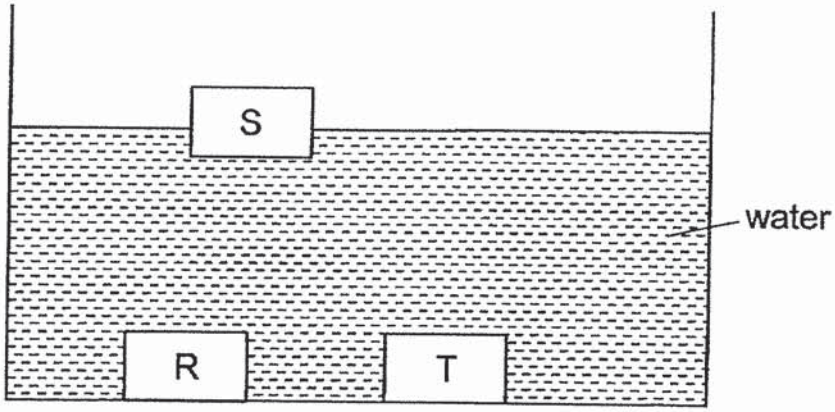
7 Rani conducted an experiment using the set-up below.



She increased the weight of the load until the string broke. She was trying to find out _____.

(1) how flexible the string was
(2) how strong the string was
(3) how flexible the load was
(4) how strong the load was

8 Lionel placed three solid blocks, R, S and T, into a tank of water. The three blocks are identical in size. His observation is shown below.

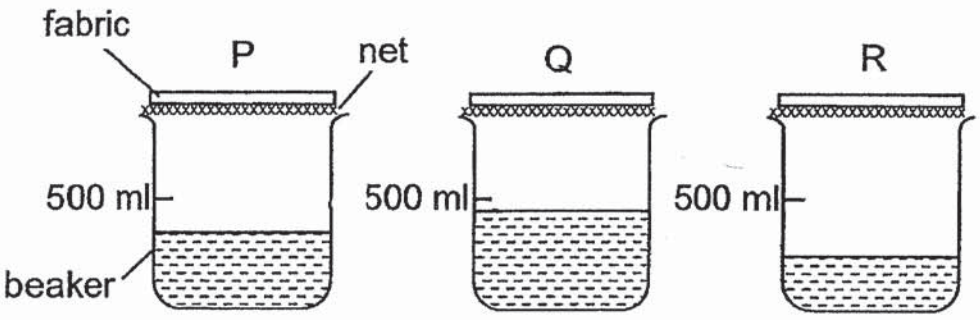


Which statement can be concluded from his observation?

(1) S will sink when more water is added.
(2) S and T are made of different materials.
(3) R, S and T are made of the same material.
(4) R and T will float when more water is added.

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9 Three different types of fabrics, P, Q and R, of the same size are placed on a net over a beaker. The diagram below shows the amount of water in the beaker after 500 ml of water is poured onto each of the fabric.



Which of the following observations is/ are true?

A : Fabric Q absorbed the most amount of water.
B : Fabric R absorbed more water than fabric P.
C : None of the fabrics is waterproof.

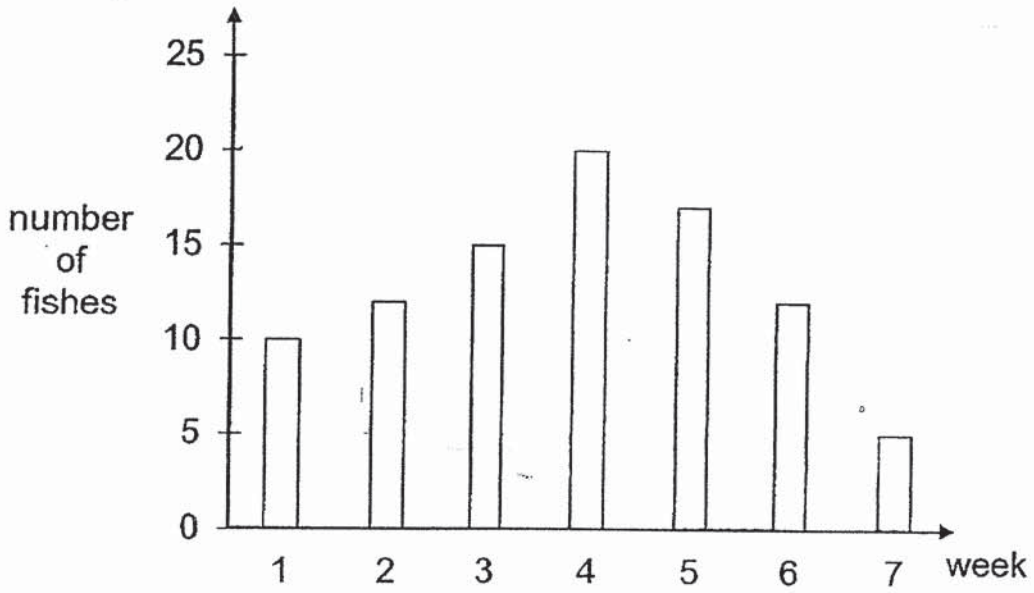
(1) C only
(2) A and B only
(3) B and C only
(4) A, B and C

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Use the information given below to answer questions 10 and 11.

10 Peter put 10 small fishes of the same type in a glass tank. He also placed water plants in the tank and ensured that there was bright light shining into the tank at all times.

From weeks 1 to 4, he fed the fishes daily. He then stopped feeding the fishes from weeks 5 to 7. The graph below shows the number of fishes left at the end of each week.



Based on the graph from weeks 1 to 4, which characteristic of living things is shown?

(1) Living things die.
(2) Living things grow.
(3) Living things reproduce.
(4) Living things respond to changes.

11 Based on the graph from weeks 5 to 7, which characteristic of living things is shown?

(1) Living things need air to survive.
(2) Living things need food to survive.
(3) Living things need water to survive.
(4) Living things need bright light to survive.

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12 The characteristics of four living things, A, B, C and D, are shown below.
A tick (✓) shows that the living thing has the characteristic.

Characteristic	A	B	C	D
Makes its own food	✓			
Can only be seen using a microscope		✓	✓	
Reproduces by spores	✓		✓	✓

The diagram below shows a toadstool.



Which organism best represents the toadstool?

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

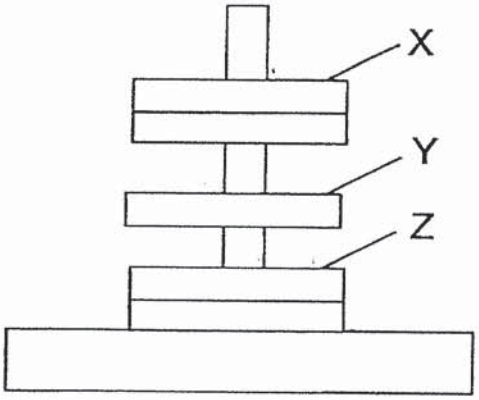
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13 Which of the following is a similarity between bacteria and fungi?

(1) They are all harmful.
(2) They reproduce by spores.
(3) They can only be found on living things.
(4) They feed on plants and animals that are dead or alive.

14 Five ring magnets are put in a stand as shown in the diagram below. X, Y and Z are poles of the ring magnets.

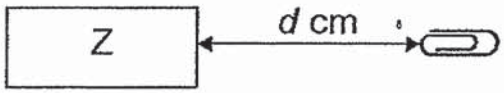


What can the poles X, Y and Z be?

	X	Y	Z
(1)	North	North	North
(2)	North	South	South
(3)	South	North	South
(4)	South	South	North

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15 The diagram below shows magnet Z and a steel clip. The greatest distance that magnet Z can attract the steel clip from is *d* cm.



Derek repeated the experiment using two other magnets. One of the magnets is weaker than magnet Z and the other is stronger.

What would be the greatest distance that each of the magnets can attract the steel clip?

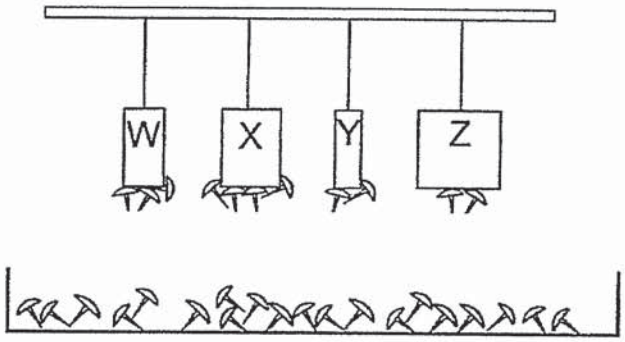
	Magnet that is weaker than magnet Z	**Magnet that is stronger than magnet Z**
(1)	*d* cm	*d* cm
(2)	less than *d* cm	less than *d* cm
(3)	less than *d* cm	more than *d* cm
(4)	more than *d* cm	more than *d* cm

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16. Susan hung four magnets, W, X, Y and Z, at the same distance from a tray of steel nails and observed the number of steel nails that were attracted by each magnet.

The diagram below shows her observation.



Based on Susan's observation, which of the following statements is/are likely to be true?

A : Magnet X is the strongest magnet.

B : Magnet W is weaker than magnet Z.

C : Magnet Y is as strong as magnet Z.

D : As the size of the magnet increases, the strength of the magnet increases.

(1) A only

(2) A and C only

(3) B and D only

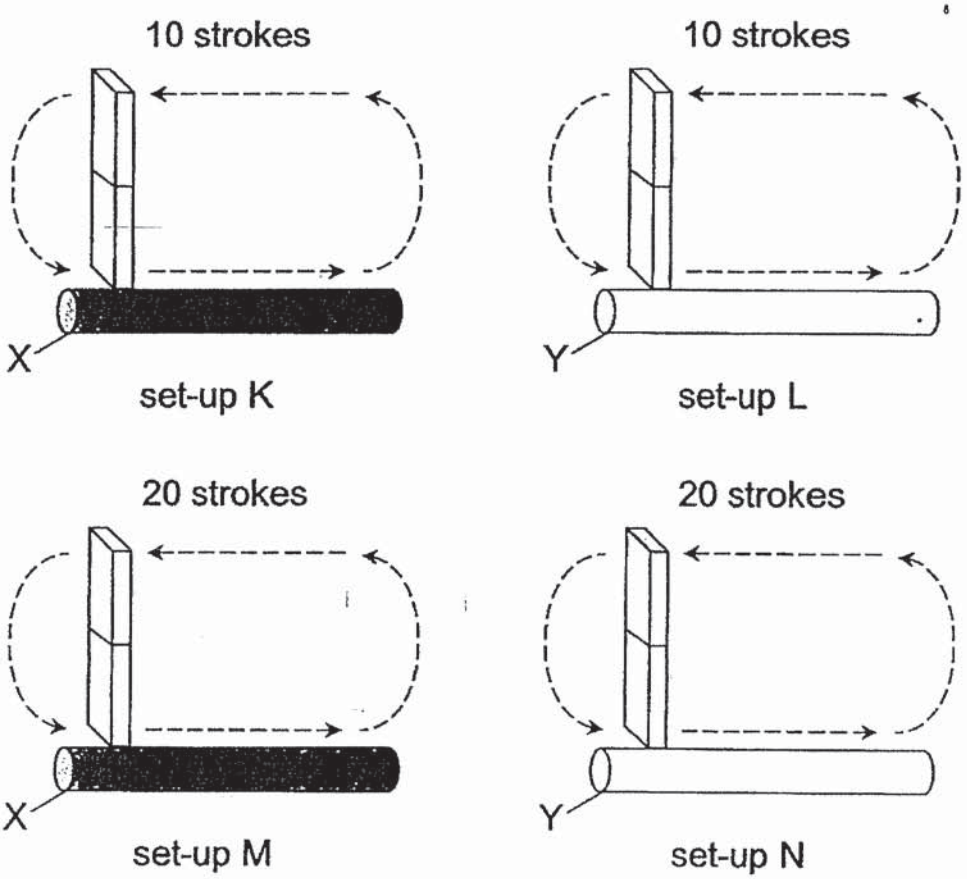
(4) C and D only

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17 Suresh wants to find out which rod, X or Y, will make a stronger magnet.

The diagram below shows four set-ups, K, L, M and N.



Which two set-ups should he compare so that he can come to a correct conclusion?

(1) K and M

(2) K and N

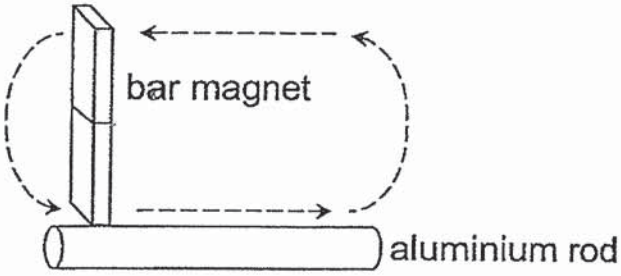
(3) L and M

(4) M and N

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18 Mary stroked an aluminium rod using a bar magnet as shown below.



She stroked the rod with the bar magnet for thirty times and placed the rod close to some steel clips. None of the steel clips was attracted to it.

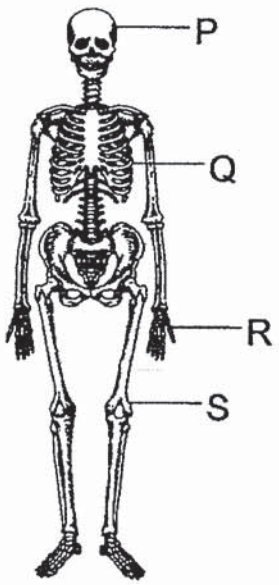
Which of the following explains why none of the steel clips was attracted to it?

(1) The steel clips are not magnetic.
(2) The aluminium rod is not magnetic.
(3) The bar magnet is not strong enough.
(4) The aluminium rod was stroked in the wrong direction.

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19 Study the diagram below.



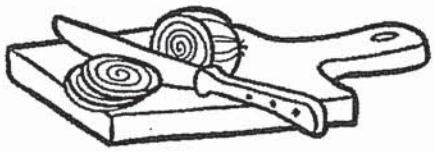
Which parts of this system protect our organs?

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

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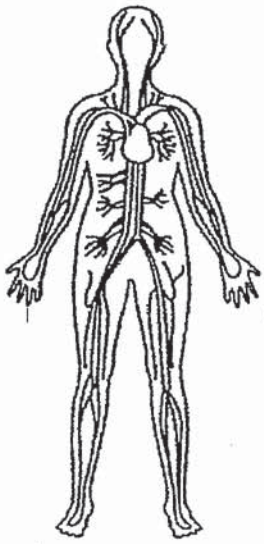
20 Mrs Chan cut herself while chopping onions.



She noticed blood coming out from the cut.

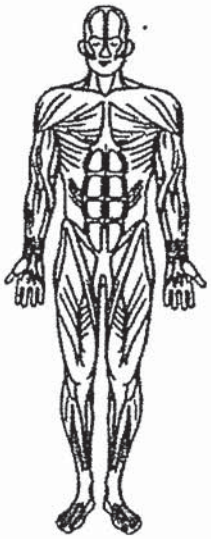
Which organ system causes blood to flow from her finger?

(1)



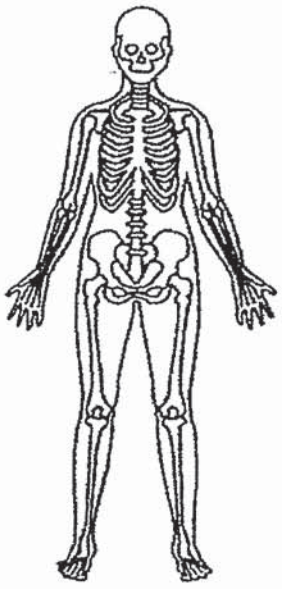
circulatory system

(2)



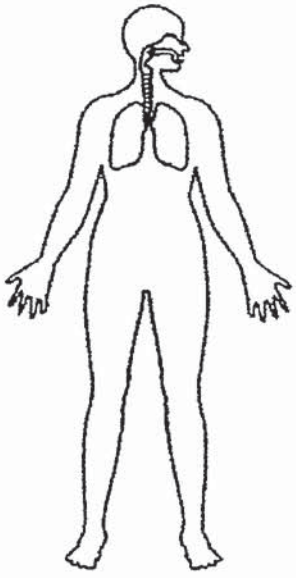
muscular system

(3)



skeletal system

(4)

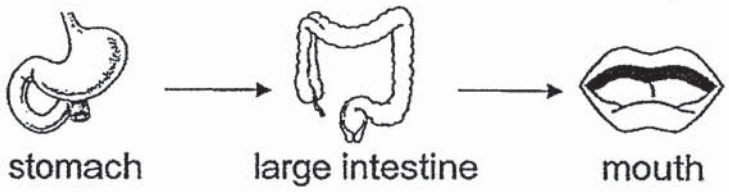


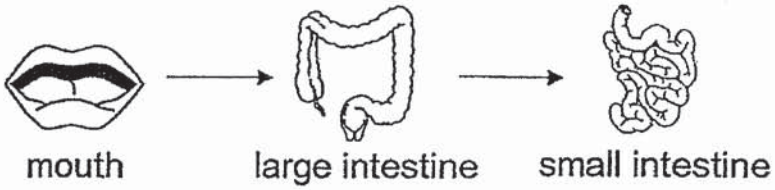
respiratory system

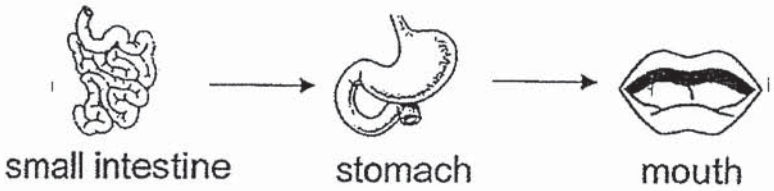
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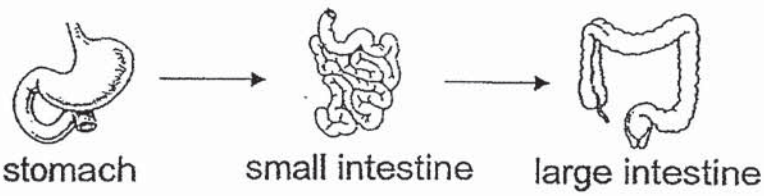
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21 Which of the following shows the correct order when food travels through the parts of the digestive system?

(1) 

(2) 

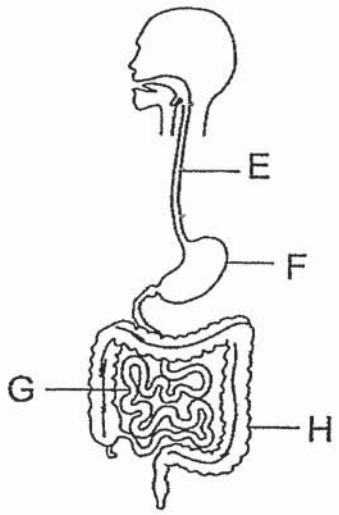
(3) 

(4) 

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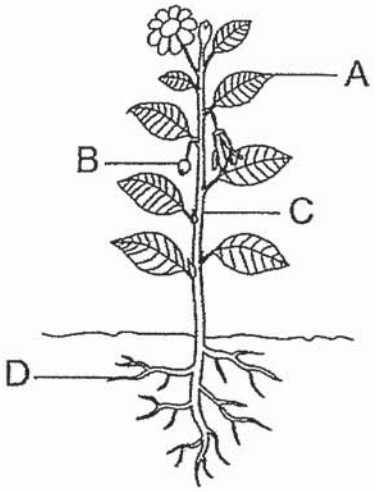
22 The diagram below shows the human digestive system.



Which of the following correctly shows where digestive juices are added to the food?

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

23 Which part of the plant, A, B, C or D, keeps the plant upright?



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

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24 The table below shows how some animals can be grouped.

	Has feathers	No feathers
Can fly	A	B
Cannot fly	C	D

The diagram below shows a bird.



Which group does the bird belong to?

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

End of Section A

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PRIMARY 3

SEMESTRAL ASSESSMENT 2 2019

SCIENCE

SECTION B

Time: 1h 20 min

SECTION A	48
SECTION B	32
TOTAL	80

Name: _____ ( )

Class: Primary 3 /( ) _____

Date: 25 October 2019

Science Teacher: _____

Parent's Signature: _____

INSTRUCTIONS TO CANDIDATES

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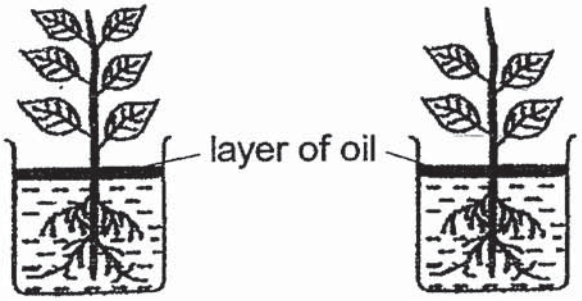
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Section B (32 marks)

For questions 25 to 35, write your answers in the spaces provided.

25 Muthu wants to find out if the number of leaves affect the amount of water absorbed by a plant. He placed two plants into two beakers, A and B, filled with 500 ml of water as shown below.



The table shows the amount of water left in each beaker on day 1 and day 5.

	Amount of water left in the beaker (ml)	
	Day 1	**Day 5**
beaker A	500	350
beaker B	500	450

(a) Circle the correct answer. [1]

From his experiment, Muthu concluded that the plant with fewer leaves absorbed (*more* / *less* / *the same amount of*) water.

(b) The diagram below shows a plant in beaker C. [1]



beaker C

Predict the amount of water left in beaker C on day 5.

_____ ml

SCORE	

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26 Ahmad found four animals, P, Q, R and S, in a pond. The following table gives information on the animals. A tick (✓) shows that the animal has the characteristic.

	Does it have scales?	Does it have gills?
P	✓	
Q		✓
R	✓	✓
S		

(a) Based on the table above, state one similarity between animals P and S. [1]

_____

_____

(b) Based on the table above, which of the animals is most likely to be an adult frog? [1]

_____

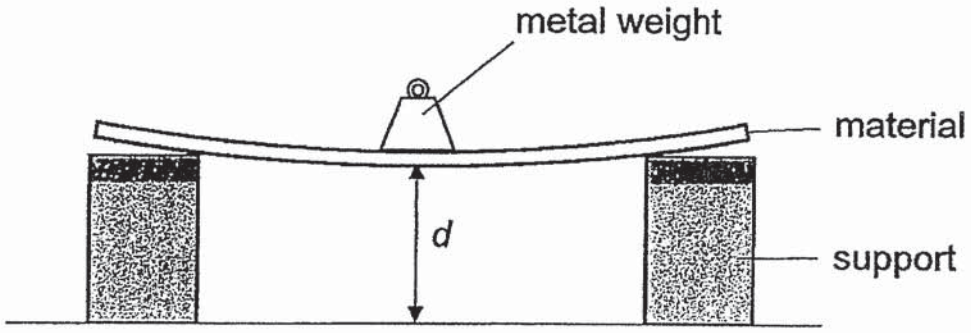
SCORE	

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27 Tammy set up an experiment below to compare the flexibility of three different materials, X, Y and Z. The materials are of the same length and thickness.

She placed a 100 g metal weight in the middle of each material as shown below.



(a) She then measured and recorded the distance *d* in the table below.

Material	Mass of metal weight (g)	Distance *d* (cm)
X	100	8
Y	100	15
Z	100	5

Arrange the materials, X, Y and Z, from the least flexible to the most flexible. [1]

_____ , _____ , _____

(least flexible) (most flexible)

SCORE	

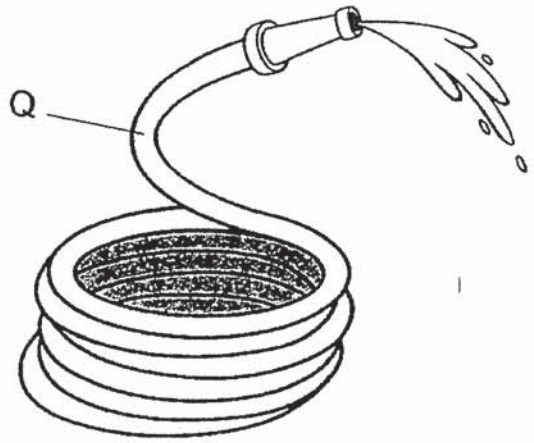
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(b) Tammy then tested whether each material absorbs water and recorded the results in a table below.

Material	Does it absorb water?
X	no
Y	no
Z	yes

The diagram below shows a water hose. It is used to water plants.



Based on the information given in the tables in (a) and (b), which material, X, Y or Z, is most suitable to make part Q of the water hose? [1]

_____

(c) Give two reasons to support your answer in (b). [2]

Reason 1 : _____

_____

Reason 2 : _____

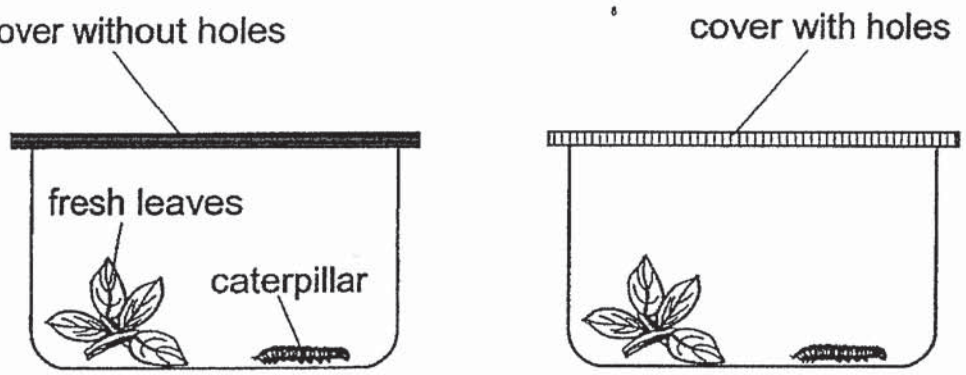
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28 Samuel caught two caterpillars from the school garden. He placed one caterpillar and the same number of fresh leaves in each container as shown below.



(a) Which container, A or B, is more suitable to keep the caterpillar alive? Explain your answer. [2]

_____

_____

(b) After a few days, Samuel noticed a change in the size of the caterpillar in one of the containers.



Which characteristic of living things does this show? [1]

_____

_____

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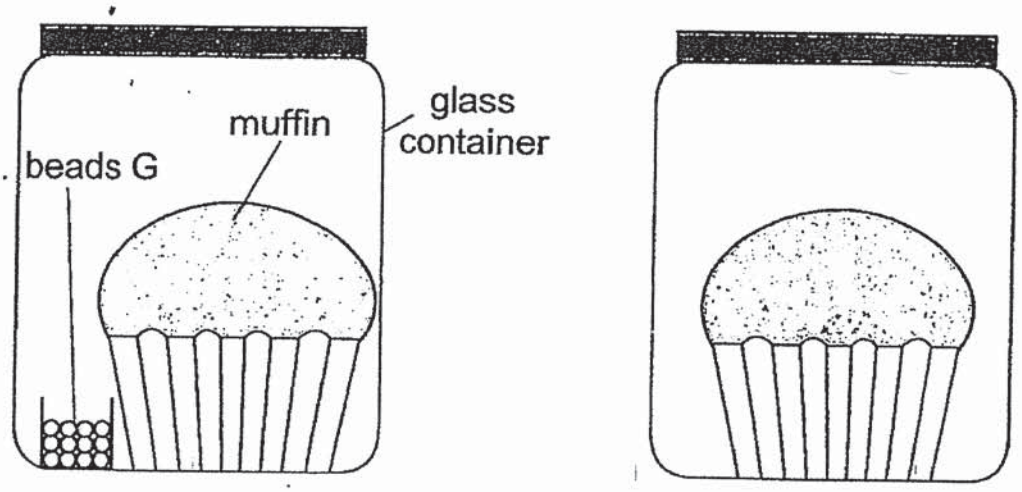
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29 Packets of beads G are often packed with muffins. These beads absorb moisture from the air.

Jones conducted an experiment to find out if the presence of beads G affects the growth of mould in muffins.

The diagram shows his set-ups.



Set-up P Set-up Q

(a) In which set-up, P or Q, would Jones observe more mould after some time? [1]

_____

(b) Explain your answer. [1]

_____

_____

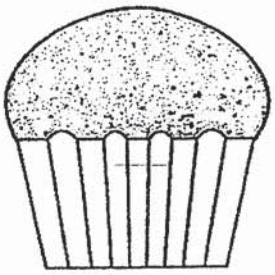
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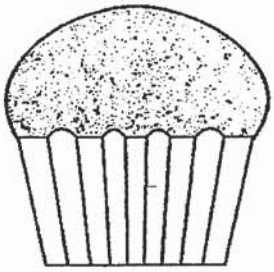
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(c) Jones conducted another experiment to find out if warmth makes mould grow faster.

The diagram below shows the set-ups for his experiment.



on a table



in a refrigerator

After three days, he observed more mould on the muffin left on the table.

What can Jones conclude based on the result of his experiment?

[1]

_____

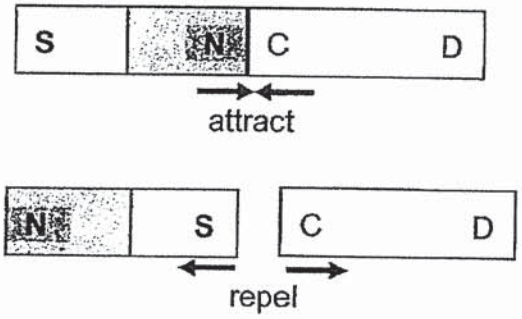
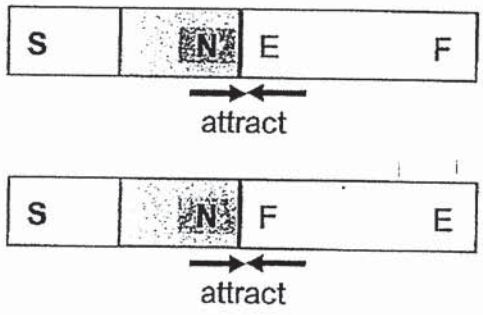
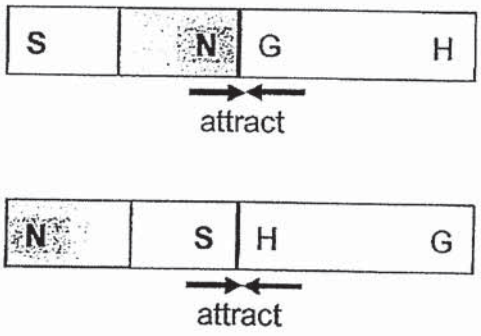
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30 The diagram below shows the observations when a bar magnet is brought close to the ends of each of the three rods, X, Y and Z. C, D, E, F, G and H are different ends of the rods.

Rod	Observations
X	
Y	
Z	

(a) Based on the information, complete the table below by putting a (✓) in the correct boxes. [2]

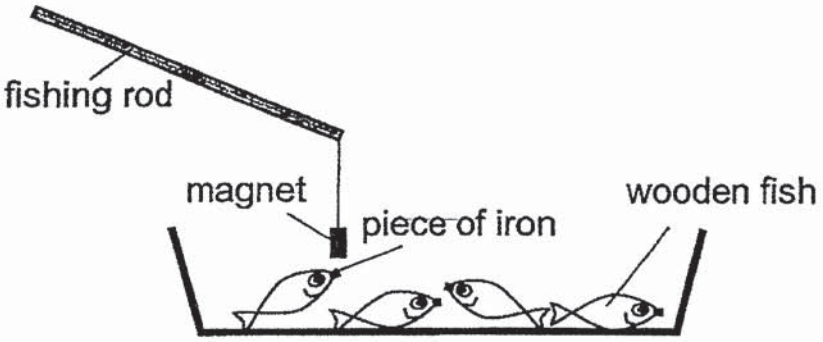
Description	X	Y	Z
It is made of a magnetic material.			
It is definitely a magnet.			
It is definitely not a magnet.			
It is not possible to tell if it is a magnet.			

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(b) Jerome had a magnetic fishing game. He was able to pick up the wooden fish, which has a small piece of iron at its tip, using a fishing rod as shown below.



Explain how Jerome can pick up the wooden fish using the fishing rod. [1]

_____

_____

(c) Jerome changed the piece of iron to a piece of copper. Would he still be able to pick up the fish with the fishing rod?
Give a reason for your answer. [1]

_____

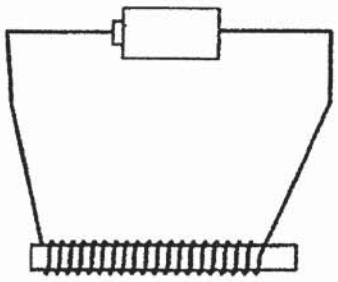
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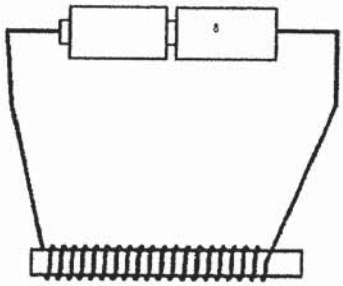
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31 Mrs Poh and her daughter made an electromagnet each by coiling the same number of turns of wire as shown in the diagram below.



Mrs Poh's electromagnet



Her daughter's electromagnet

They placed their electromagnets into a tray containing the same number of steel pins. Mrs Poh's electromagnet picked up 5 pins while her daughter's electromagnet picked up 9 pins.

(a) Explain why Mrs Poh's electromagnet picked up fewer pins. [1]

_____

_____

(b) Without changing the number of batteries, suggest one change Mrs Poh can make to her electromagnet so that it can pick up more pins. [1]

_____

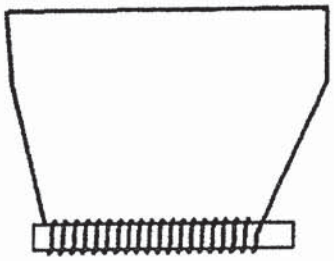
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(c) Mrs Poh made another electromagnet as shown below.



She observed that no pin was picked up by the electromagnet.
Explain why. [1]

_____

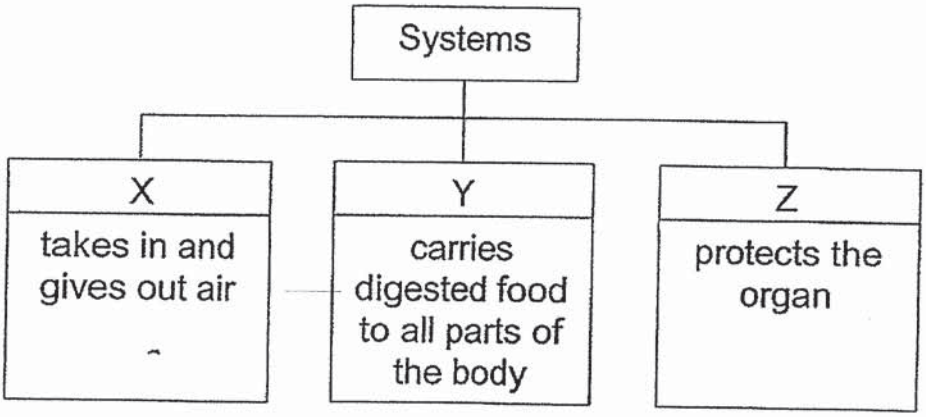
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32 The diagram below shows the functions of three human body systems.



(a) Using the helping words below, identify systems X and Y. [2]

circulatory	digestive	muscular
respiratory	skeletal	

Letter	System
X	
Y	

(b) Which system, X, Y or Z, can the lungs be found in? [1]

_____

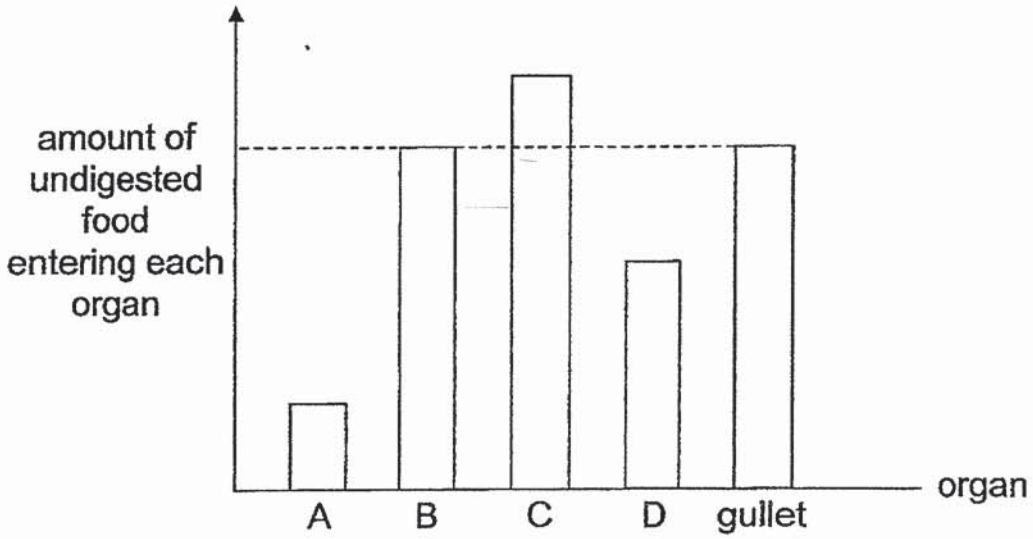
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33 The graph below shows the amount of undigested food present in each organ of the digestive system as the food entered each organ.

The organs of the digestive system, A, B, C, D and gullet are not arranged in order.



(a) Based on the diagram, match the letters, A, B, C or D, to each organ in the digestive system. [2]

Organ in the digestive system	Letter
mouth	
stomach	
small intestine	
large intestine	

(b) Name a substance absorbed in the large intestine. [1]

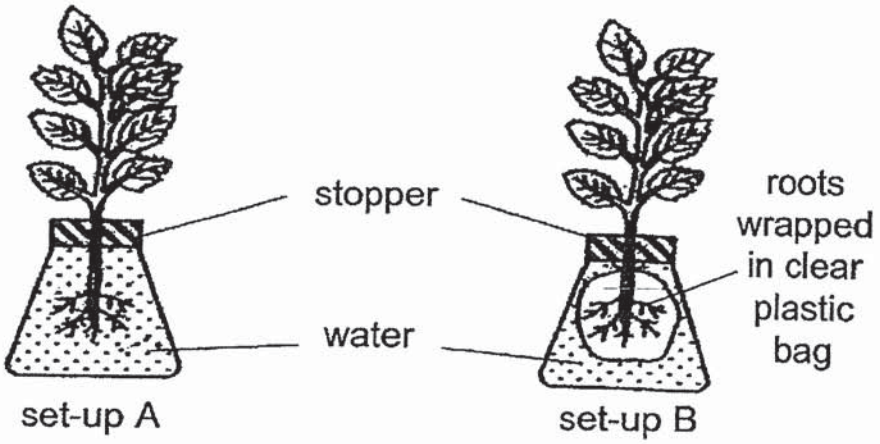
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34 Zhi Yi carried out an experiment to find out if the presence of roots affect the amount of water left in the flask.



(a) What would Zhi Yi most likely observe after a few days? Circle the correct answer below. [1]

The amount of water left in set-up B is

(*more than* / *less than* / *the same as*)

the amount of water left in set-up A.

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

_____

_____

(c) Besides absorbing substances, state another function of roots. [1]

_____

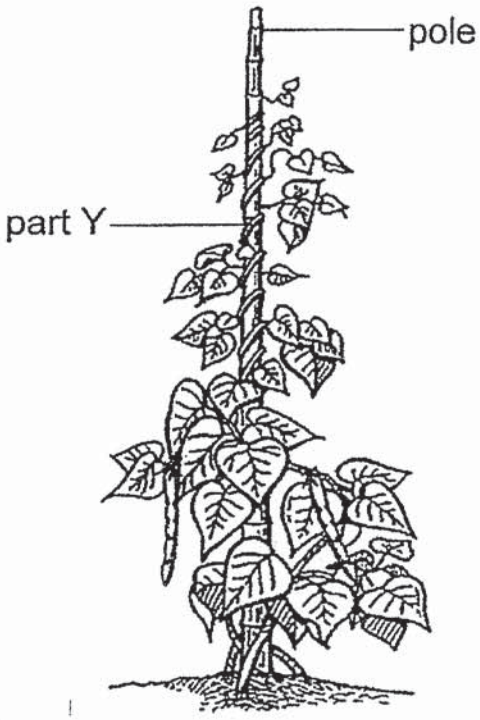
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35 The diagram below shows a bean plant.



(a) Identify part Y. [1]

_____

(b) Fill the blanks below. [1]

Part Y helps the leaves to get more _____ to make _____.

End of Section B

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ANSWER KEY

YEAR : 2019
LEVEL : PRIMARY 3
SCHOOL : PEI CHUN PUBLIC SCHOOL
SUBJECT : SCIENCE
TERM : SA2

BOOKLET A

Q1	4	Q2	4	Q3	4	Q4	2	Q5	3
Q6	3	Q7	2	Q8	2	Q9	3	Q10	3
Q11	2	Q12	4	Q13	4	Q14	3	Q15	3
Q16	2	Q17	4	Q18	2	Q19	1	Q20	1
Q21	4	Q22	2	Q23	3	Q24	1		

BOOKLET B

Q25a) less

b)470ml

Q26a) Both animals do not have gills.

b)Animal S

Q27a)Y,X,Z

b)Material X

c)Reason 1 : It is more flexible than Y

Reason 2 : It is waterproof.

Q28a) ner B.The caterpillar in Container B has enough air to stay alive b but the caterpillar in Container A doen not.

b)Living things grow.

Q29a)Set-up A

b)The air in set-up Q contains more moisture.

c)Mould grow faster in a warmer place.

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Q30a)

X	Y	Z
✓	✓	✓
✓		
	✓	
		✓

b)The magnet on the fishing rod attracted the iron piece on the tip of the fish.

c)No.Copper is a non-magnetic material, so it will not be attracted to the magnet.

Q31a)Mrs Poh's electromagnet has fewer batteries, so it is a weaker electromagnet.

b)She can increase the number of turns of coil.

c)There is no battery so the electromagnet is not magnetised.

Q32a)X respiratory

Y circulatory

b)System Y

Q33a)

Organ in the digestive system	Letter
mouth	C
stomach	B
Small intestine	D
Large intestine	A

b)water

Q34a)The amount of water left in set-up B is more than the amount of water left in Set-up A.

b)The [illegible] the plant in set-up b could not absorb any water as they were wrapped in clear p[illegible]ag.

c)Roots anchor the plant firmly onto the ground.

Q35a)Part Y is the stem.

b)Part Y helps the leaves to get more sunlight to make food.

2
END

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