

2019

Primary 3 Science

1.	Ai Tong	SA2
2.	Catholic	SA2
3.	CHIJ	SA2
4.	Henry Park	SA2
5.	Maha Bodhi	SA2
6.	Maris Stella	SA2
7.	MGS	SA2
8.	Nan Hua	SA2
9.	Nanyang	SA2
10.	Pei Chun	SA2
11.	Pei Hwa	SA2
12.	Red Swastika	SA2
13.	RGPS	SA2
14.	River Valley	SA2
15.	Rosyth	SA2
16.	SCGS	SA2
17.	St Hilda	SA2
18.	Tao Nan	SA2



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 : _____

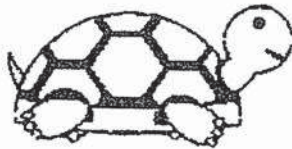
Booklet A	30
Booklet B	20
Total	50

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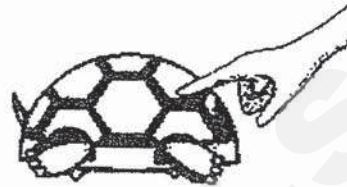
Section A (15 x 2 marks)

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.

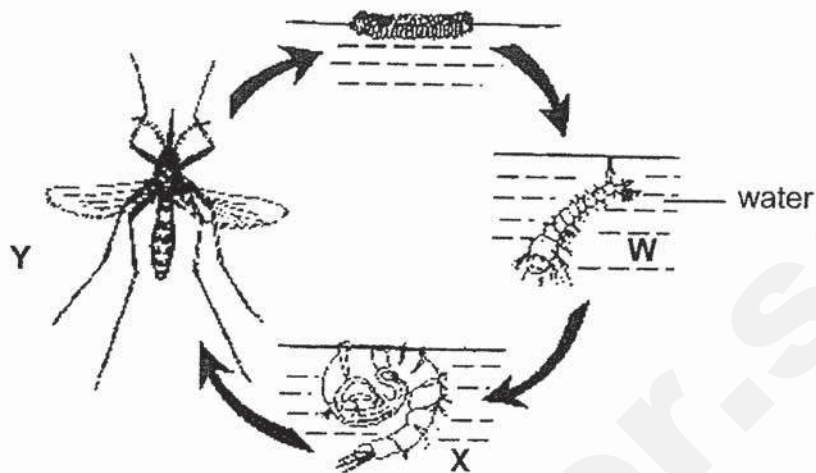
4. The table below shows the characteristics of animals P, Q and R.
A tick (✓) shows that the animal has the characteristic.

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?

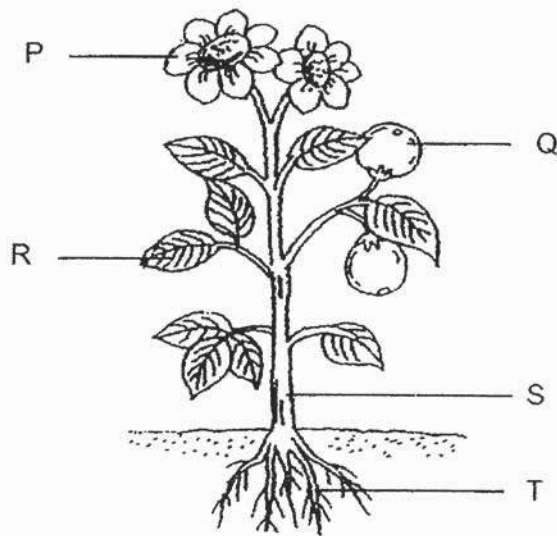
- (1) W only
 - (2) X only
 - (3) W and X only
 - (4) X and Y only
6. The following statements show different stages in the growth of a seed.

- 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

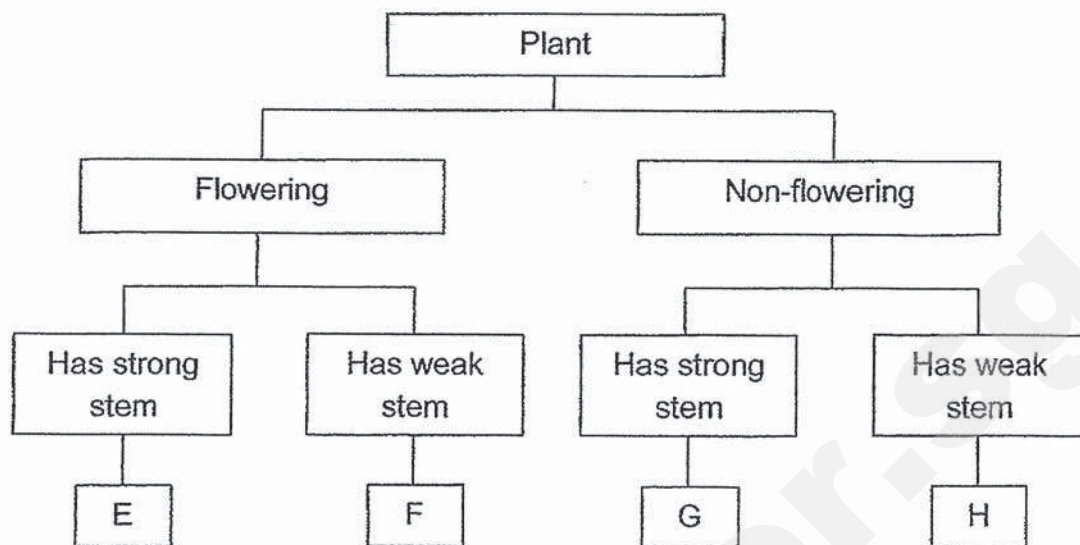
7. The diagram shows an adult plant.



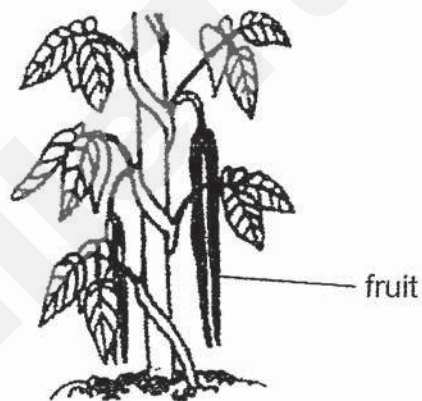
Which parts of the plant **cannot** be found in a young plant?

- (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.

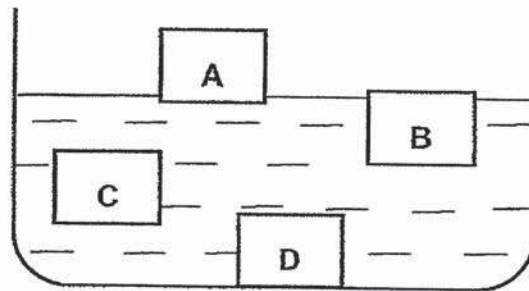


Based on the classification chart, which group does the plant shown below belong to?



- (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)



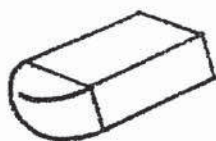
drinking straw

(2)



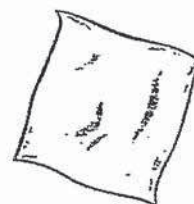
nail

(3)



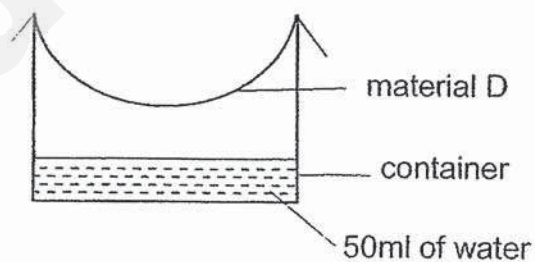
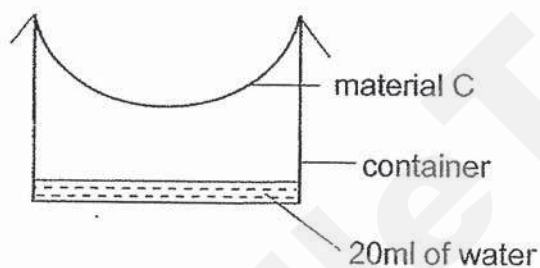
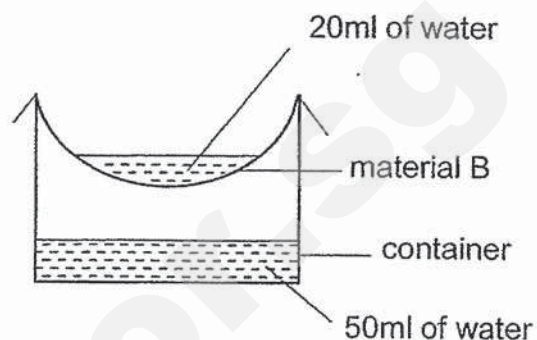
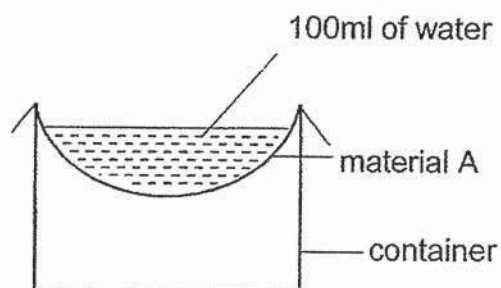
eraser

(4)

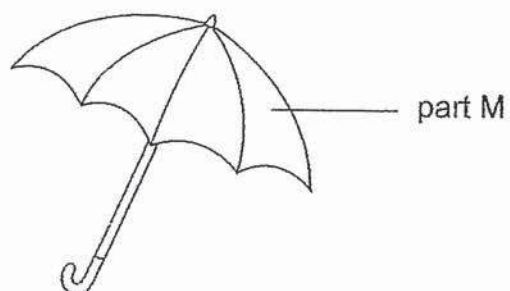


handkerchief

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?



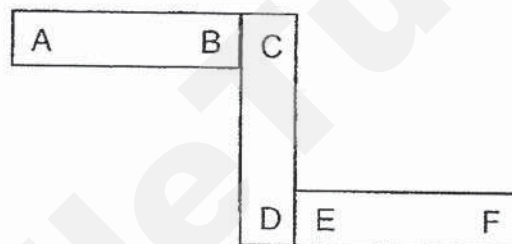
- (1) A
- (2) B
- (3) C
- (4) D

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

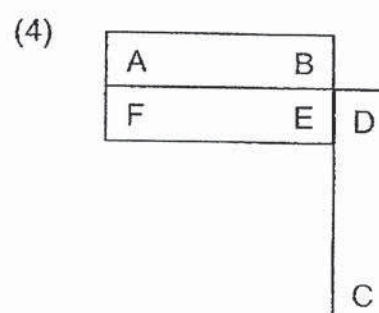
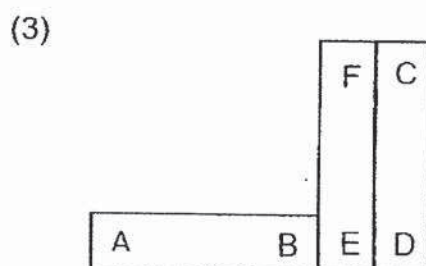
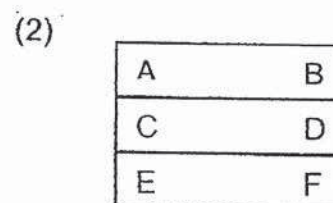
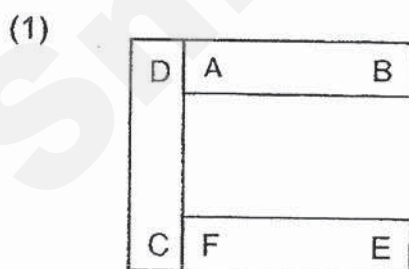
In which container can the two objects be separated using a bar magnet?

	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.

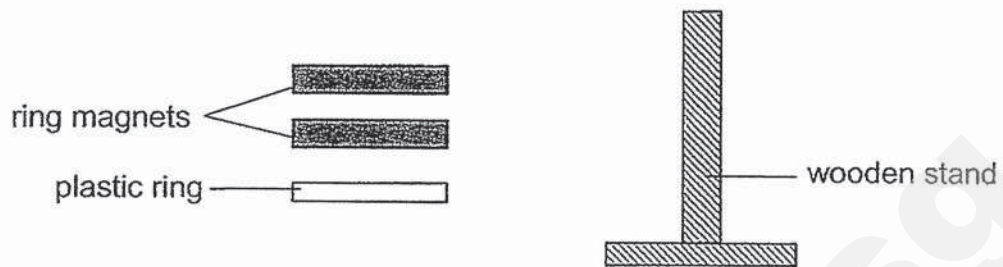


Which one of the following arrangements of the magnets is **not** possible?



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

Side view



Which of the following observations is/are possible?

A	B	C	D

- (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.

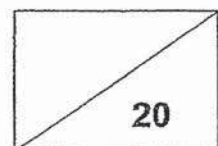
Answer all questions.

Write your answers in this booklet.

Name : _____ ()

Class : Primary _____

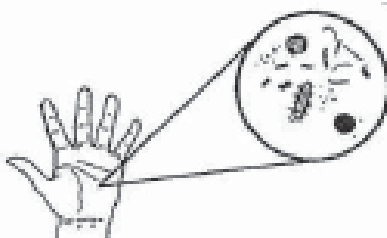
Parent's Signature : _____



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.

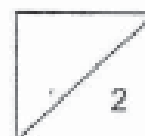


Tony carried out an experiment to find out which hand soap would reduce the amount of bacteria on the hands after washing. He recorded the results in the table below.

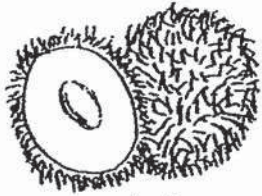

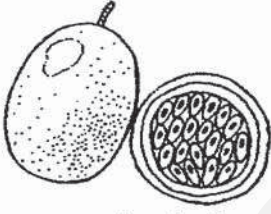

Hand Soap	Amount of bacteria on the hands after washing (unit)
A	5
B	20
C	13

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

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



17. Study the pictures in the table below.

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

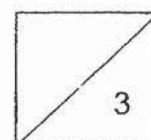
(a) Give a suitable heading for each group. [1]

Group A : _____

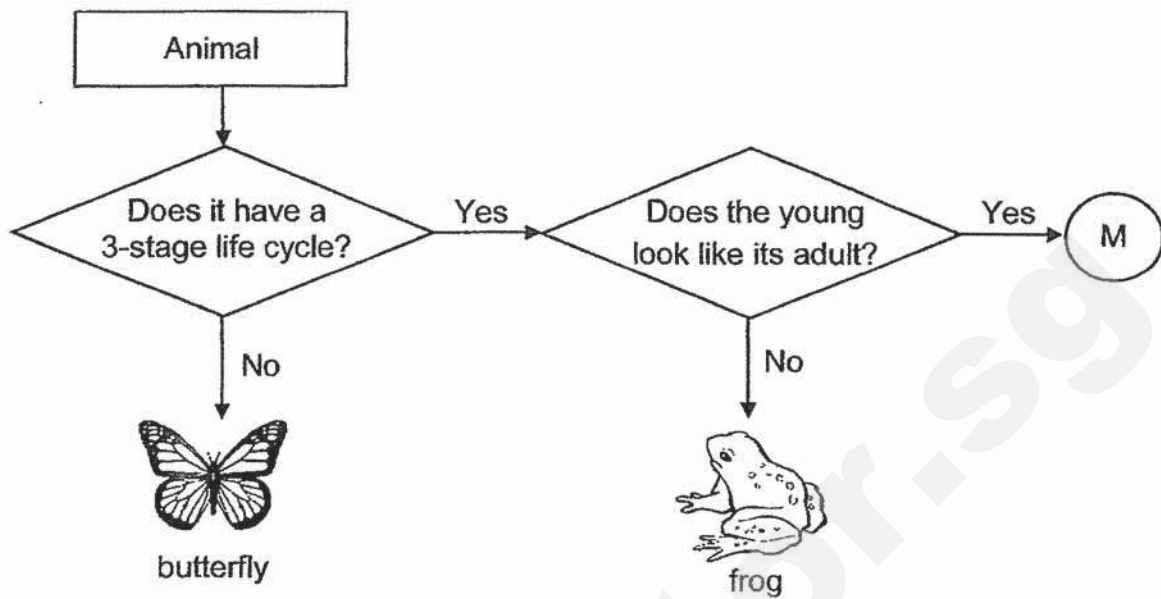
Group B : _____

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

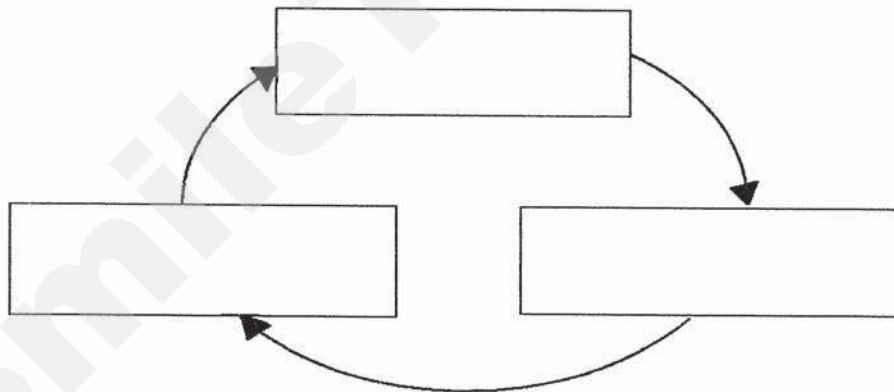
(c) State how seeds in these fruits are useful to plants. [1]



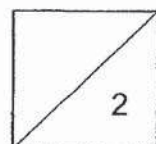
18. Study the flowchart below.



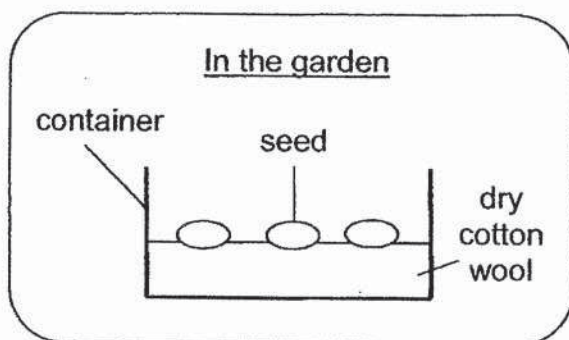
- (a) Animal M is an insect. Based on the flowchart above, write the names of the stages in animal M's life cycle in the boxes provided below. [1]



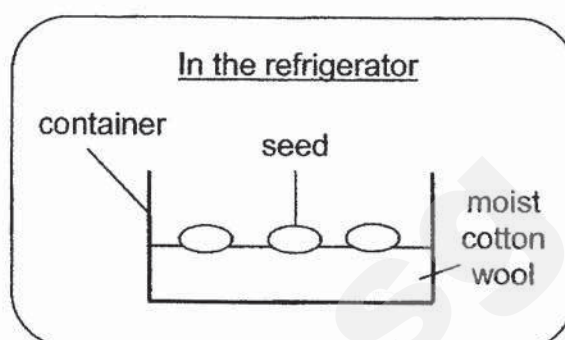
- (b) Write down one difference shown in the flowchart above between the life cycle of a butterfly and the life cycle of a frog. [1]



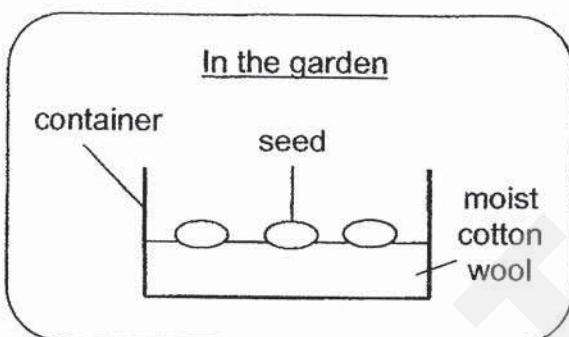
19. Cindy prepared four identical containers with three seeds of the same type and size in each container. She placed them at different locations as shown in the diagrams below.



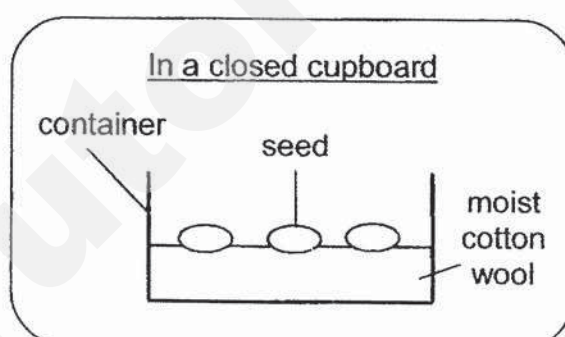
Set-up W



Set-up X



Set-up Y

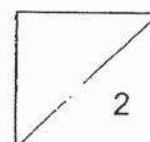


Set-up Z

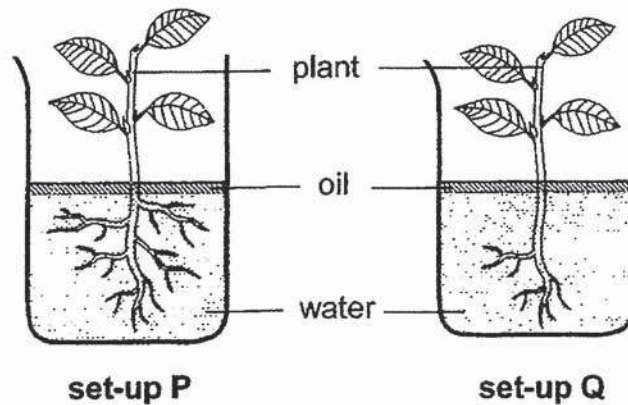
- (a) Cindy wanted to find out if seeds need warmth to germinate. Which two set-ups should she use in her experiment? [1]

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]



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]

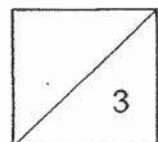
After one week, the amount of water in set-up P was

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

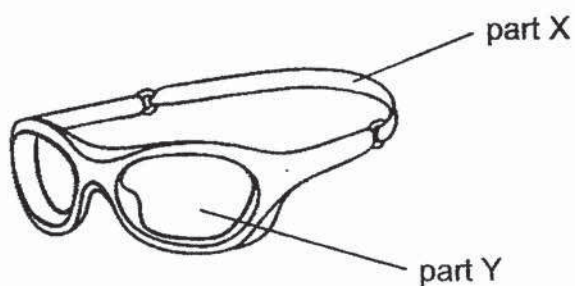
- (b) Give a reason for your answer in Part (a). [1]

- (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]

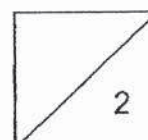


21. The picture below shows a pair of goggles that a swimmer uses when swimming in water.

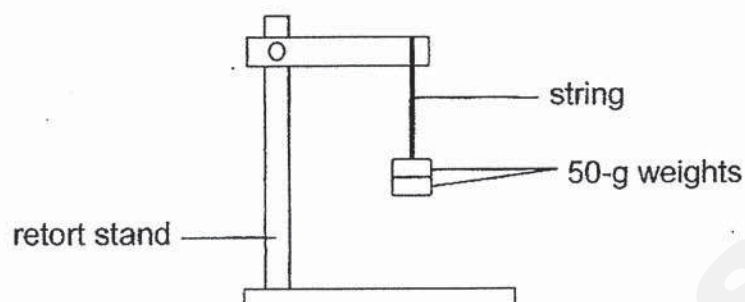


- (a) In the table below, name a waterproof material that is suitable for making parts X and Y. [1]
- (b) Other than being waterproof, write down one other reason for your choice of material for each part. [1]

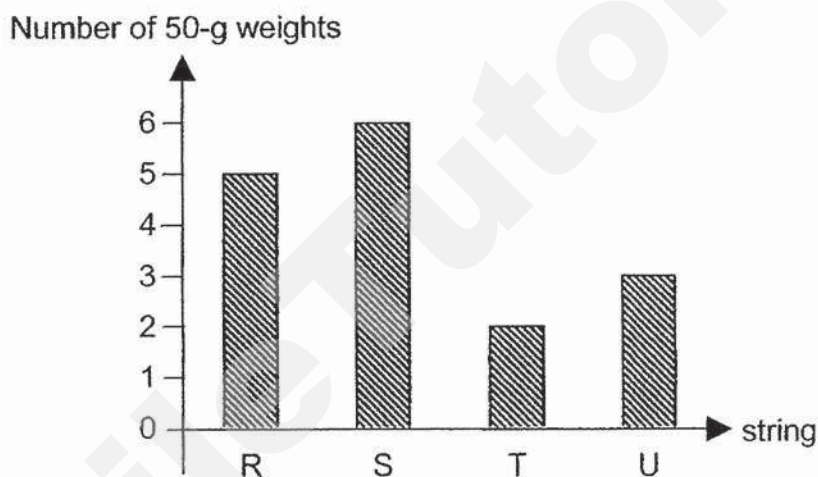
Part	A suitable material used to make the part	Reason
X		<hr/> <hr/> <hr/>
Y		<hr/> <hr/> <hr/>



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.



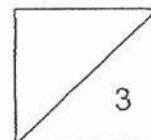
The following graph shows the number of weights needed to break each string.



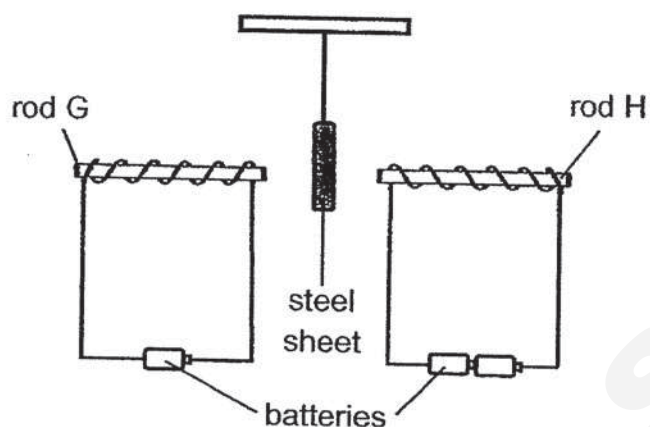
- (a) What property of the string was Ashley testing? [1]

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

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



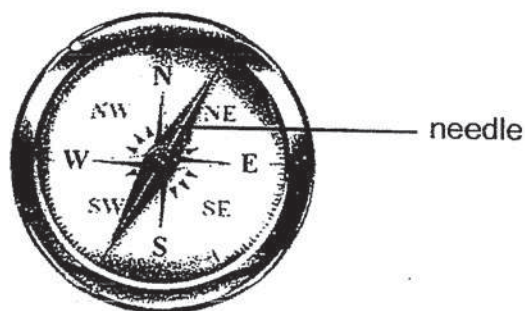
23. Joey placed a steel sheet between rods G and H in the set-up shown below. Rods G and H are made of iron.



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

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

- (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]

End of Paper

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ANSWER KEY

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

BOOKLET A

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

Q21. (a) (b)

Part	A suitable material used to make the part	Reason
X	Rubber	Rubber because it is very flexible and it is waterproof.
Y	Glass	Glass because glass allows light to pass through thus being able to see through the glass.

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.

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CATHOLIC HIGH SCHOOL
END-OF-YEAR EXAMINATION (2019)
PRIMARY THREE
SCIENCE
BOOKLET A

Name: _____ ()

Class: Primary 3 - _____

Date: 31 October 2019

24 questions

48 marks

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

INSTRUCTIONS TO CANDIDATES

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

Follow all instructions carefully.

Answer all questions.

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

This booklet consists of 13 printed pages, excluding the cover page.

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Booklet A (24 × 2 marks)

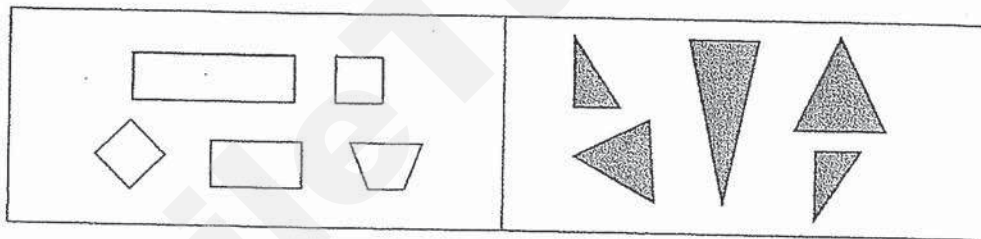
For each question from 1 to 24, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade your answer on the Optical Answer Sheet. (48 marks)

1 Which statement(s) is/are characteristic(s) of all living things?

- A They grow.
- B They reproduce.
- C They make their own food.
- D They move from place to place.

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

2 Study the diagram below.


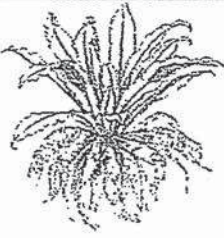

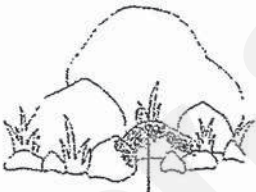


The objects are classified according to their _____.

- A sizes
- B shapes
- C colours
- D number of sides

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

3 Study the two groups of plants as shown below.

Group A	Group B
 rose	 fern
 water lily	 moss

The plants are grouped according to whether they _____.

- (1) are trees or ferns
- (2) are able to make food
- (3) are land or water plants
- (4) are flowering or non-flowering plants

4 Animal G has the following characteristics:

- three pairs of legs
- a hard outer covering

Which group does animal G belong to?

- (1) Insect
- (2) Reptile
- (3) Mammal
- (4) Amphibian

5 Study the plants below.



plant X




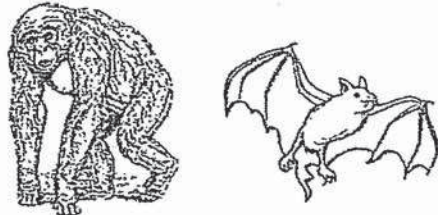
plant Y

Based on the diagrams above, how is plant X similar to plant Y?

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

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

6 Study the two groups of animals below.

Group M		Group N	
			

Which of the following correctly describes animal groups M and N?

	Group	Has scales	Has hair	Lays eggs
(1)	M	No	Yes	No
(2)	M	Yes	No	Yes
(3)	N	No	Yes	Yes
(4)	N	Yes	No	No

7 Which statement about bacteria is correct?

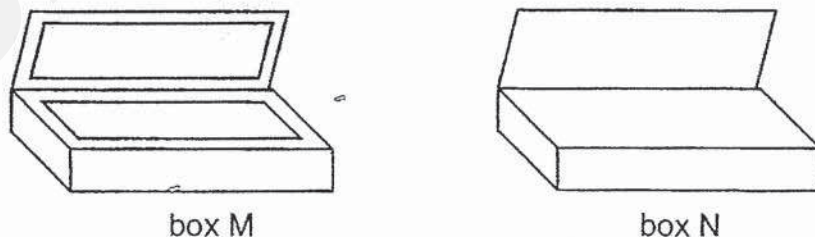
- (1) Bacteria can make their own food.
- (2) Some bacteria reproduce from spores.
- (3) All bacteria are harmful to living things.
- (4) Bacteria respond to changes in the surroundings.

8 Samuel, Wei Ling and Betty made the following statements about yeast.



Which pupil(s) was/were correct?

- (1) Samuel only
 - (2) Wei Ling only
 - (3) Samuel and Betty only
 - (4) Wei Ling and Betty only
- 9 Zhihao has two cardboard boxes M and N of different thickness. He wants to use box M to carry the class library books from the classroom to the staffroom without tearing.



Which of the following is the best reason for Zhihao to use box M?

- (1) Box M is heavier than box N.
- (2) Box M is stronger than box N.
- (3) Box M is more flexible than box N.
- (4) Box M is able to absorb more water than box N.

- 10 Carrie brushes her teeth with a toothbrush as shown below.



Based on the properties shown below, which material is most suitable for making part B of the toothbrush? A tick (✓) in the box shows that the material has that property.

	Material	Properties		
		strong	flexible	waterproof
(1)	P	✓	✓	✗
(2)	Q	✓	✗	✓
(3)	R	✓	✓	✓
(4)	S	✗	✓	✓

- 11 Yusri wanted to find out the strength of three materials S, U and V of the same length. He hung the metal washer onto the hook one at a time until the material broke.



He then counted the number of metal washers needed to break each material and recorded the results in the table below.

Material	Number of metal washers needed to break the material
S	4
U	16
V	9

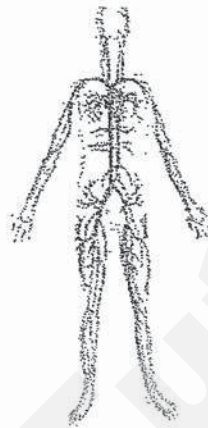
Based on his results, arrange the materials from the strongest to the weakest.

	strongest	→	weakest
(1)	U	S	V
(2)	U	V	S
(3)	V	S	U
(4)	V	U	S

12 Which of the following is **not** a function of the skeletal system?

- (1) Supports the body
- (2) Gives the body shape
- (3) Removes air from the body
- (4) Protects the organs in the body

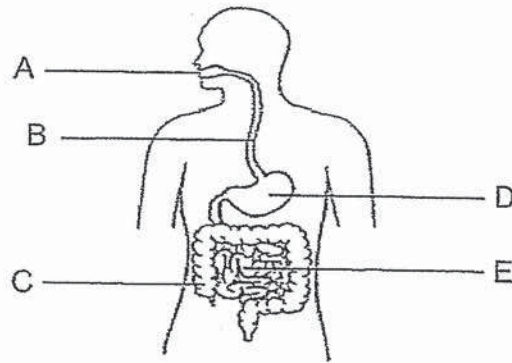
13 Study the diagram below.



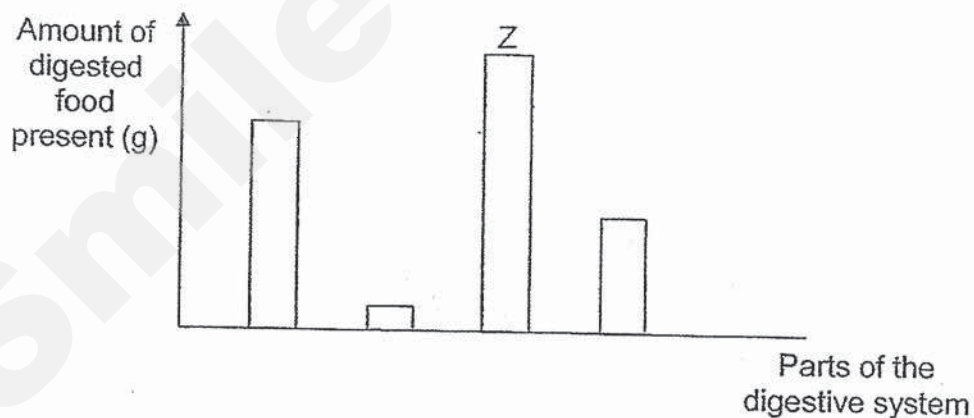
Which body system does the diagram above belong to?

- (1) digestive system
- (2) muscular system
- (3) circulatory system
- (4) respiratory system

Use the diagram below to answer questions 14 and 15.



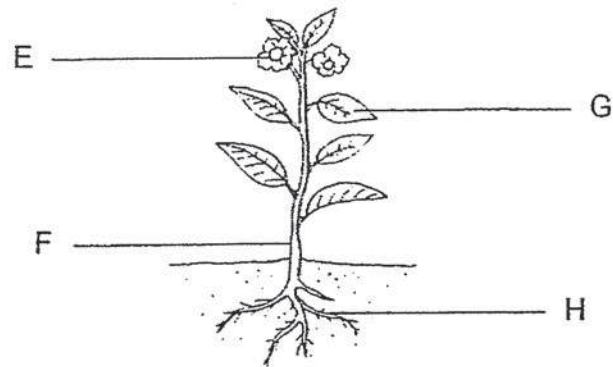
- 14 Based on the diagram above, in which parts A, B, C, D and E are digestive juices found?
- (1) A and B only
 - (2) A, D and E only
 - (3) C, D and E only
 - (4) B, C, D and E only
- 15 The graph below shows the amount of digested food present in various parts of the human digestive system.



Which part of the human digestive system could substance Z be taken from?

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

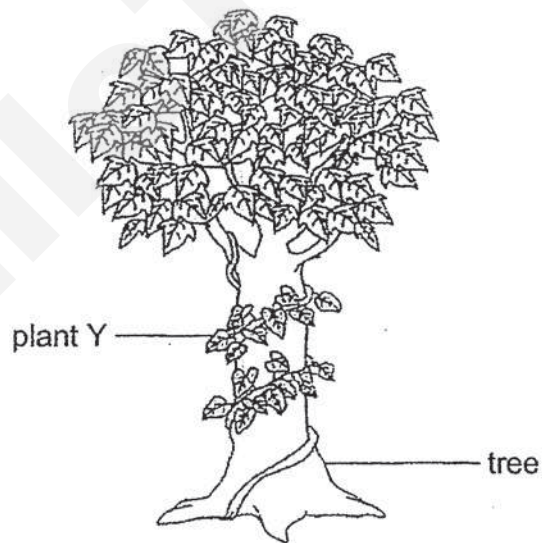
16 Study the diagram below.



Which part (E, F, G or H) of the plant is able to trap light from the Sun?

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

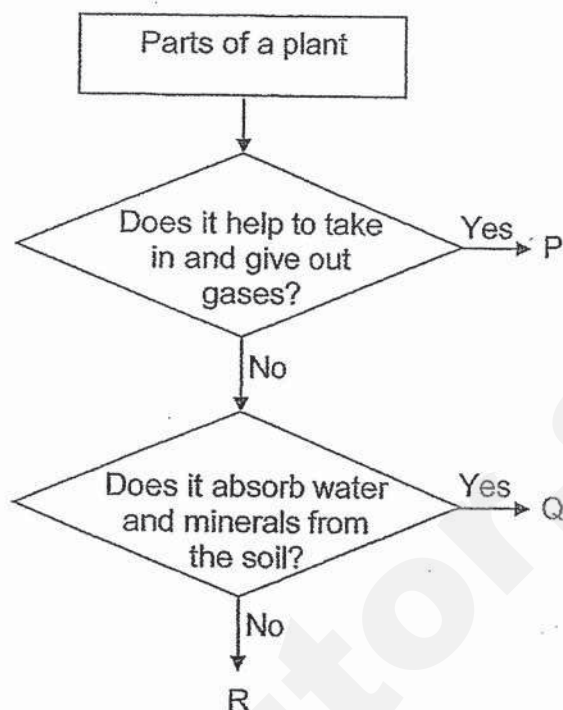
17 The diagram below shows a tree and plant Y.



What is plant Y trying to get by climbing up the tree?

- (1) air
- (2) food
- (3) water
- (4) sunlight

18. Study the diagram below.



What do P, Q and R represent?

	P	Q	R
(1)	leaf	root	stem
(2)	leaf	stem	root
(3)	stem	root	leaf
(4)	stem	leaf	root

19 Which one of the following things does **not** make use of magnets?

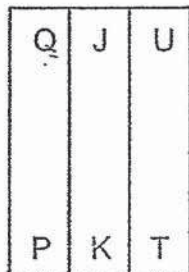
- (1) newspaper
- (2) refrigerator
- (3) chess board
- (4) doorstopper

- 20 Three bar magnets PQ, JK and TU can be arranged as shown below.

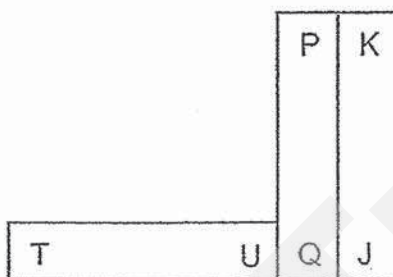


Which of the following arrangements of the magnets is **not** possible?

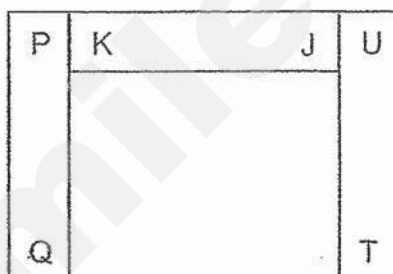
(1)



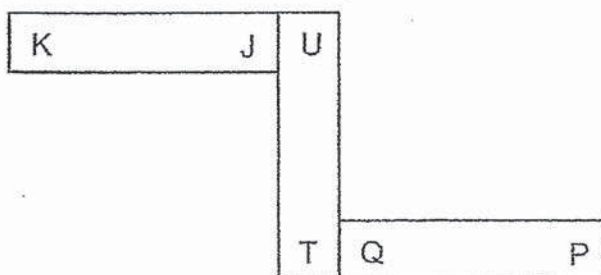
(2)



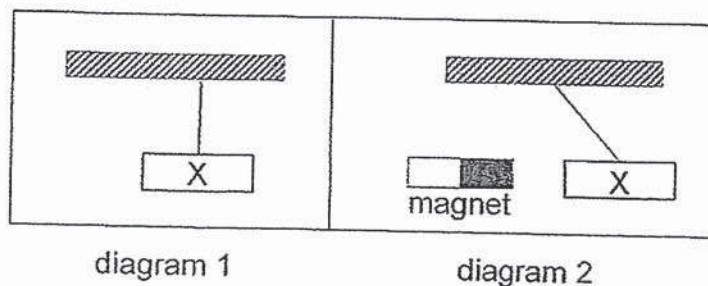
(3)



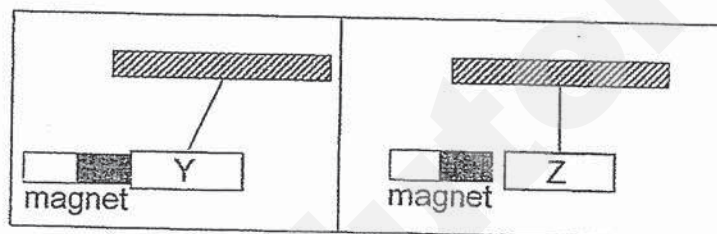
(4)



- 21 Bar X was hung from a string as shown below in diagram 1. Faizal moved a magnet near to bar X and recorded his observations in diagram 2.



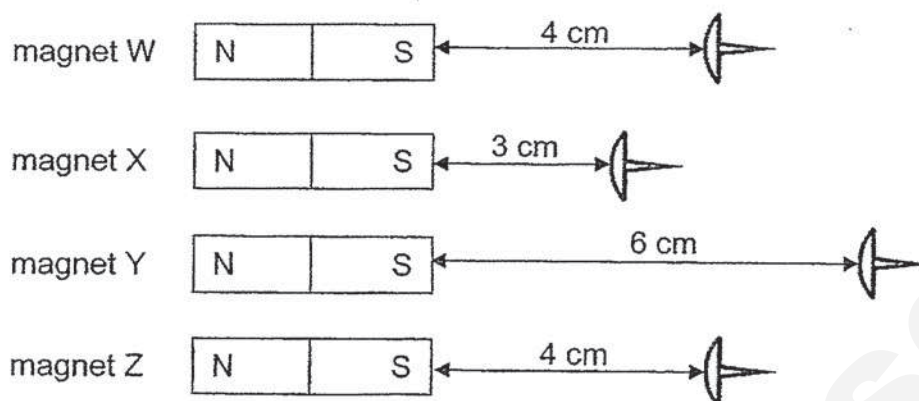
He repeated with bars Y and Z. The diagrams below show his observations.



Based on the observations above, which statement is correct?

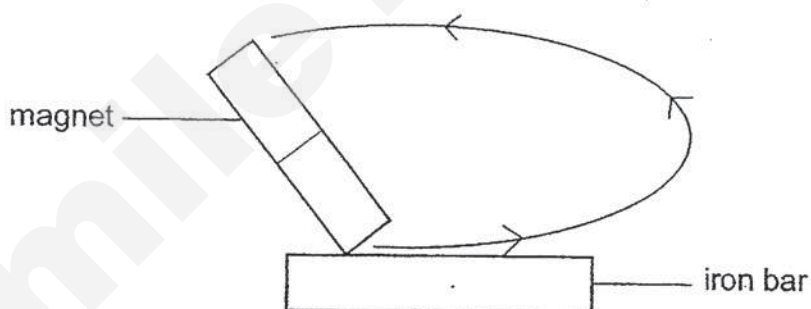
- (1) All bars are magnetic.
- (2) Bars X and Y are magnets.
- (3) Only bar Z is non-magnetic.
- (4) Only bar X is a magnet and the rest are magnetic.

- 22 The diagram below shows the distance at which the different magnets W, X, Y and Z can attract an iron pin.



Which of the following best describes the above observations?

- (1) Magnet Y is the strongest.
 - (2) Magnet W is weaker than magnet X.
 - (3) Magnet X is stronger than magnet Y.
 - (4) Magnet Z is twice as strong as magnet W.
- 23 Andy stroked an iron bar with a magnet as shown below.

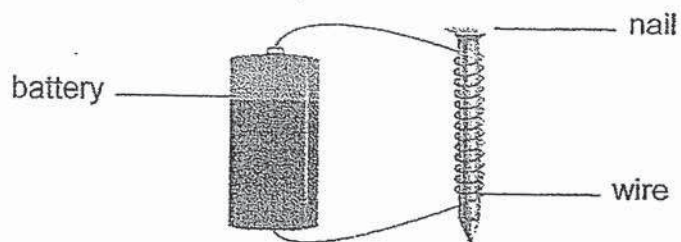


The iron bar attracted two paper clips after it was stroked a few times.

What could Andy do so that the iron bar could attract more than two paper clips?

- (1) Drop the iron bar a few times.
- (2) Heat the iron bar over a flame.
- (3) Stroke the iron bar in a different direction many times.
- (4) Increase the number of times he stroke the iron bar in the same direction.

- 24 Selvi tested four electromagnets A, B, C and D using some paper clips. The batteries used were similar.



The table below shows the results.

Electromagnet	Number of batteries used	Number of paper clips attracted
A	1	2
B	2	4
C	3	?
D	4	8

What could be the possible number of paper clips attracted for electromagnet C?

- (1) 6
- (2) 2
- (3) 3
- (4) 9

End of Booklet A

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CATHOLIC HIGH SCHOOL
END-OF-YEAR EXAMINATION (2019)
PRIMARY THREE
SCIENCE
BOOKLET B

Name: _____ ()

Class: Primary 3 - _____

Date: 31 October 2019

Parent's Signature: _____

Booklet A	48
Booklet B	32
Total	80

10 questions

32 marks

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

INSTRUCTIONS TO CANDIDATES

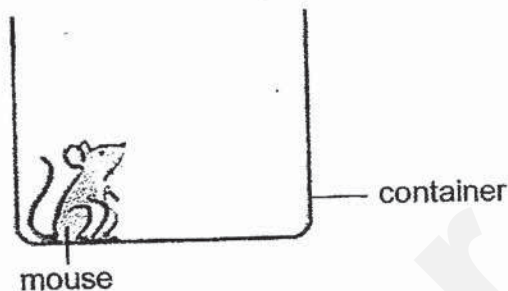
Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Write your answers in this booklet.

This booklet consists of 11 printed pages, excluding the cover page.

Booklet B (32 marks)

For questions 25 to 34, write your answers in this booklet.
The number of marks available is shown in brackets [] at the end of each question or part question. (32 marks)

25 Chee Keong kept a mouse as shown below.



- (a) Based on the diagram above, which basic need of living things was provided for the mouse? [1]

- (b) What would happen to the mouse if it did not have the basic need in (a)? [1]

- (c) Name two other important needs of living things. [1]

(Go on to the next page)

SCORE	3
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- 26 The table below shows the characteristics of four plants W, X, Y and Z. A tick (✓) shows the characteristic that each plant has.

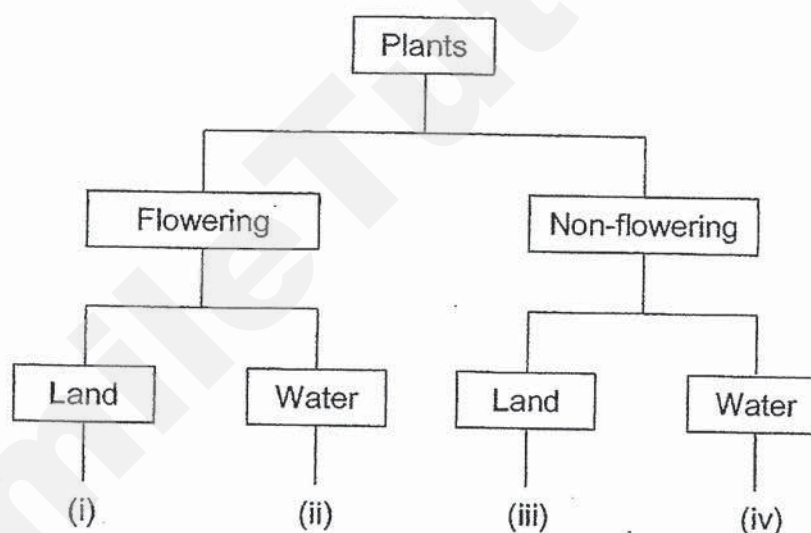
Characteristics	Plants			
	W	X	Y	Z
has flowers	✓		✓	
grows in water			✓	✓

- (a) Based on the table above, state two characteristics of plant Z. [1]

(i) _____

(ii) _____

- (b) Based on the table above, plants W, X, Y and Z can be classified as shown below.



What do (i), (ii), (iii) and (iv) represent? Fill in the blanks with W, X, Y and Z.

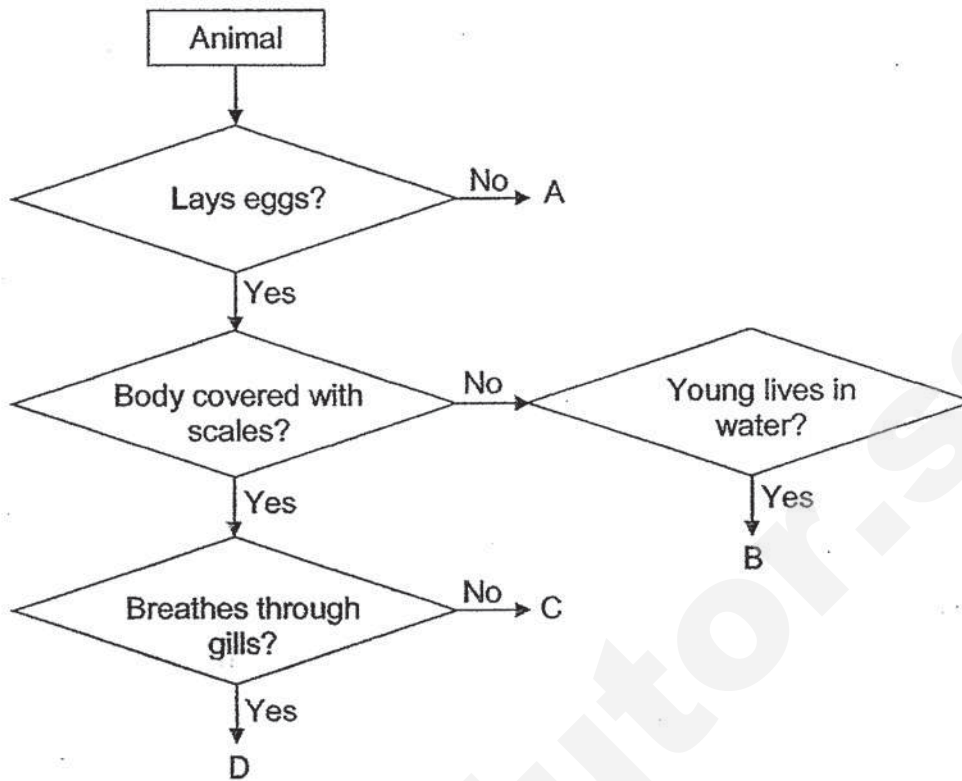
[2]

(i)	
(ii)	
(iii)	
(iv)	

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SCORE	3
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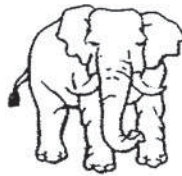
27 Study the diagram below.



Based on the diagram above,

(a) which letter A, B, C or D represents the animal below?

[1]



(b) state one similarity between animals C and D.

[1]

(c) which animal group does animals B and C belong to?

[1]

(i) animal B : _____

(ii) animal C : _____

(Go on to the next page)

SCORE	3
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- 28 Lydia had four similar muffins P, Q, R and S. She added different amounts of water on three of the muffins and placed all of them in the Science Room over a period of ten days.



10 ml



20 ml



30 ml



no water added

The table below shows the number of days taken for the muffins to turn mouldy.

Muffin	P	Q	R	S
Number of days for muffins to turn mouldy	6	4	2	?

- (a) Muffin P turned mouldy in 6 days. Would the number of days for muffin S to turn mouldy be more than, same as or less than 6 days? Put a tick (✓) in the correct box below.

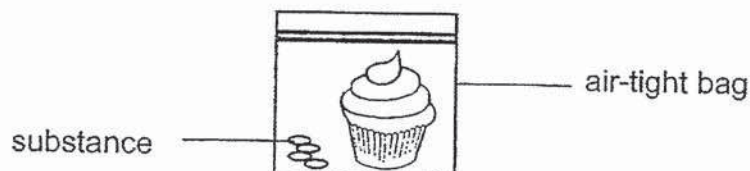
[1]

more than 6 days	same as 6 days	less than 6 days

- (b) Explain your choice in (a).

[1]

Lydia took another muffin and toasted it in the oven. She cooled it and then placed it in an air-tight plastic bag. She added substance X to absorb the moisture in the bag as shown below.



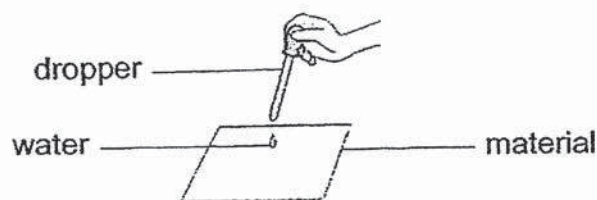
- (c) What would Lydia observe on the muffin after two days?

[1]

(Go on to the next page)

SCORE	3
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- 29 Dinesh conducted a test on two different materials P and Q of similar size and thickness. He put two drops of water on both materials as shown below.



He recorded his observations below.

Material	Observations
P	water is absorbed by material P
Q	water stayed on the surface of material Q

- (a) Put a tick (✓) in the box(es) next to the variable that Dinesh must keep the same to make his test fair. [1]

	Variable	Tick (✓)
(i)	distance between the dropper and the materials	
(ii)	type of material	
(iii)	number of drops of water dropped onto the material	

- (b) Based on Dinesh's results, which material P or Q would be more suitable for making tissue paper? Give a reason. [1]

Dinesh wore a pair of gloves made from material R to wash his car as shown below.



- (c) Based on the picture above, list two properties of material R in the blanks below. [2]

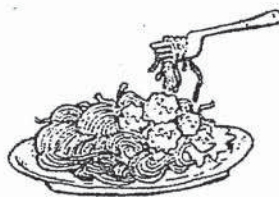
(i) _____

(ii) _____

(Go on to the next page)

SCORE	4
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- 30 Timothy ate a plate of noodles for his lunch as shown below.



Arrange the digestive processes below to show the order of digestion.

Write 1, 2, 3 and 4 in the boxes provided.

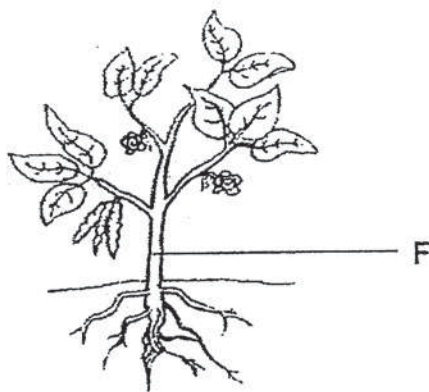
[2]

Digestive Process	Steps
Water is removed from the undigested food.	
The food is chewed and broken down into smaller pieces.	
The digested food passes through the walls of the small intestine into the blood.	
The food is mixed with digestive juices to break down into simple substances.	

(Go on to the next page)

SCORE	2
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31 · Study the diagram below.



(a) Name part F. [1]

(b) State a function of part F. [1]

During a thunderstorm, the roots of the trees are pulled out of the ground as shown in the diagram below.

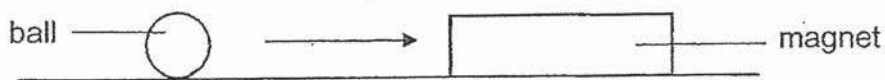


(c) Which function of the roots resulted in the tree being pulled out from the ground? [1]

(Go on to the next page)

SCORE	3
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32 Xavier placed a magnet near a ball as shown below.



He observed that the ball moved towards the magnet in the direction as shown by the arrow.

- (a) Based on Xavier's observation, name one material the ball could be made of. [1]

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

Xavier replaced the ball with a glass marble as shown below.



- (c) What do you think he would observe? [1]

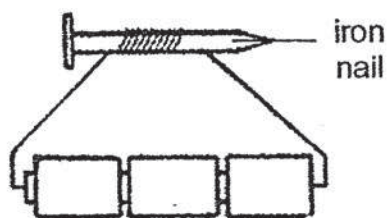
- (d) Give a reason for your answer in (c). [1]

(Go on to the next page)

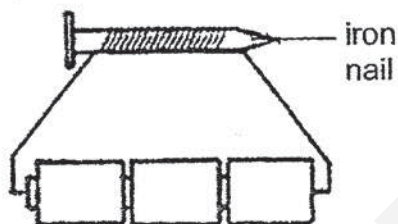
SCORE	4
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33 Ahmad had the following set-ups.

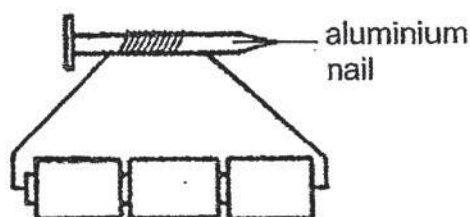
set-up A (10 coils)



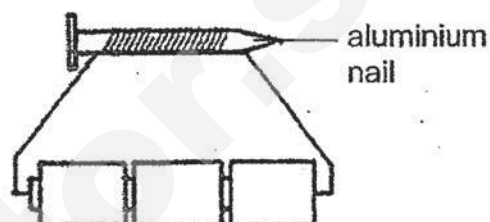
set-up B (20 coils)



set-up C (10 coils)



set-up D (20 coils)



- (a) Which set-ups should Ahmad use to find out if the number of coils on the nail would affect the strength of the electromagnet?

[1]

Ahmad tested set-ups B and D with some paper clips. The table below shows part of his observation.

- (b) Complete the table to show the number of paper clips which set-up D could attract.

[1]

Set-up	Number of paper clips attracted
B	8
D	

- (c) Explain your answer in (b).

[1]

(Go on to the next page)

SCORE	3
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Continue from Question 33

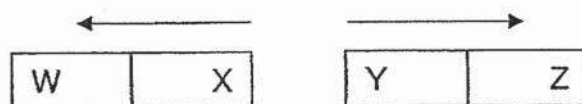
- (d) Without changing the number of batteries, suggest one thing Ahmad could do to set-up A so that the iron nail could attract more paper clips. [1]

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(Go on to the next page)

SCORE	1
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- 34 John brought two bar magnets near each other. He observed that they moved in the directions as shown by the arrows.



- (a) Name the poles at X and Y.

[1]

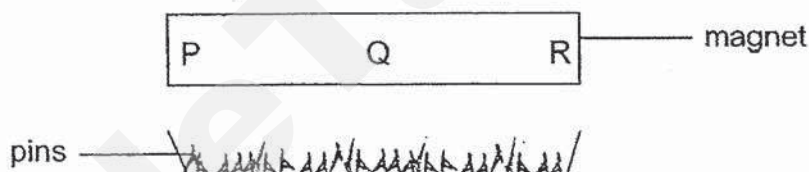
X: _____

Y: _____

- (b) Explain your answer in (a).

[1]

John then marked another bar magnet into three parts P, Q and R as shown in the diagram below.



After marking the magnet, he lowered it into a tray of pins and counted the number of pins attracted to the different parts of the bar magnet.

- (c) Identify the part(s) with the most number of pins attracted to the magnet by putting a tick (✓) in the correct box(es).

[1]

Parts	P	Q	R
Number of pins attracted			

End of Booklet B

SCORE	3
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ANSWER KEY

YEAR : 2019
 LEVEL : PRIMARY 3
 SCHOOL : CATHOLIC HIGH SCHOOL
 SUBJECT : SCIENCE
 TYPE : END-OF-YEAR

Booklet A

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

BOOKLET B

(25a) Oxygen

(25b) The mouse will die.

(25c) Food and water.

(26a)(i) Plant Z does not bear flowers.

(ii) Plant Z grows in water.

(26b)(i) W

(ii) Y

(iii) X

(iv) Z

(27a) A

(27b) Both have scales.

(27c)(i) Amphibians

(ii) Reptiles

(28a) more than 6 days

(28b) Muffin S did not have water and mould needs moisture to grow.

(28c) She did not observe any mould growing on the muffin.

(29a)(i) distance between the dropper and the materials.

(iii) number of drops of water dropped onto the material.

(29b) Material P, because it is absorbent.

(29c)(i) waterproof

(ii) flexible

(30) 4,1,3,2

(31a) Stem.

(31b) It is to transport water to all parts of the plant.

(31c) The roots hold the plant firmly to the ground.

(32a) Steel.

(32b) The ball is made of a magnetic material and the magnet can only attract magnetic materials.

(32c) The marble will not move.

(32d) Glass is a non-magnetic material so the magnet ~~cannot~~^{will not} attract the marble.

(33a) Set-up A and B.

(33b) 0

(33c) D did not attract any paper clips because D is made of aluminium which is a non-magnetic material and cannot be magnetised.

(33d) He can coil more wire around the iron nail.

(34a) X: South-pole

Y: South-pole

(34b) The like poles are facing each other so the 2 magnets repel.

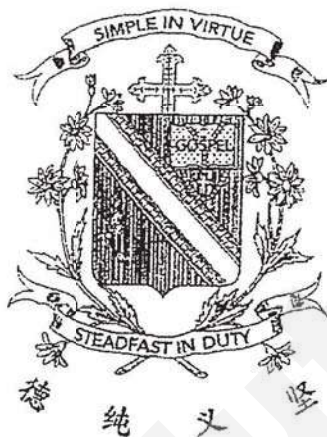
(34c) P,R

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Name: _____ ()

Class: Primary 3 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL



Primary 3 End-Year Assessment SCIENCE

BOOKLET A

24 October 2019

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

24 questions
48 marks

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

This booklet consists of 16 printed pages.

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Section A (24 x 2 marks = 48 marks)

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

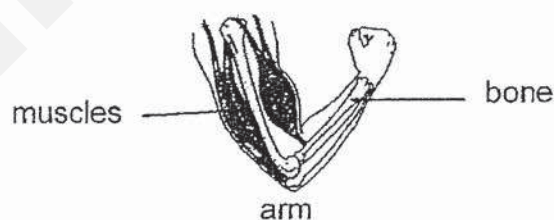
1. The table below shows the characteristics of four things A, B, C and D.

Things	Characteristics		
	Does it need air?	Does it move from place to place?	Does it reproduce?
A	No	No	No
B	Yes	No	Yes
C	No	Yes	No
D	Yes	Yes	Yes

Which one of the following things A, B, C or D best represents a kite flying in the sky?

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

2. Study the diagram below.



What are the functions of the muscles?

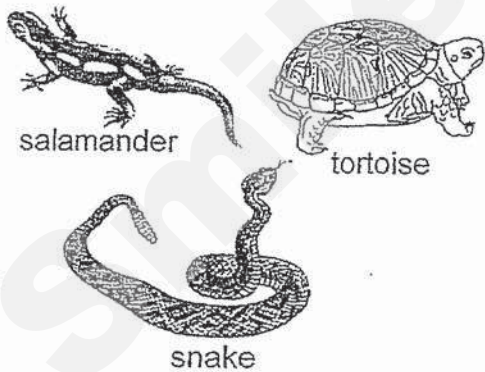
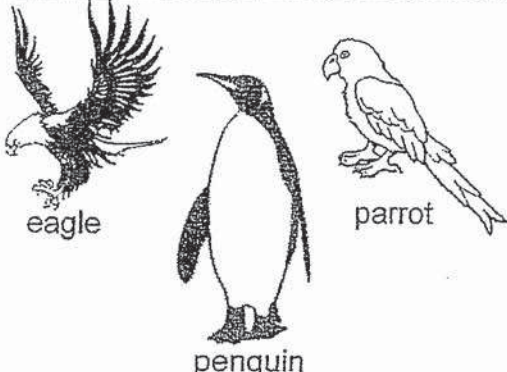
- (1) Muscles support the body.
- (2) Muscles give the body shape.
- (3) Muscles strengthen the bones.
- (4) Muscles enable different parts of the body to move.

3. Which of the following statements about bacteria are true?

- A Bacteria can reproduce.
- B All bacteria are harmful.
- C All bacteria are not microorganisms.
- D Bacteria feed on other living things, dead or alive.

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

4. Study the classification table below.

Group P	Group Q
 <p>salamander</p> <p>tortoise</p> <p>snake</p>	 <p>eagle</p> <p>penguin</p> <p>parrot</p>

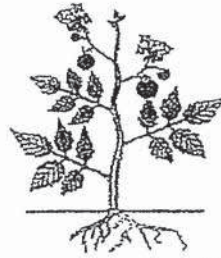
Which one of the following animals is classified wrongly?

- (1) parrot
- (2) tortoise
- (3) penguin
- (4) salamander

5. The diagram below shows organisms A and B.



organism A

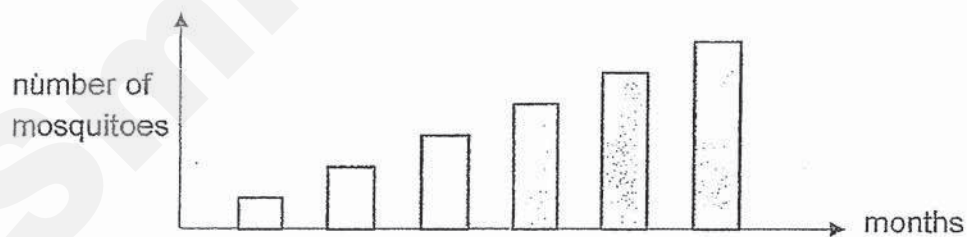


organism B

Which one of the following classifications best describes organisms A and B?

	Organism A	Organism B
(1)	land plants	water plants
(2)	cannot make its own food	can make its own food
(3)	reproduce from seeds	reproduce from spores
(4)	non-flowering plants	flowering plants

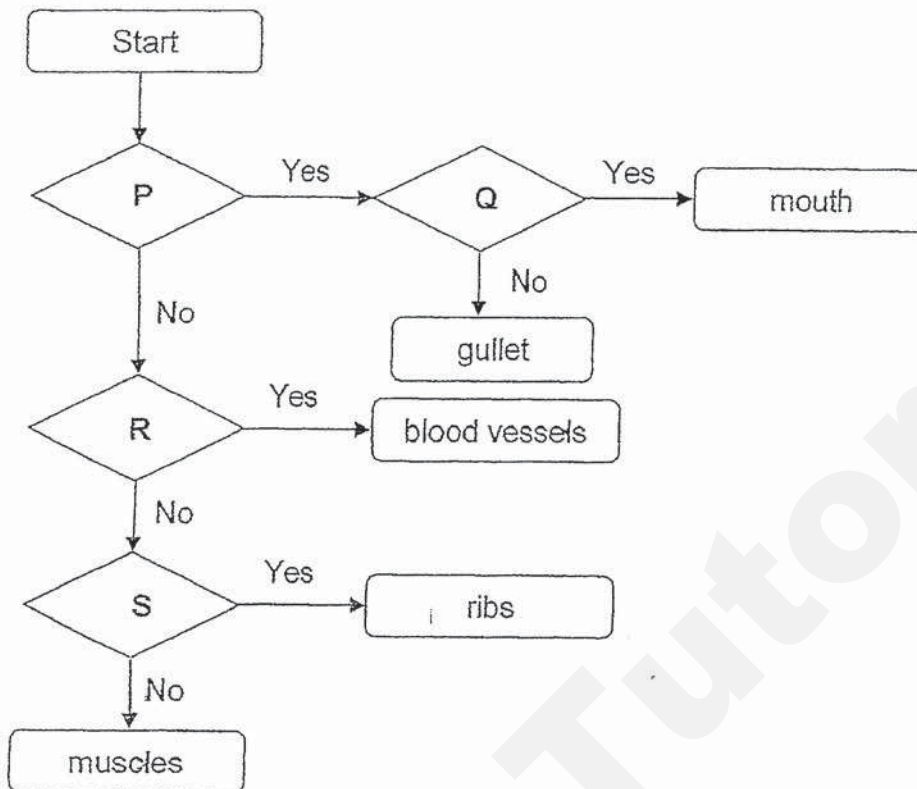
6. Study the graph below.



Which characteristic of living things does the graph show?

- (1) Living things can grow.
- (2) Living things can reproduce.
- (3) Living things can respond to changes.
- (4) Living things need air, food and water to survive.

7. Study the flow chart below.



Based on the flow chart above, which one of the following best represents P, Q, R and S?

	P	Q	R	S
(1)	Is it part of the skeletal system?	Is it part of the digestive system?	Is it part of the muscular system?	Is it part of the circulatory system?
(2)	Is it part of the respiratory system?	Is it part of the circulatory system?	Is it part of the skeletal system?	Is it part of the circulatory system?
(3)	Is it part of the digestive system?	Does it break down food into simpler substances?	Is it part of the circulatory system?	Is it part of the skeletal system?
(4)	Does it break down food into simpler substances?	Is it part of the digestive system?	Is it part of the respiratory system?	Is it part of the skeletal system?

8. Study the classification table below.

Group A	Group B
balloon	tiger
skateboard	bracket fungi
rock	mimosa plant

Which of the following are the correct headings for group A and group B?

	Group A	Group B
(1)	can reproduce	cannot reproduce
(2)	cannot grow	can grow
(3)	cannot make its own food	can make its own food
(4)	can respond to changes	cannot respond to changes

9. Three children made the following statements about plants.

Abby All plants have flowers.

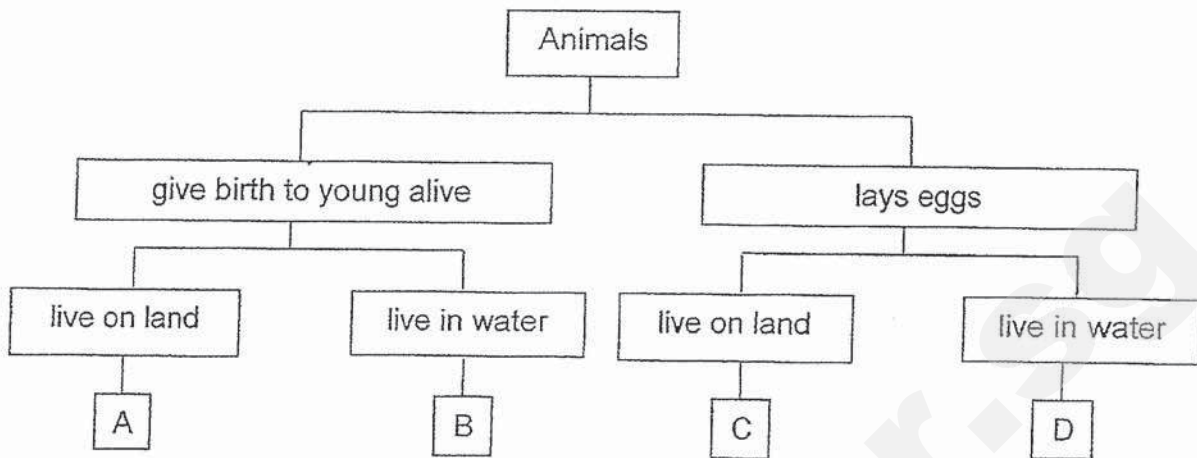
Betty All plants have roots and fruits.

Candy Some plants have edible fruits while other plants have inedible fruits.

Who made incorrect statements?

- (1) Abby and Betty only
- (2) Abby and Candy only
- (3) Betty and Candy only
- (4) Abby, Betty and Candy

10. Study the classification table below.



Which one of the following A, B, C or D best describes a bat?

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

11. Lisa wanted to find out if plants need water to grow. She bought two similar plants A and B. She watered plant A daily but did not water plant B at all.



plant A

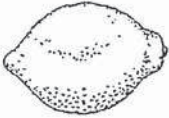





plant B

In which location should she place plant A and B for her experiment?

	Plant A	Plant B
(1)	in the garden	in the cupboard
(2)	in a dark room	in an open field
(3)	in the garden	in the garden
(4)	in the cupboard	in the garden

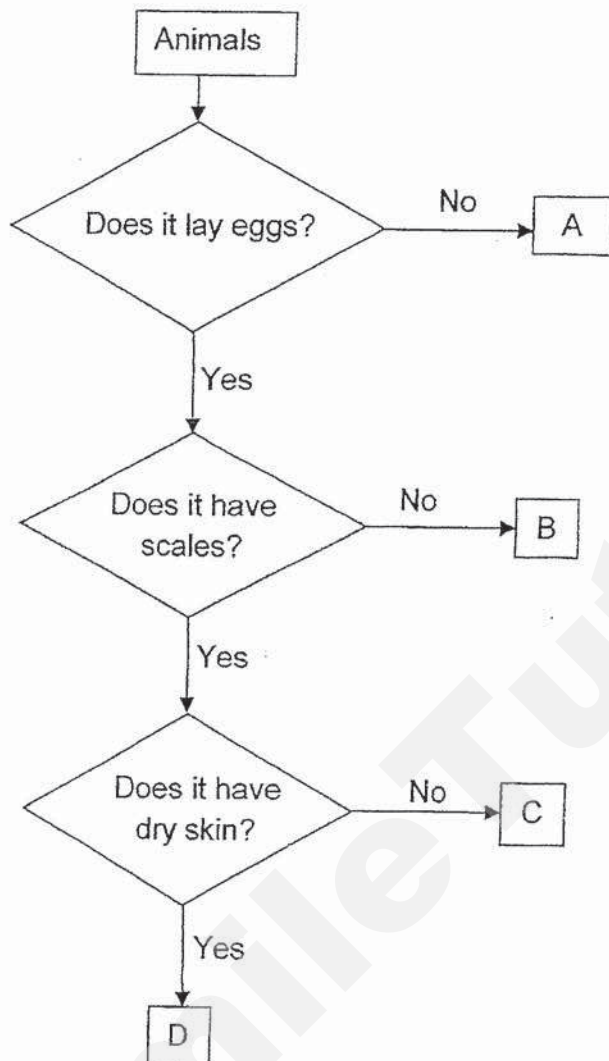
12. Study the classification table below.

Group J	Group K
 lemon	 cupcake
 lime	 honey

Based on the classification table, how are the items grouped?

- (1) according to their taste
- (2) according to their shape
- (3) according to their colour
- (4) according to their texture





13. Study the flow chart shown below.



Based on the flow chart above, which of the following best represents animals A, B, C and D?

	A	B	C	D
(1)	orang-utan	mosquito	snake	ant
(2)	giraffe	newt	angelfish	turtle
(3)	grasshopper	goldfish	penguin	elephant
(4)	goldfish	bat	beetle	parrot

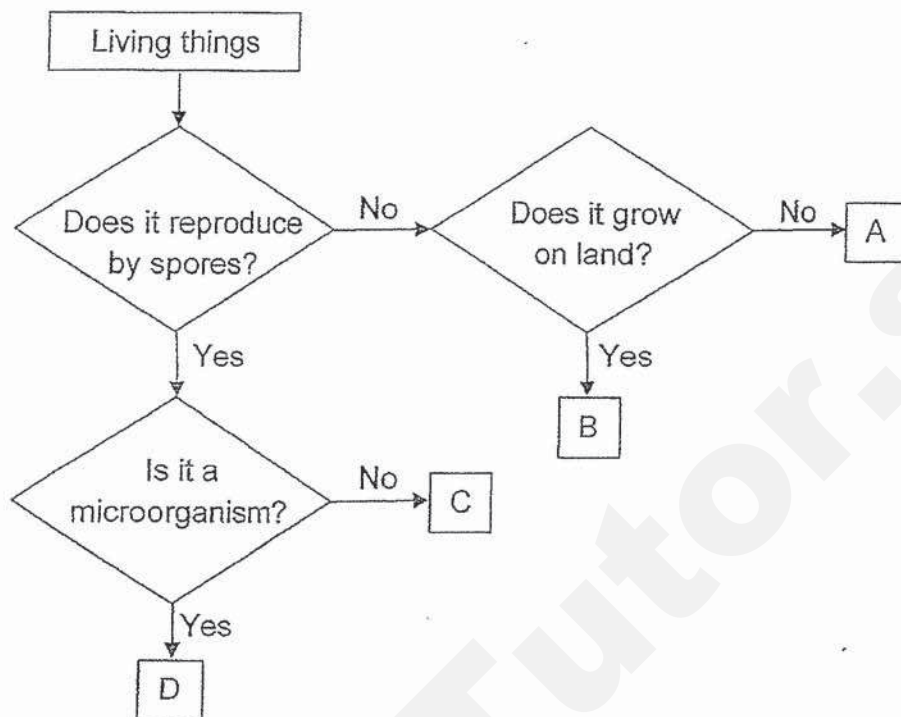
14. Four pupils made some statements about yeast.

 <p>Yeast can make its own food.</p>	 <p>Yeast does not need air to grow.</p>	 <p>Yeast can be seen clearly without a microscope.</p>	 <p>Yeast reproduces in the same way as mushrooms.</p>
Ali	Rita	James	Stella

Which one of the pupils has made a correct statement?

- (1) Ali
- (2) Rita
- (3) Stella
- (4) James

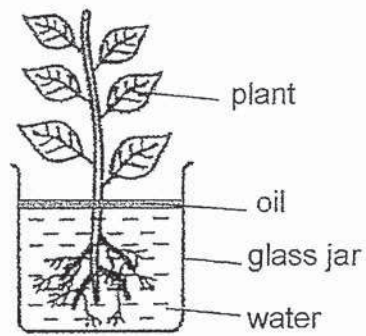
15. Study the flow chart below.



Based on the flow chart above, which one of the organisms A, B, C or D best represents a plant and a mould?

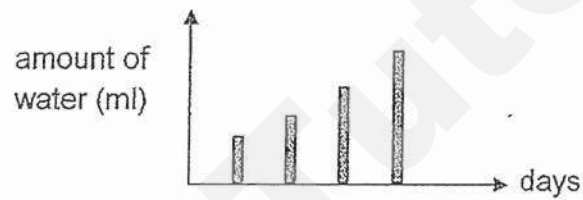
	Plant	Mould
(1)	A	B
(2)	B	C
(3)	C	D
(4)	D	A

16. Jane filled a glass jar with water and placed a plant in it.

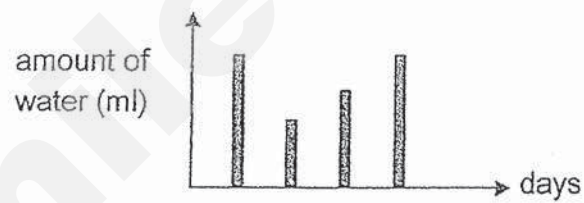


She recorded the amount of water in the glass jar over four days. Which one of the following graphs best represents the amount of water in the glass jar?

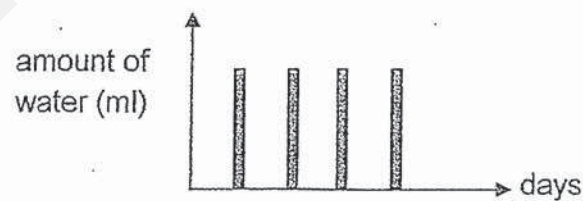
(1)



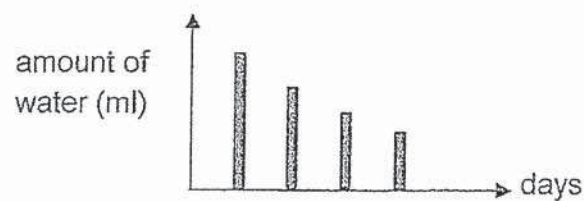
(2)



(3)



(4)



17. The table below shows the properties of materials S, T, U and V. A tick (✓) shows that the material has the property.

	Materials			
Properties	S	T	U	V
flexible		✓		
break easily	✓		✓	
able to float		✓	✓	

Based on the table above, which material S, T, U or V is most suitable for making a walking stick to provide support for the elderly?

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

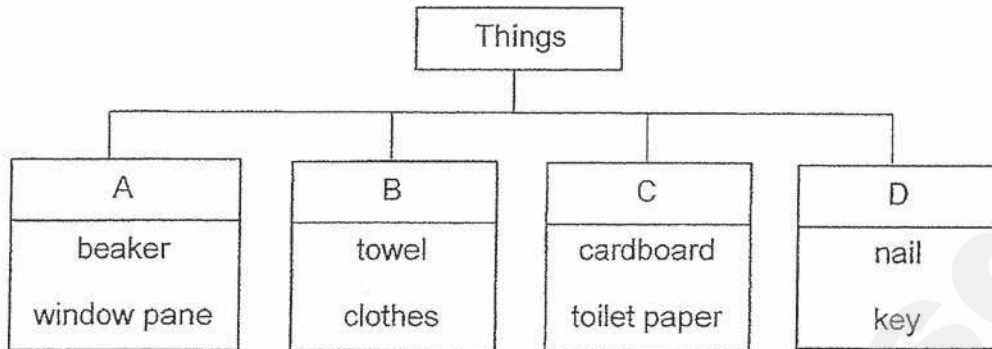
18. The properties of three objects are shown in the table below.

Properties	Objects		
	rubber band	fish tank	cotton towel
X	Yes	No	Yes
transparent	No	Yes	No

Which of the following best represents property X?

- (1) strong
- (2) flexible
- (3) waterproof
- (4) able to sink in water

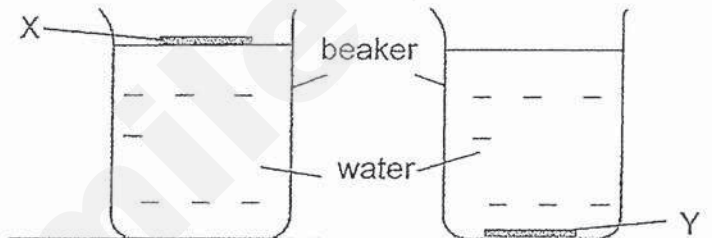
19. Study the classification chart below.



In which group would you classify a coin?

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

20. Jamie placed materials X and Y which are of the same size and thickness in two identical beakers of water as shown below.

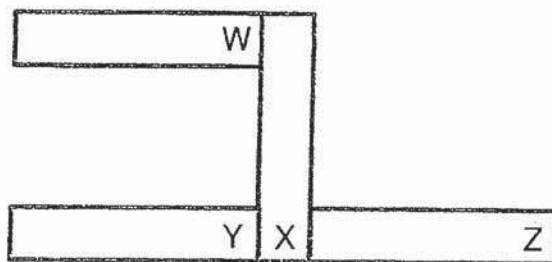


Based only on the diagram, which of the following observations can she make?

- A Y sinks in water.
- B X floats on water.
- C Y is stronger than X.
- D X is more flexible than Y.

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

21. The diagram below shows four bar magnets that are attracted to one another.



Which of the following represents the poles at W, X, Y and Z correctly?

	W	X	Y	Z
(1)	north	north	south	north
(2)	south	north	south	north
(3)	north	south	south	north
(4)	north	north	north	south

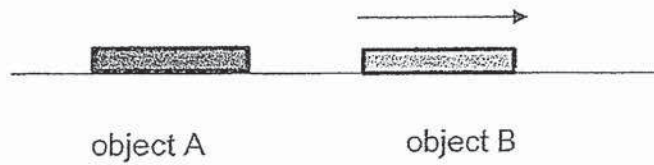
22. Joe brought a magnet close to each of the following objects.

- A glass marble
- B steel clip
- C iron nail
- D aluminium can

Which of the following will be observed?

	Attracted by the magnet	Not attracted by the magnet
(1)	B and C	A and D
(2)	C and D	A and B
(3)	C only	A, B and D
(4)	B, C and D	A only

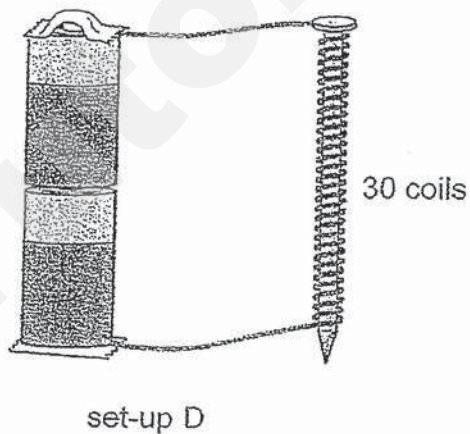
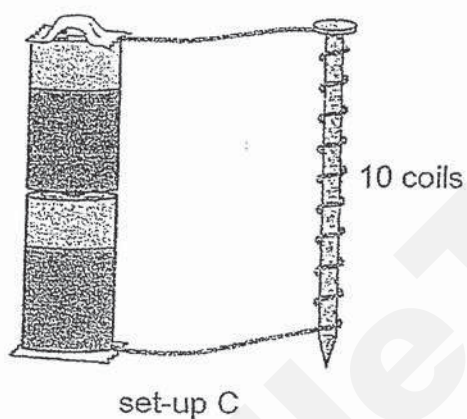
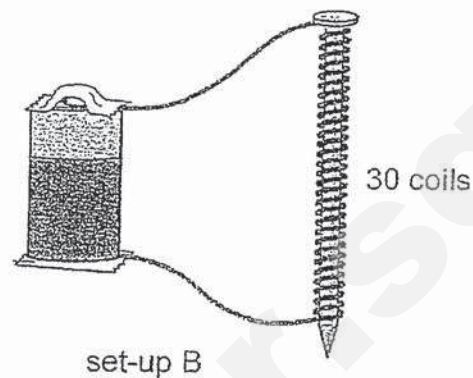
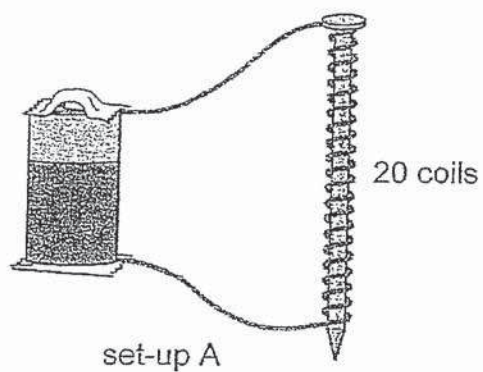
23. When object A was brought near one end of object B, object B moves in the direction as shown by the arrow.



What can we conclude about objects A and B?

- (1) Both objects are made of copper.
- (2) Both objects A and B are magnets.
- (3) Only one of the objects is a magnet.
- (4) Only one of the objects is a non-magnetic material.

24. An iron nail becomes an electromagnet when it is placed in a coil of wire connected to batteries. Danny wanted to find out if the number of batteries used would affect the strength of an electromagnet.



Which two set-ups should he choose to conduct a fair test?

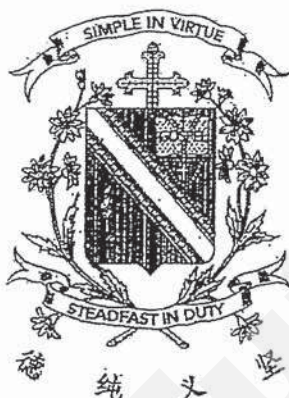
- (1) set-up A and set-up B only
- (2) set-up B and set-up C only
- (3) set-up B and set-up D only
- (4) set-up C and set-up D only

END OF BOOKLET A

Name : _____ ()

Class : Primary 3 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL



Primary 3

End-Year Assessment 2019

SCIENCE

BOOKLET B

24 October 2019

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

10 questions
32 marks

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

This paper consists of 10 printed pages.

Booklet A	48
Booklet B	32
Total	80

Parent's Signature/Date

Section B (32 marks)

For questions 25 to 34, write your answers in this booklet.

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

25. The statements below describe the characteristics of living things.

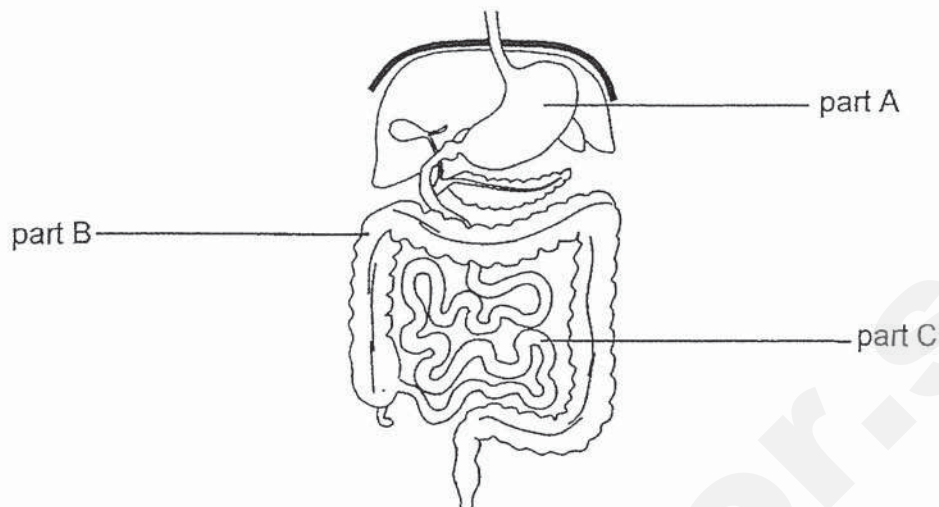
- A Living things can die.
- B Living things can grow.
- C Living things can reproduce.
- D Living things need air to live.
- E Living things need water to stay alive.
- F Living things can respond to changes in the environment.

Match the letters A, B, C, D, E and F to the correct observations below. Each letter can only be used once.

[3]

	Observations	Characteristics of living things
(a)	A turtle comes up to a beach to lay eggs.	
(b)	A little girl increases in height after a year.	
(c)	A boy covers his ears every time he hears thunder.	
(d)	Fish in the aquarium dies when the air pump stops working.	
(e)	A cockroach is being hit and crushed with a roll of newspaper.	
(f)	A balsam plant withers and dries up when it is not watered for two weeks.	

26. The picture below shows part of the human digestive system.



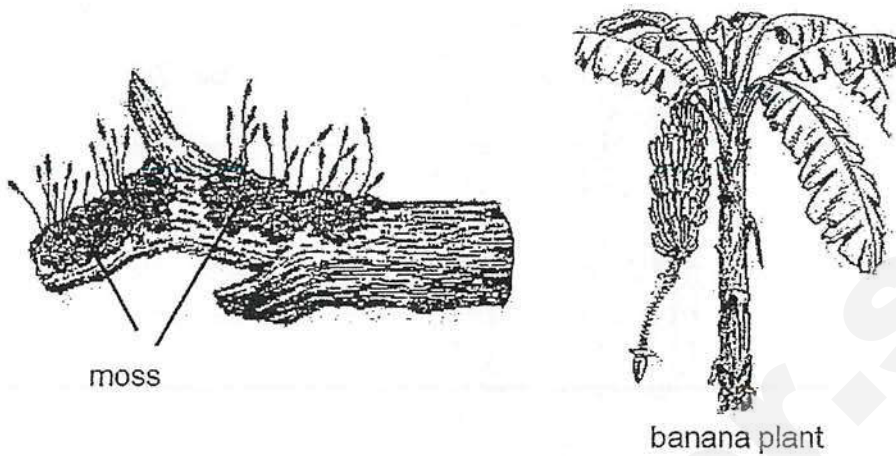
(a) State the substances absorbed by part B and C. [2]

Substance(s) absorbed by part B: _____

Substance(s) absorbed by part C: _____

(b) State one similarity in the function of part A and part C. [1]

27. The diagram below shows a moss and a banana plant.



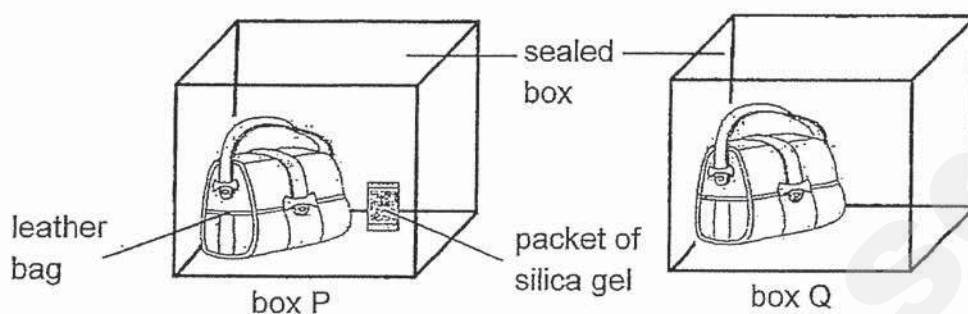
(a) How are they similar in the way they obtain food?

[1]

(b) How are the parts of a moss and a banana plant different?

[1]

28. Aishah placed a leather bag in each of the two identical boxes P and Q shown below. She placed a packet of silica gel in box P. Silica gel helps to remove moisture.



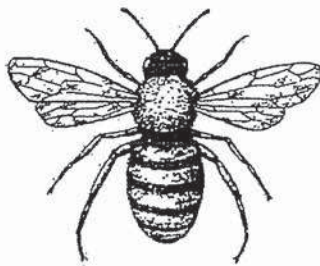
After a month, she noticed grey powdery substances on only one of the bags.

- (a) Which box was the bag with the grey powdery substance in? Explain your answer. [1]

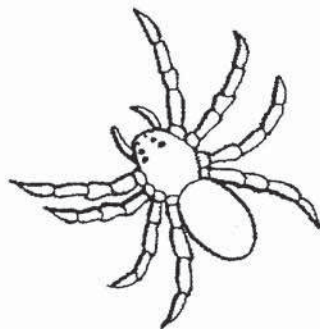
- (b) State two other conditions that are necessary for the grey powdery substances to grow? [1]

- (c) Which group of living things does the grey powdery substance belong to? [1]

29. Ray found two organisms in a park and concluded that they were both insects. His teacher told him that his conclusion was incorrect.



organism A



organism B

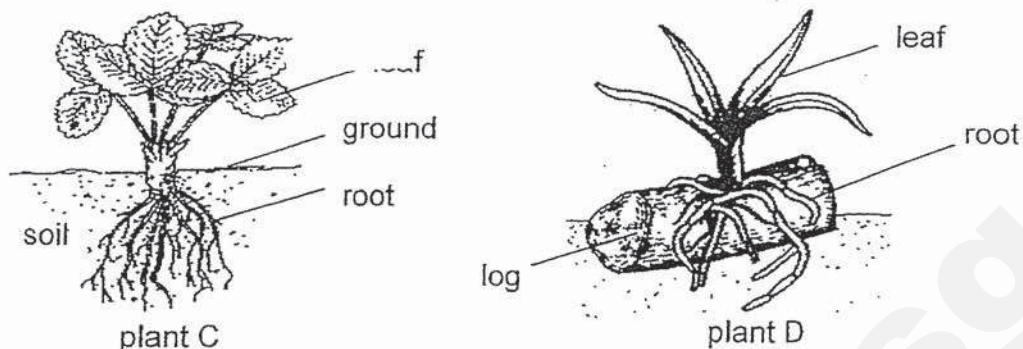
- (a) Give two reasons to explain why Ray's conclusion is incorrect. [2]

Reason 1:

Reason 2:

- (b) Organisms A and B have a hard outer covering. How does this hard outer covering help the organisms? [1]

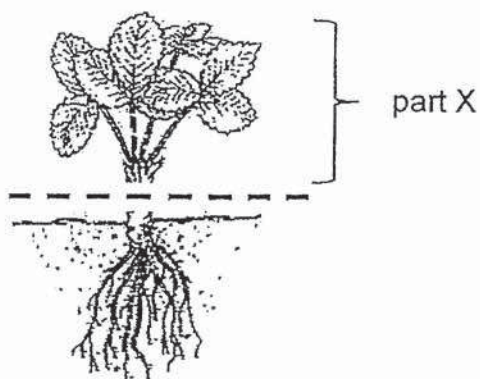
30. The diagram below shows plants C and D.



- (a) Based on the diagram, state the difference between where the roots of plants C and D are found. [1]

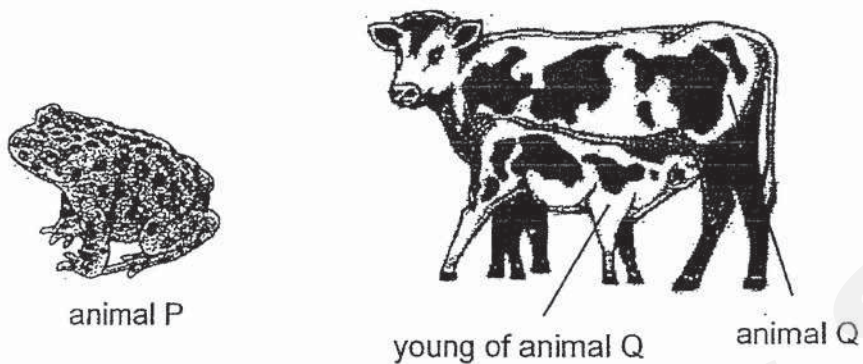
- (b) Jane observed there were no flowers growing on plant C and concluded that it is a non-flowering plant. Is Jane correct? Explain your answer. [1]

Jane pulled plant C by the leaves and found that the plant broke off at the stem as shown below.



- (c) What will happen to part X of plant C after a few days? Explain your answer. [1]

31. The pictures below shows animals P and Q.



- (a) State one difference in the outer covering of animals P and Q. [1]

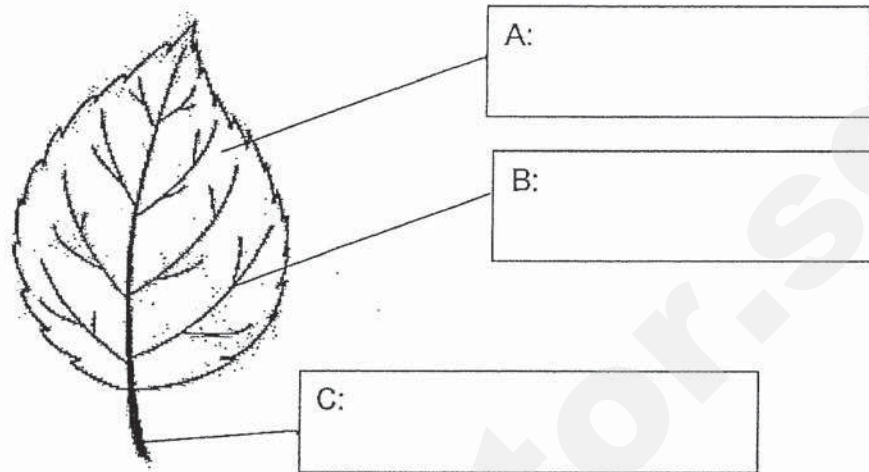
- (b) Which animal group does animal Q belong to? [1]

- (c) Based on your answer in (b), state one characteristic of the animal group that is shown in the picture. [1]

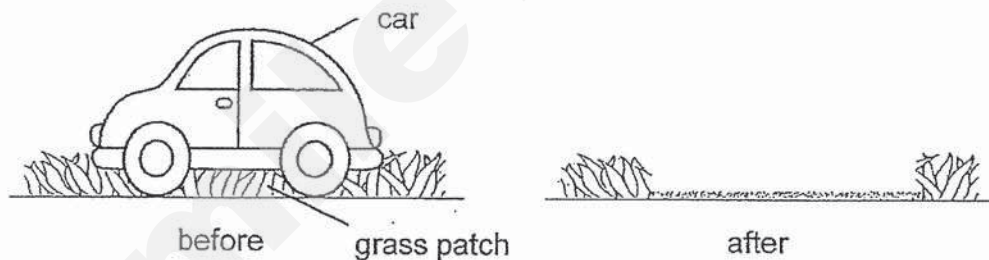
32. The diagram below shows a leaf.

(a) Identify parts A, B and C.

[3]



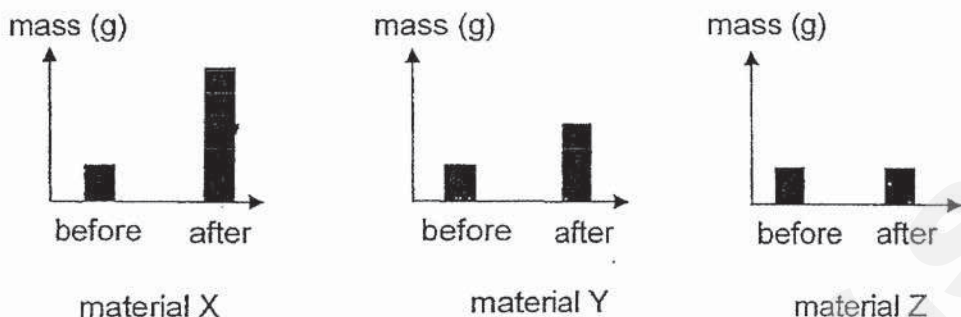
Latifah parked her car on a grass patch in her garden. After a few weeks, she removed her car. She observed that the grass patch under the car had turned brown and died.



(b) Based on her observation, explain why the grass patch under the car had died.

[1]

33. Sathiya set up an experiment to find out which materials X, Y or Z absorbs the most water. She weighed each material before and after leaving them in a basin of water for a minute. She recorded the results in the graph below.



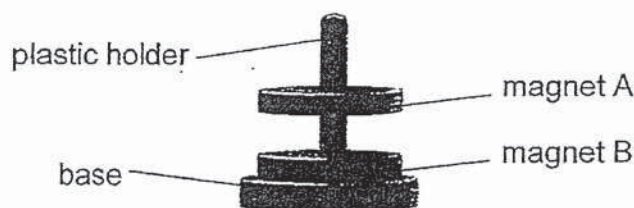
- (a) Based on the results above, which material X, Y or Z is waterproof? Explain your answer. [1]

- (b) Based on the results above, which material is the most suitable for making a hand towel? Explain your answer. [1]

- (c) For the experiment to be fair, tick (✓) the variables that should remain the same. [2]

Variables	Tick (✓)
type of materials	
thickness of materials	
amount of water in the basin at the start of the experiment	

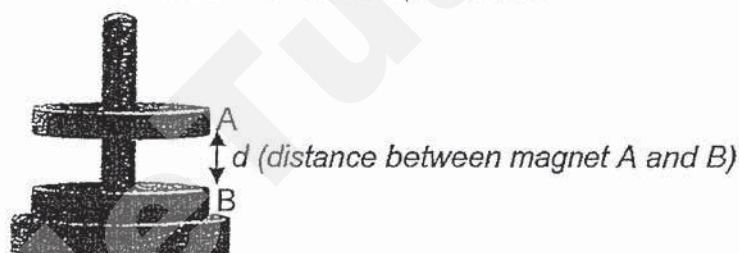
34. Amy placed two ring magnets A and B through a plastic holder shown below.



- (a) Explain why magnet A was floating above magnet B.

[2]

Amy measured distance d at the start of the experiment. She dropped magnet A onto the ground 5 times and placed magnet A through the plastic holder in the same way. She then measured distance d again and repeated the experiment. She recorded the results in the table below.



Number of times magnet A was dropped onto the ground	Distance d (cm)
0	7
5	6
10	5
15	4
20	?

- (b) Based on the results in the table, what is the relationship between the number of times magnet A was dropped and its magnetic strength?

[1]

- (c) Based on the table, what could be distance d after magnet A was dropped 20 times?

[1]

END OF BOOKLET B

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ANSWER KEY

YEAR : 2019
LEVEL : PRIMARY 3
SCHOOL : CHIJ ST NICHOLAS GIRL'S SCHOOL
SUBJECT : SCIENCE
TERM : EOY

SECTION A

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

SECTION B

- Q25 (a)C
(b) B
(c) F
(d) D
(e) A
(f) E

Q26 (a) Water from the undigested food.

Digested food into the bloodstream.

(b) They both have digestive juices which help to break down food into simpler substances.

Q27 (a) Both the moss and the banana plant make their own food.

(b) The banana plant bears flowers while the moss does not bear flowers.

Q28 (a) Box Q. As Aishah did not put a packet of silica gel in Box Q, so there was moisture. Hence mould needs moisture to grow.

(b) air and warmth.

(c) Fungi

Q29 Reason 1 : Organism B has 8 legs while insects have 6 legs.

Reason 2 : Organism B has 2 Body parts while an insect has 3 body parts.

(b) It protects the organisms soft body.

Q30 (a) The roots of plant C are found underground while the roots of plant D are found above the ground.

(b) No. As some plants only bloom when the seasons are right.

(c) Plant C will die as it has no roots to absorb water for the plant.

Q31 (a) Animal P has moist skin while animal Q has fur.

(b)Mammals

(c)Mammals produce milk to feed their young.

Q32 (a) A : leaf blade

B : leaf vein

C : leaf stalk

(b)The grass under the car could not receive sunlight to make food so it died.

Q33 (a)Material Z. The mass of material Z remains the same before and after placed in basin of water showing that I did not absorb any water.

(b)Material X.As material X absorbed the most amount of water.Hence, a hand towel needs to absorb the most amount of water so your hands will be dry.

(c)

Variables	Tick (✓)
type of materials	
thickness of materials	✓
amount of water in the basin at the start of the experiment	✓

Q34 (a)The like poles of magnet B and A are facing each other so they are repelling each other.

(b)The greather the number of times magnet A was dropped, the weaker the magnetic strength of the magnet.

(c)3

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HENRY PARK PRIMARY SCHOOL
SECOND SEMESTRAL ASSESSMENT 2019
PRIMARY 3
SCIENCE

SECTION A (40 MARKS)

INSTRUCTIONS TO CANDIDATES

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

Name: _____ ()

Class: Primary 3 ()

Date: 22 October 2019

Total Time: 1 h 30 min

Section	Marks
A	/ 40
B	/ 16
C	/ 24
Total (A+B+C)	/ 80

Parent's Signature: _____

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Section A: 40 marks

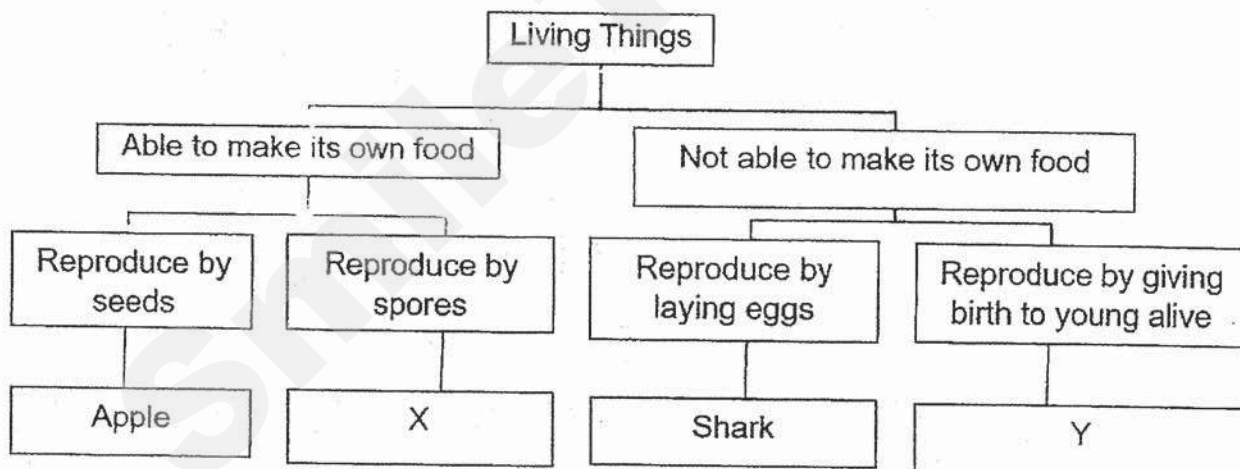
For each question from 1 to 20, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.

1. Which of the following observations is correctly matched to the characteristics of living things?

	Observation	Characteristic
(1)	A cockroach moves away from light.	Living things respond to changes.
(2)	A frog feeds on insects.	Living things can grow.
(3)	A bird has a beak.	Living things need air, food and water.
(4)	A monkey has hair on its body.	Living things can reproduce.

()

2. Study the classification chart shown below.

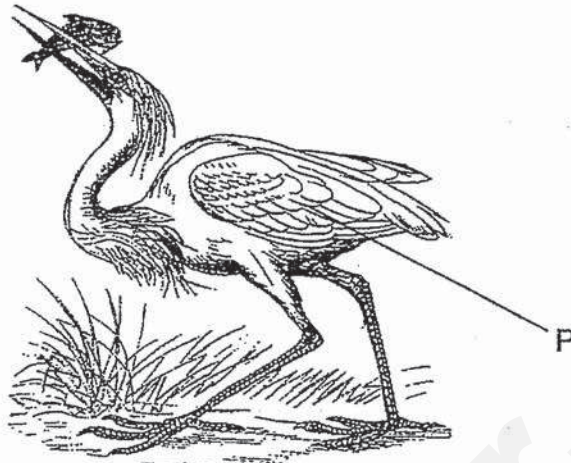


Which of the following best represents X and Y?

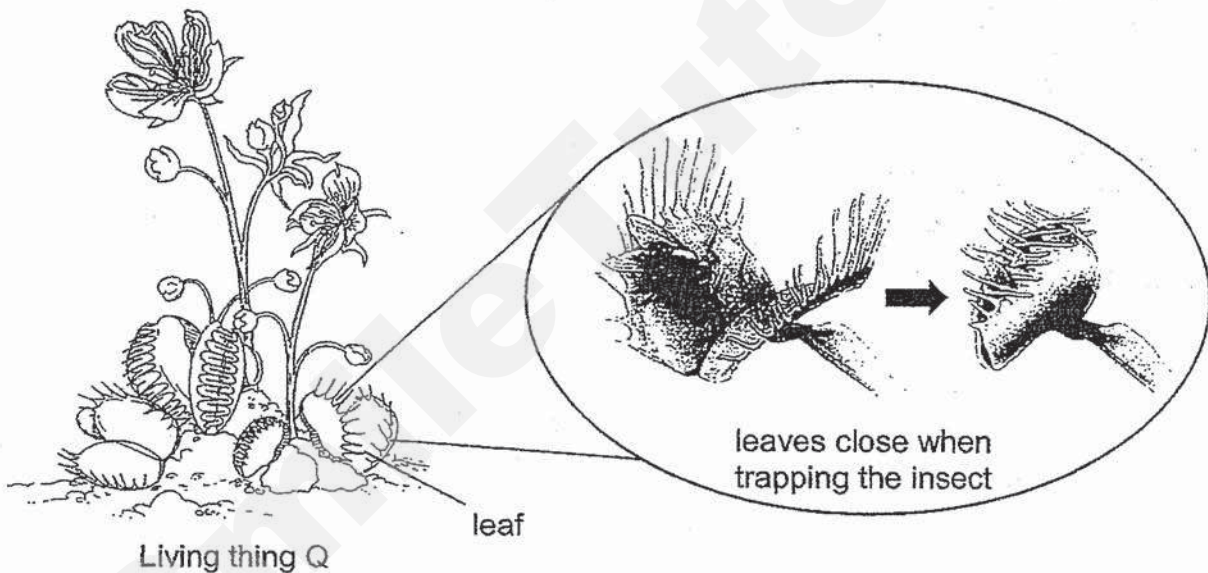
	X	Y
(1)	Rose	Penguin
(2)	Moss	Goldfish
(3)	Fern	Elephant
(4)	Mould	Dolphin

()

3. Jeffrey observed living things P and Q.



Living thing P catches and eats fish



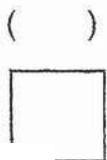
Living thing Q

Living thing Q uses its leaves to trap insects



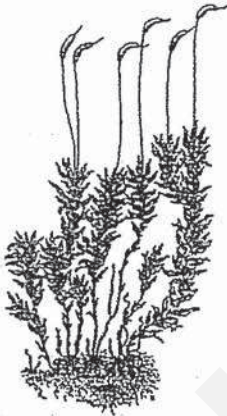

Based on the information given, which of the following characteristics **cannot** be observed?

- | | |
|---|--|
| A Both living things grow. | B Both living things reproduce. |
| C Both living things move on their own. | D Both living things respond to changes. |

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



4. Study the following plants.

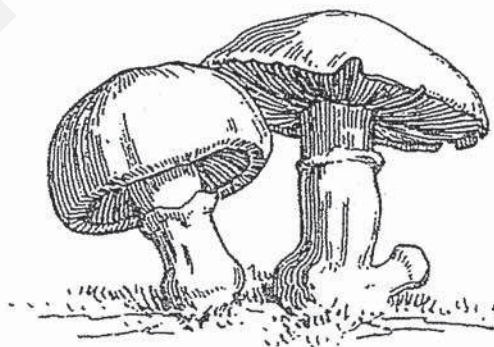
Group A		Group B	
			
orchid plant	strawberry plant	moss	fern

Which of the following is correct?

	Group A	Group B
(1)	Land plants	Water plants
(2)	Flowering plants	Non-flowering plants
(3)	Can make food	Cannot make food
(4)	Reproduce by spores	Reproduce by seeds

()

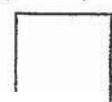
5. The diagram shows some mushrooms.



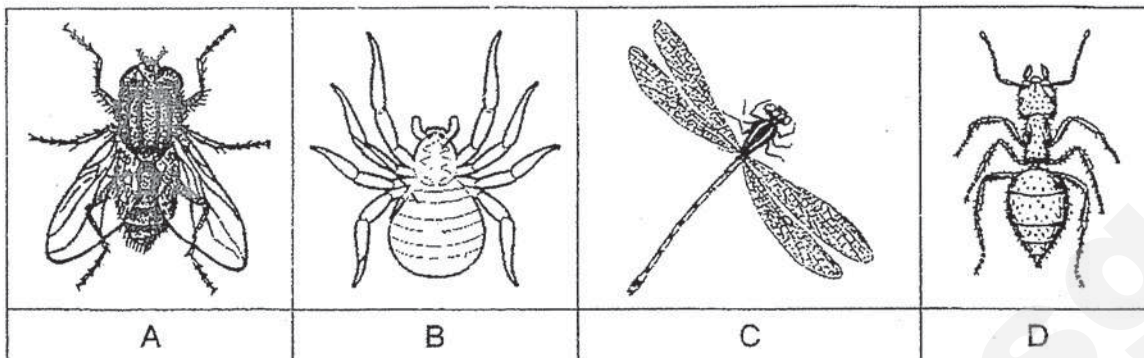
Which of the following is **not** a characteristic of a mushroom?

- (1) Makes its own food.
- (2) Responds to changes.
- (3) Reproduces by spores.
- (4) It needs air and water.

()



6. Study the animals below.

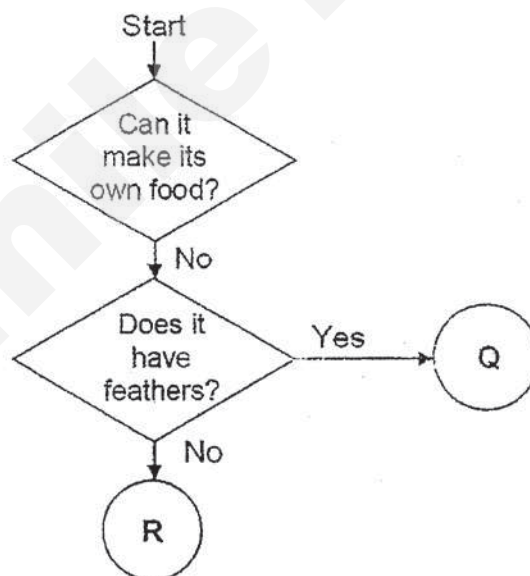


Which of the following are insects?

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

()

7. Study the flowchart below.



Which of the following is correct?

- (1) R is a fern.
- (2) Q is a chicken.
- (3) R is a penguin.
- (4) Q is a snake.

()



8. Which of the following statements about bacteria is / are correct?

- A All bacteria are harmful.
- B Bacteria is a living thing.
- C Bacteria is a microorganism.

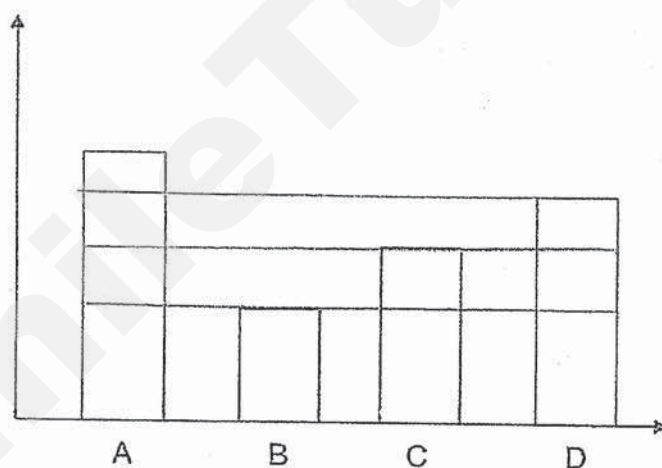
- (1) C only
- (2) A and B only
- (3) A and C only
- (4) B and C only

()

9. Mrs Tan wants to sew a set of curtains for her bedroom.

The graph below shows the amount of light that can pass through materials A, B, C and D.

Amount of light
that can pass
through (units)



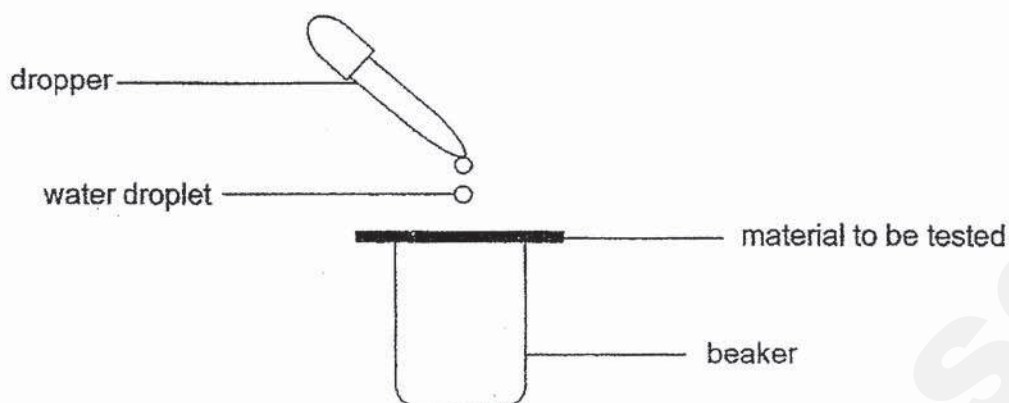
Which material should she choose for making the curtains to make her room the darkest?

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

()



10. John carried out an experiment on materials X and Y. He placed five drops of water on each material and recorded his observations below.



Material	Observation
X	There were a few drops of water in the beaker.
Y	There was one drop of water in the beaker.

Based on the information above, what property of the materials, is John testing?

- (1) Strength
- (2) Flexibility
- (3) Waterproof
- (4) Ability to float or sink

()

11. The table describes some materials based on the different properties observed.

	Material E	Material F	Material G	Material H
Waterproof	✓	✓	✓	
Strong	✓			✓
Floats on water			✓	
Light	✓	✓		✓

A tick (✓) indicates that the property is observed.

Which of the materials, E, F, G or H, is **most** suitable for making a grocery bag?

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

()



12. Study the classification table.

Group X	Group Y	Group Z
Towel	Textbook	Nail
T-shirt	Newspaper	Stapler





Which of the following objects can be classified under group Z?

- (1) key
- (2) string
- (3) socks
- (4) handkerchief

()



13. Four pairs of similar bar magnets were arranged in the following ways.

Set-up A	
Set-up B	
Set-up C	
Set-up D	

Which one of the following shows the correct results?

(1)

Set-up	Attracted	Repelled
A	✓	
B		✓
C		✓
D	✓	

(2)

Set-up	Attracted	Repelled
A		✓
B	✓	
C	✓	
D		✓

(3)

Set-up	Attracted	Repelled
A	✓	
B		✓
C	✓	
D		✓

(4)

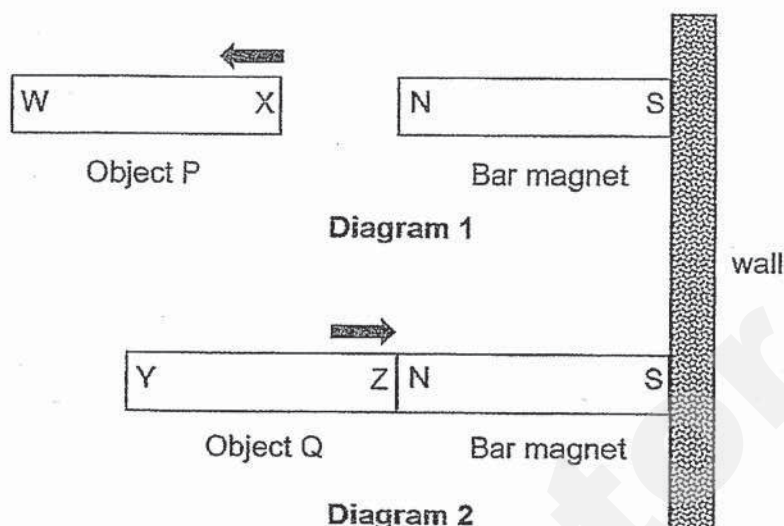
Set-up	Attracted	Repelled
A		✓
B	✓	
C		✓
D	✓	



14. A bar magnet is fixed to a wall.

When object P was placed near the bar magnet, it moved away as shown in diagram 1.

When object Q was placed near the bar magnet, it moved towards the magnet, as shown in diagram 2.



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

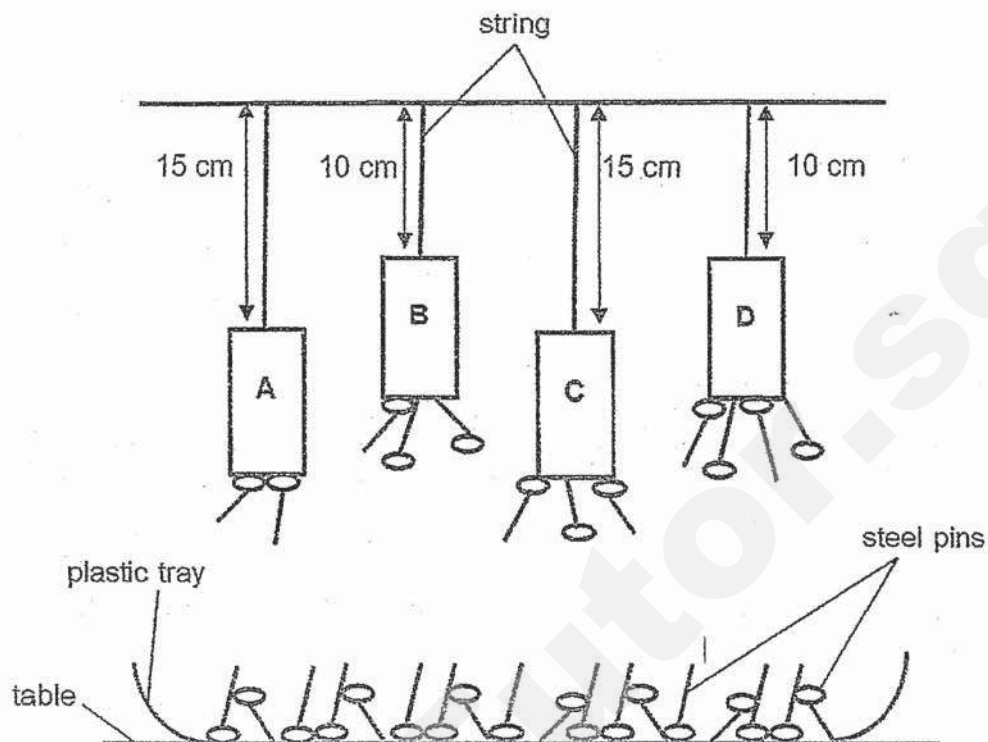
- A Object P is a magnet.
- B Object Q is a magnet.
- C Object P is made of a non-magnetic material.
- D Object Q is made of a magnetic material.

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

()



15. Annette hung four magnets, A, B, C and D, above tray of identical steel pins. Her observation is shown in the diagram below.

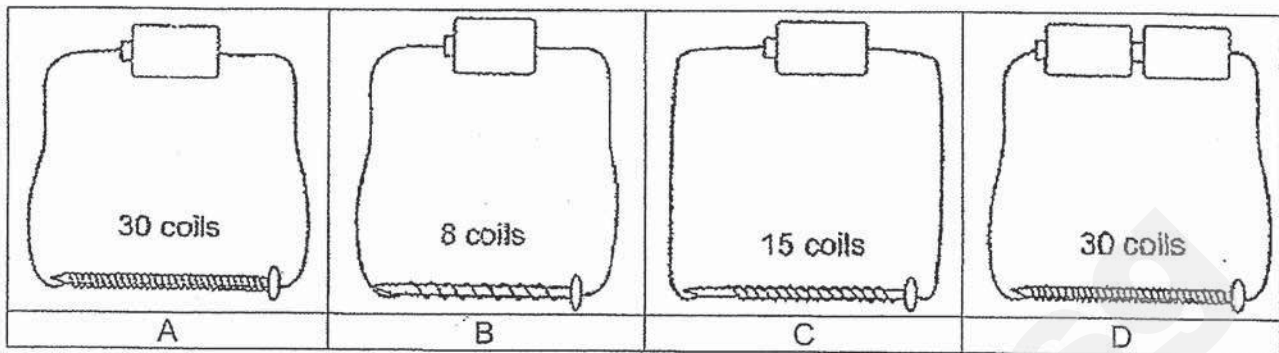


Based on the diagram given, which one of the following is correct?

	Strongest magnet	Weakest Magnet
(1)	B	A
(2)	B	C
(3)	D	A
(4)	D	C

()

16. Mike had four sets of electromagnets, A, B, C and D, as shown below. Similar batteries, nails and wires were used in all the set-ups.



Which of the following electromagnets would attract the **most** number of steel paper clips?

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

()

17. Insects **M**, **N**, **O** and **P** can be found on plant **H**. The table below shows the duration of each stage in the life cycle of the four insects.

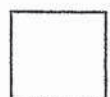
Insect	Egg	Larva	Pupa	Adult
M	6 days	25 days	17 days	At least 4 days
N	8 days	15 days	11 days	At least 1 week
O	6 days	21 days	12 days	At least 3 days
P	8 days	12 days	14 days	At least 5 days

The insects feed on the leaves of plant **H** during the larva stage.

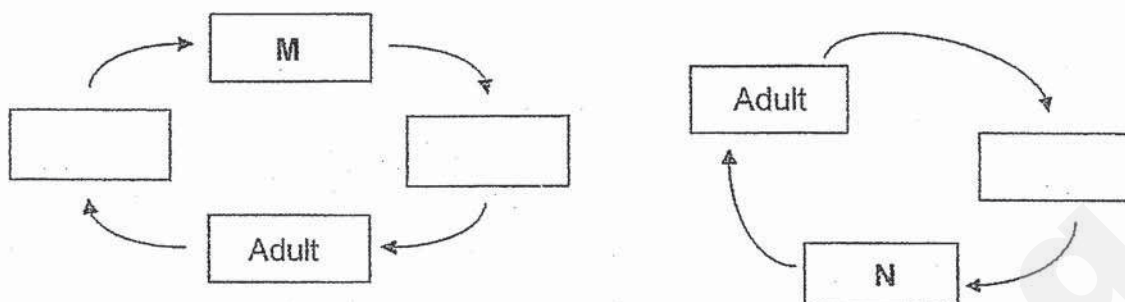
Based on the information given, which insect would cause the **most** damage to plant **H** during the larva stage?

- (1) M
- (2) N
- (3) O
- (4) P

()



18. The diagrams show the life cycles of a frog and a beetle.

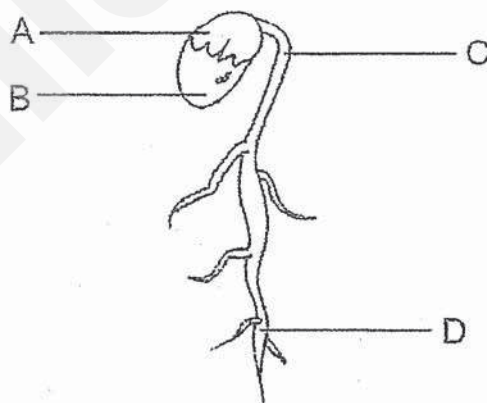


Both life cycles are **not** complete. Which of the following is correct?

	M	N
(1)	Tadpole	Egg
(2)	Larva	Nymph
(3)	Pupa	Tadpole
(4)	Larva	Young

()

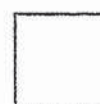
19. The diagram shows a young plant.



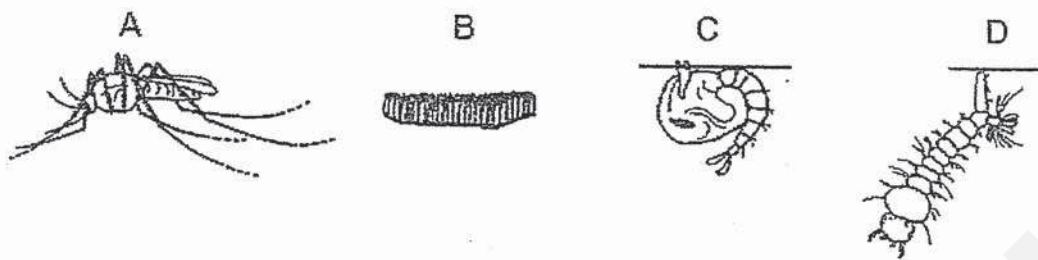
From which part, A, B, C or D, does the young plant get water from?

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

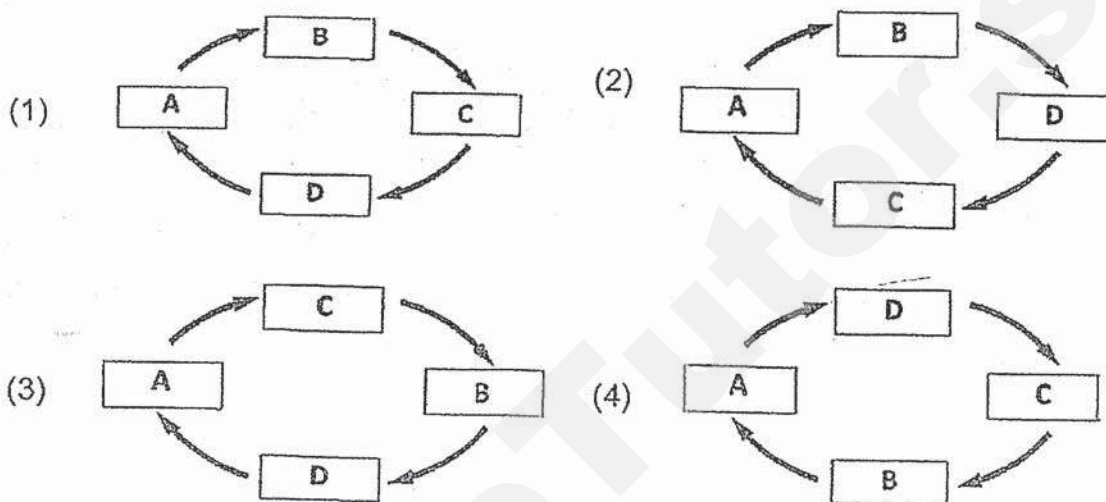
()



20. A, B, C and D are the various stages in the life cycle of a mosquito.

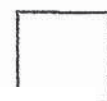


Which of the following correctly shows the life cycle of a mosquito?



()

End of Section A





HENRY PARK PRIMARY SCHOOL
SECOND SEMESTRAL ASSESSMENT 2019

PRIMARY 3

SCIENCE

SECTION B & C (40 MARKS)

INSTRUCTIONS TO CANDIDATES

1. Do not turn over this page until you are told to do so.
2. Follow all instructions carefully.
3. Answer all questions.

Name: _____ ()

Class: Primary 3 ()

Date: 2019

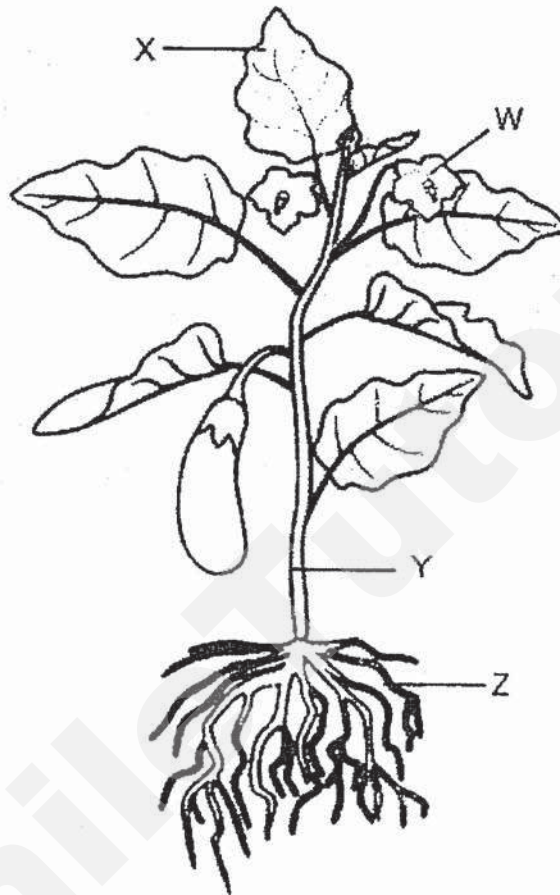
Total Time: 1 h 30 min

Marks for Sections B & C: _____

Section B: (16 marks)

Write your answers to questions 21 to 28 in the spaces given. Each question carries 2 marks.

21. The diagram below shows a plant.



Fill in the blanks using the correct words in the box.

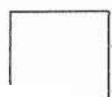
stem	fruit	root
leaf	flower	soil

Name the following parts of the plant correctly.

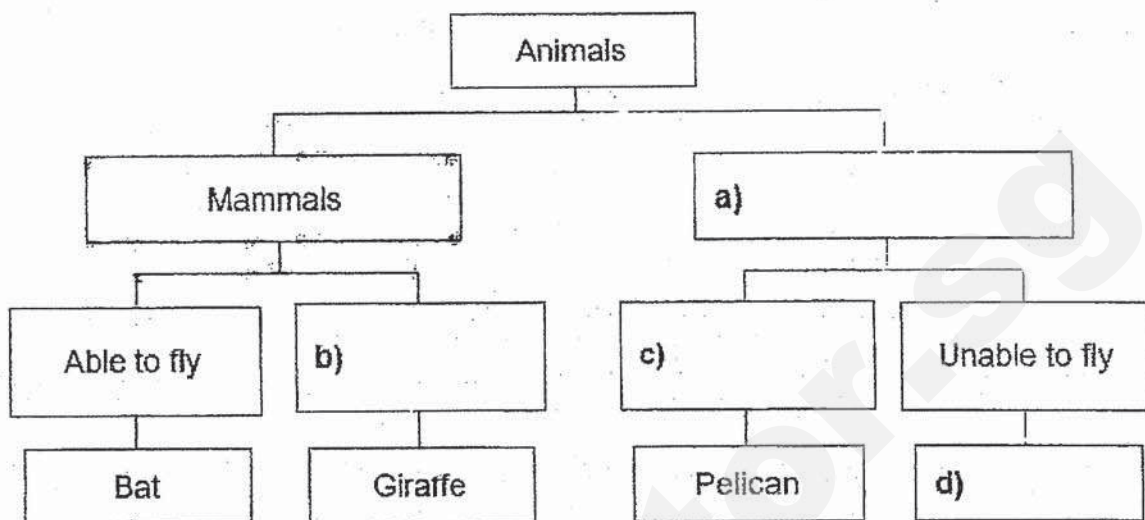
[2]

W: _____ Y: _____


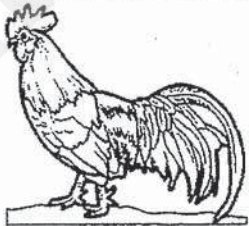
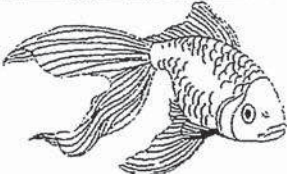

X: _____ Z: _____



22. The classification table below shows how some animals are classified.
Fill in the boxes below with suitable headings for (a), (b), (c) and a suitable example for (d). [2]



23. Write the **animal group** that each animal belongs to. [2]

	Animal	Animal Group
a)		
b)		
c)		
d)		

24. Read the following statements. Write (T) if the statement is **true** and (F) if the statement is **false** in the boxes provided.

[2]

	Statements	T or F
a)	Yeast is a type of fungi.	
b)	All types of fungi are poisonous.	
c)	Fungi are non-flowering plants.	
d)	All types of fungi are microorganisms.	

25. Mei places a magnet near object U. She observed that object U does not move when the magnet is brought near it.



Choose the correct word from the box to answer the questions below.

[2]

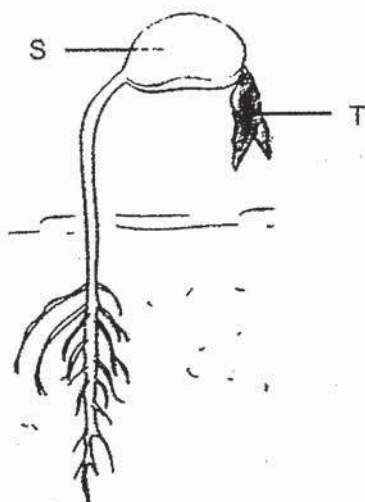
magnetic	steel	round	non-magnetic
----------	-------	-------	--------------

- a) Magnets are made of _____ material.
- b) Mei's observation shows that object U is made of _____ material.



26. The diagram below shows a young plant.

[2]

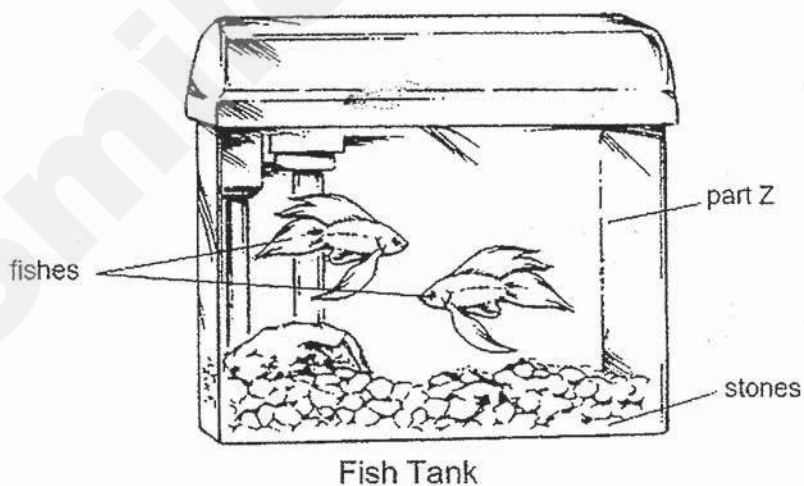


Fill in the blanks with the correct parts **S** or **T**.

a) Provides the young plant with food while it is growing.

b) Makes food for the plant when the plant grows bigger.

27. Study the diagram shown below.

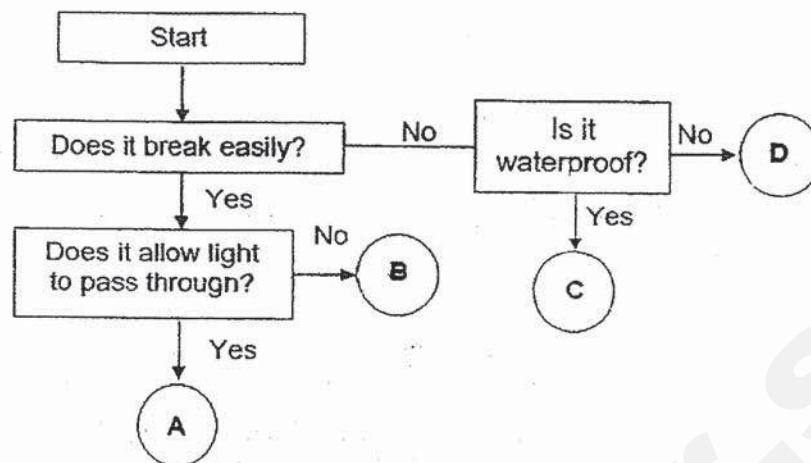


a) Name the material that part Z is made of. _____ [1]

b) Write down one useful property of the material used to make part Z of the fish tank. [1]

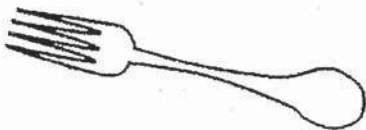


28. Study the flow chart shown below.



Classify the two objects given below into groups A, B, C or D correctly.

[2]



steel fork



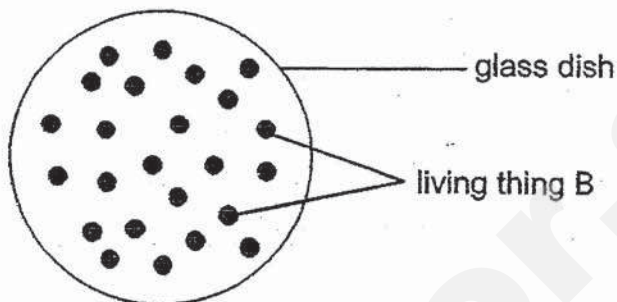
glass

End of Section B

Section C: 24 marks

Write your answers to questions 29 to 35 in the spaces given. Each question carries 2 to 4 marks.

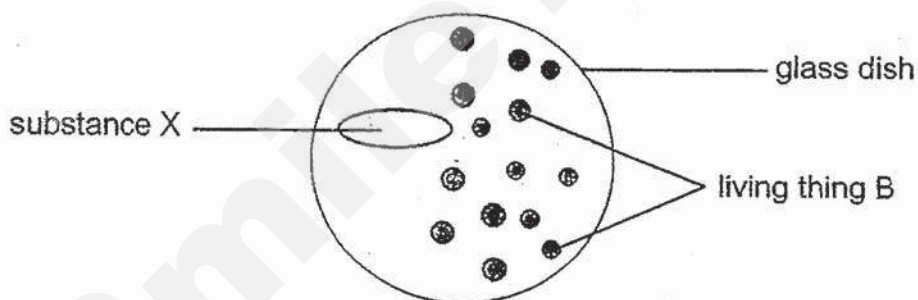
29. Dr Carl was carrying out a research on living thing B. He placed living thing B on a glass dish, as shown below.



Day 1

Dr Carl placed the glass dish in a closed cupboard and observed living thing B for 6 days. He added **substance X** to the glass dish on Day 5.

The diagram below shows what Dr Carl observed on Day 6.



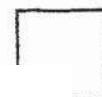
Day 6

Based on the diagrams given, state two characteristics of living things that could be observed in living thing B over the 6 days.

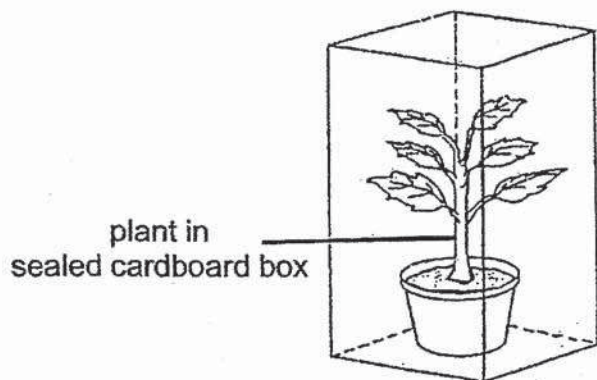
[2]

Characteristic 1 - _____

Characteristic 2 - _____

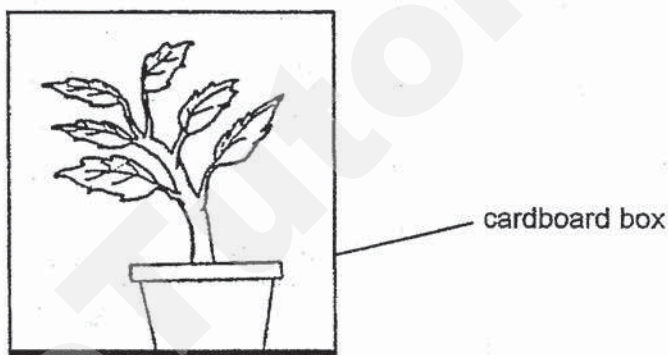


30. Ravi carried out an experiment to see how plants respond to light. He watered a potted plant before leaving it a sealed cardboard box as shown in the diagram below.

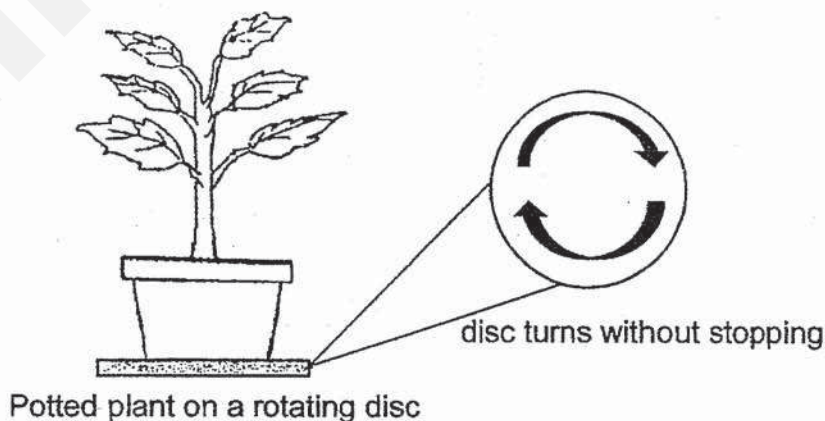


Ravi then made a hole in the cardboard box and placed it near the window. After a few days, he observed that the plant grew towards one side of the box.

- a) On the diagram below, draw a 'X' to show the position of the hole made by Ravi. [1]

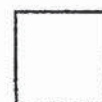


Ravi conducted another experiment using a similar plant and a cardboard box with a hole. He placed the potted plant on a rotating disc as shown in the diagram below.

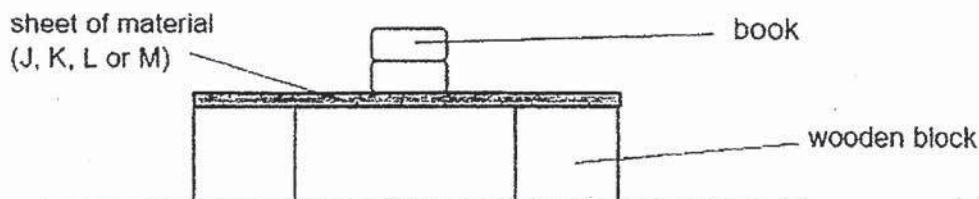


He placed the plant with the rotating disc inside the cardboard box with the hole. The disc turns without stopping.

- b) After a few days, he observed that the plant grew upright. Explain why. [2]



31. Jean wanted to carry out an experiment using different types of material, J, K, L and M. She placed some books on each material to see how many books it can hold before breaking.



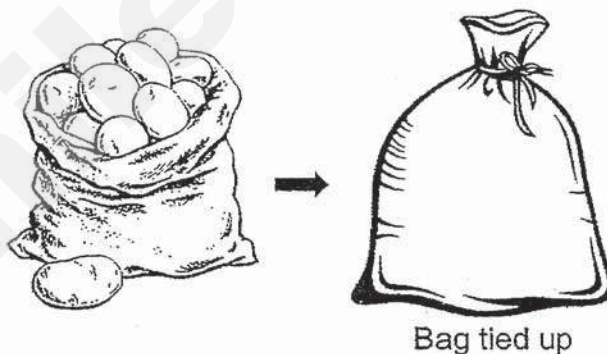
The table below shows the results of her experiment.

Material	Number of books it can hold before breaking
J	20
K	8
L	26
M	14

- a) What property was Jean testing the materials for?

[1]

Jean used one of the materials to make a bag to carry potatoes and onions. Each bag would be used to carry 10 kg of potatoes or onions.

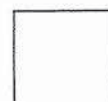


- b) Which material, J, K, L or M did Jean use? Explain your answer.

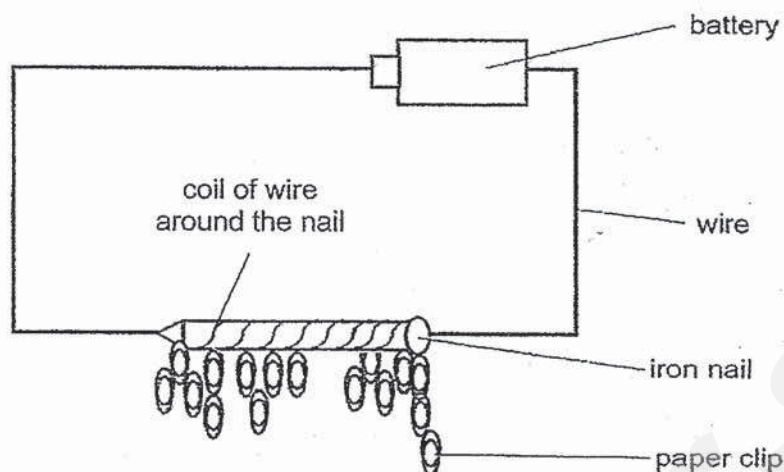
[2]

- c) Jean noticed that after the bags were tied up, she could not identify what was in each bag. Explain why.

[1]



32. Ray set up the following experiment to see how the number of coils affect the number of paper clips the iron nail can attract.



He recorded the results in the table below.

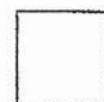
Number of coils around the iron nail	Number of paper clips attracted
8	4
10	5
14	8
18	12

- a) Based on the experiment, what happened to the number of paper clips attracted when the number of coils around the iron nail increased?

[1]

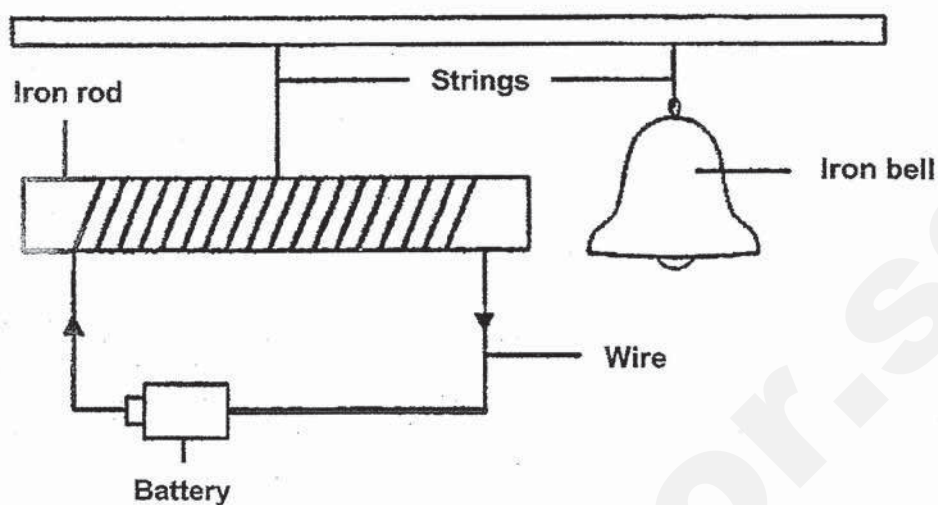
- b) Other than increasing the number of coils around the iron nail, state **another** way to increase the number of paper clips attracted.

[1]



Question 32 continued

Ray set up another experiment as shown below.



- c) Describe what happens to the following objects in this set-up when the battery is connected to the wire. [2]

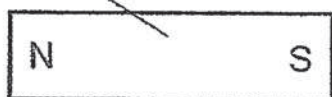
Iron rod - _____

Iron bell - _____




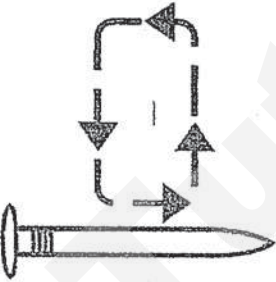
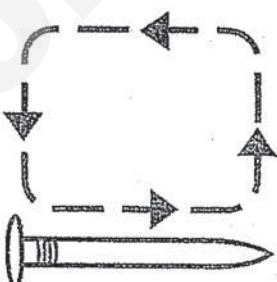
33. Devi has a bar magnet and some iron nails. She wanted to make some temporary magnets out of the iron nail using the stroking method.

bar magnet



- a) Put a tick (✓) in the box that shows the correct way of stroking the iron nail.

[1]

Method 1	Method 2	Method 3
		
<input data-bbox="261 1128 400 1227" type="checkbox"/>	<input data-bbox="671 1128 810 1227" type="checkbox"/>	<input data-bbox="1082 1128 1220 1227" type="checkbox"/>

After stroking, Devi brought the iron nail near a box of different type of pins. She observed and recorded number of pins in the box that were attracted to different parts of the iron nail.

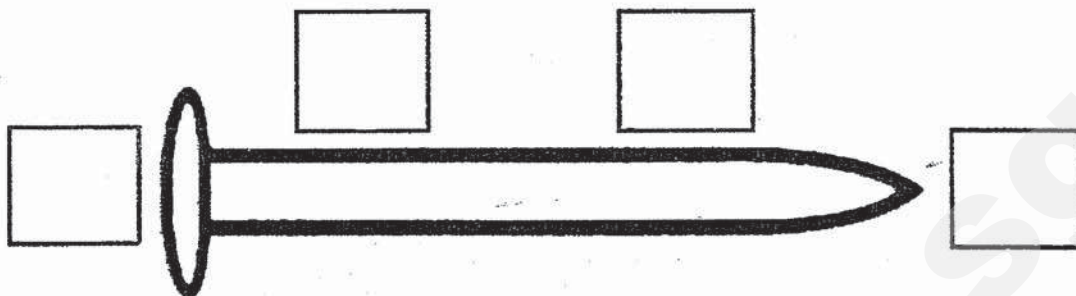
The table below shows her observations.

Part	Number of pins attracted to the iron nail
D	17
E	2
F	17
G	4



Question 33 continued

- b) Based on the results given in the table, label the different parts of the iron nail with **D**, **E**, **F** and **G**. [2]



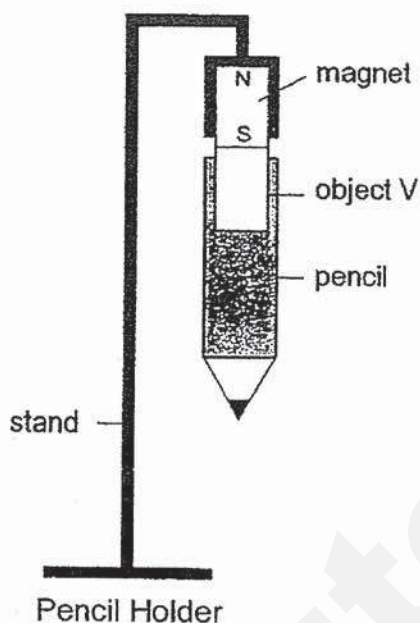
- c) Devi also noticed that **some** pins in the box were **not** attracted to the iron nail.

Give a reason for Devi's observation.

[1]



34. Lily bought a pencil holder, as shown below. The pencil is kept hanging from the stand by a magnet.



- a) What could object V most likely be made of? Give a reason for your answer.

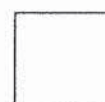
[2]

Lily bought another pencil holder. However, the pencil kept falling off after a short time.

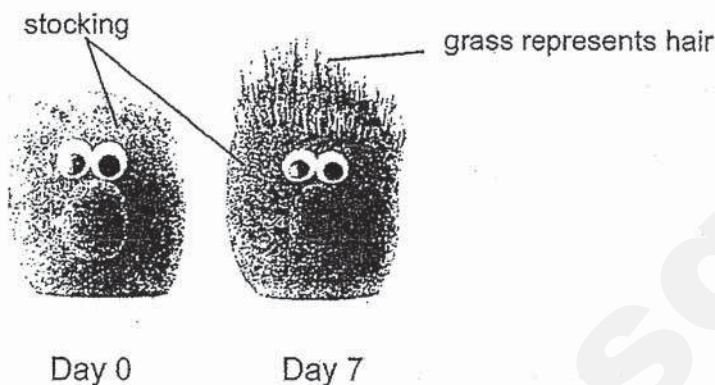
She compared and observed that both pencil holders were similar, so she concluded that the magnet in the new pencil holder is weak.

- b) Do you agree with Lily? Explain your answer.

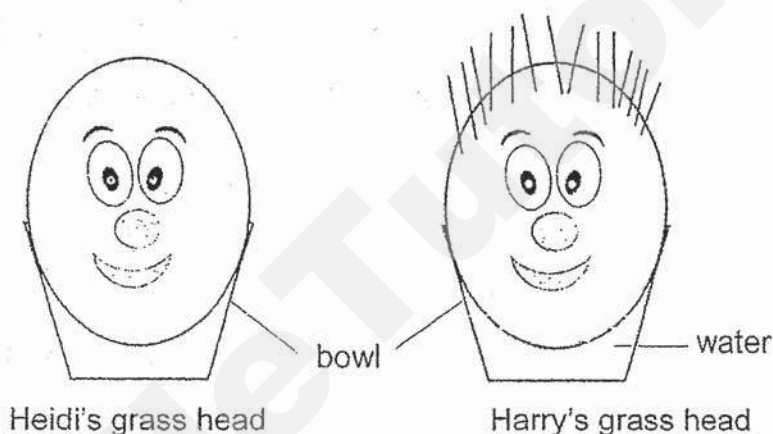
[1]



35. Grass heads, shown below, are a form of gardening project. Each head comprises of soil and seeds inside a piece of stocking. After some time, the grass will start growing out of the stocking representing hair.

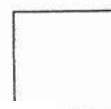


Heidi and Harry were each given a grass head as presents. After a week, Heidi's grass head did not grow any "hair" while Harry's grass head did as shown below.



- a) Based on the diagram above, what could be a possible reason why Heidi's grass head did **not** grow any hair? [1]
-
- b) Why is your answer in (a) important for Heidi's grass head to grow hair? [1]
-
- c) Explain why the grass hair growing on the head is likely to be a flowering plant. [1]
-
- d) Which stage of the life cycle of the plant does the grass hair represent? [1]
-

End of Section C



SmileTutor.sg

ANSWER KEY

YEAR : 2019
LEVEL : PRIMARY 3
SCHOOL : HENRY PARK PRIMARY SCHOOL
SUBJECT : SCIENCE
TERM : SECOND SEMESTRAL ASSESSMENT

BOOKLET A

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

BOOKLET B

Q21 W: Flower

Y: Stem

X: Leaf

Z: Root

Q22 a) Birds

b) Unable to fly

c) Able to fly

d) Penguin

Q23 a) Reptile

b) Bird

c) Fish

d) Mammal

Q24 a) T

b) F

c)F

d)F

Q25 a)magnetic material

b)non-magnetic material

Q26 a)S

b)T

Q27 a)glass

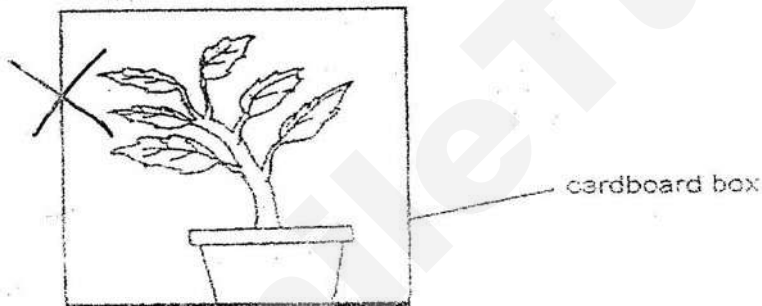
b)waterproof

Q28 C, A

Q29 1-Living things can grow

2-Living things die

Q30 a)



b)The plant is turning and all parts of the plant are receiving sunlight.

Q31 a)strength

b)Lit can hold the most number of of books before. Thus, it is the strongest and can be used to carry 10 kg of poataos or onions

c)The bag is opaque and cannot be seen through.

Q32 a)When Ray coiled more coils ground the iron nail, the strength increased.

number of paper clips
strength increased
increased.

b)Increase the number of batteries

c)Iron-rod-It will ~~become more magnetic than usual~~. magnetise.

Iron bell-The iron bell will be attracted to the iron rod.

Q33 a)Method 3

b)F G E P

c)The pins were made of non-magnetic material.

Q34 a)V could be most likely be made of a magnetic material.All magnetic materials can be attracted.

b)Yes, object V could only attracted and to the magnetic for a short time.

Q35 a)Heidi did not water the grass head

b)All living thing need water to grow.

c)Grass grew from seeds, *and not spores.*

d)Seedling



3
3/12

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MAHA BODHI SCHOOL
2019 SEMESTRAL ASSESSMENT 2
PRIMARY THREE SCIENCE
(BOOKLET A)

Name : _____ ()

Class : Primary 3 _____

Date : 1 November 2019

Total Duration for Booklets A and B: 1 h 30 min

INSTRUCTIONS TO CANDIDATES:

1. Do not turn over this page until you are told to do so.
2. Follow all instructions carefully.
3. Answer all questions.
4. Shade your answers in the Optical Answer Sheet (OAS) provided.

This booklet consists of **13** printed pages.

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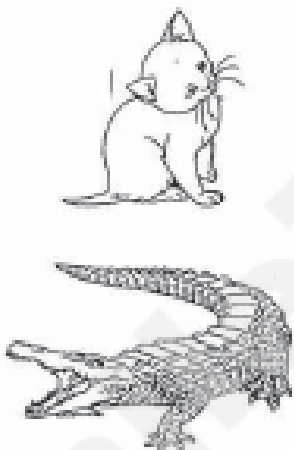

BOOKLET A : [21 x 2 marks = 42 marks]

For each question from 1 to 21, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade your answer on the Optical Answer Sheet.

1. Which of the following statements about living things is not correct?

- (1) All living things grow.
- (2) All living things respond to changes.
- (3) All living things need air, food and water to survive.
- (4) All living things reproduce by giving birth to young alive.

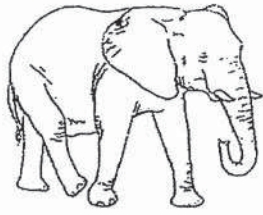
2. Study the classification table below.

Group D	Group E
	

Which one of the following pair is the correct heading for groups D and E?

	Group D	Group E
(1)	live in water	live on land
(2)	move on its own	do not move on its own
(3)	able to reproduce	do not reproduce
(4)	need food to survive	do not need food to survive

3. Study the animals J and K below.



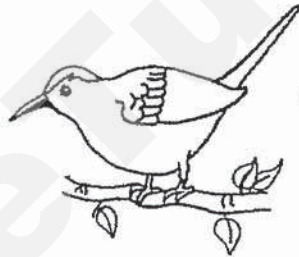
Animal J



Animal K

Which of the following statements is correct?

- (1) Both animals J and K live on both land and water.
 - (2) Both animals J and K have hair as their outer covering.
 - (3) Animal J lays eggs but animal K gives birth to its young.
 - (4) Animal J gives its young milk but animal K does not give its young milk.
4. Study the animal Q shown below.



Animal Q

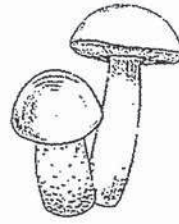
Which of the following statements below is not correct about the animal group that animal Q belongs to?

- (1) All of them can fly.
- (2) All of them have wings.
- (3) All of them have a beak.
- (4) All of them have feathers.

5. During a field trip, Mariam spotted and observed organisms Y and Z as shown below.



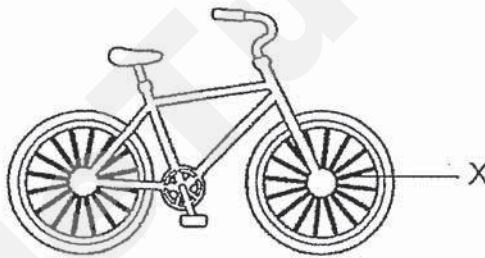
Organism Y



Organism Z

Which of the following statement is true?

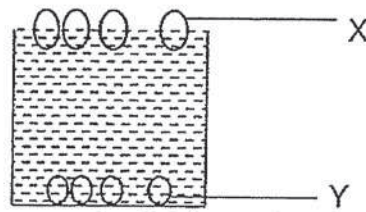
- (1) Organism Y does not make its own food.
 - (2) Organism Z is able to make its own food.
 - (3) Both organisms Y and Z reproduce by spores.
 - (4) Both organisms Y and Z are classified as fungi.
6. | The diagram below shows a bicycle. X is a part of the wheel of a bicycle.



Metal is suitable for making part X because it _____.

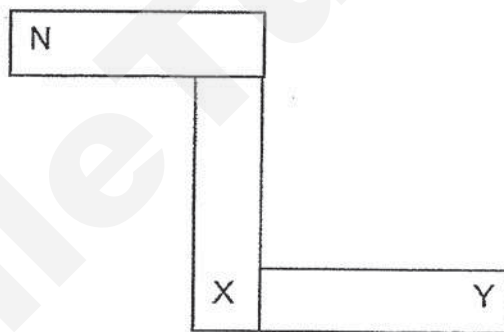
- (1) is strong
- (2) is flexible
- (3) is magnetic
- (4) can float on water

7. Kenneth placed the two materials, X and Y, in a beaker of water and made the following observations of the two materials as shown below.



Based on his observation, what property of materials X and Y was he testing?

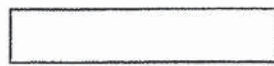
- (1) flexibility
 - (2) transparency
 - (3) ability to float or sink
 - (4) ability to absorb water
8. The diagram below shows three magnets.



Which one of the following pairs shows the correct poles for X and Y?

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

9. Jeff used a magnet and held it near three objects S, T and U which are made of different metals.



magnet



object

He moved the magnet near the object and recorded his observations in the table below. A tick (✓) shows the observation he made.

Objects	Attract	Repel
S	✓	×
T	×	×
U	✓	✓

Based on his observations above, which of the following statements is correct?

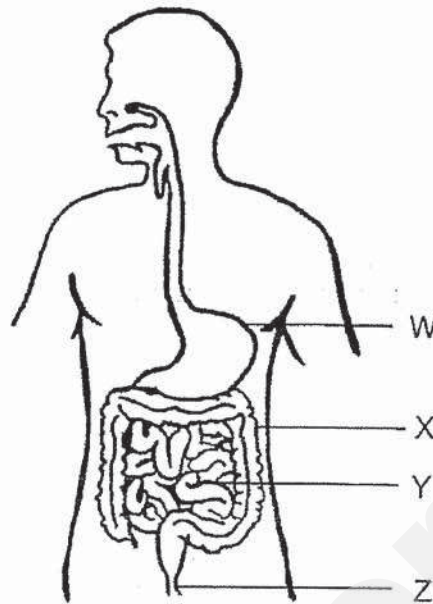
- (1) Object U is a magnet.
- (2) Object T is made of iron.
- (3) Object U is non-magnetic.
- (4) Both S and U are magnets.

10. Which two statements about the human respiratory system are correct?

- A. The heart is part of the respiratory system.
- B. The windpipe is part of the respiratory system.
- C. The respiratory system pumps blood to all parts of the body.
- D. The respiratory system helps body to take in and remove air.

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

11. The diagram below shows the human digestive system.



Part _____ is where digestion is completed.

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

12. Study the following things shown below.



police car



traffic light



telephone



grasshopper

Which of the above things does not belong to the same group as others?

- (1) police car
- (2) traffic light
- (3) telephone
- (4) grasshopper

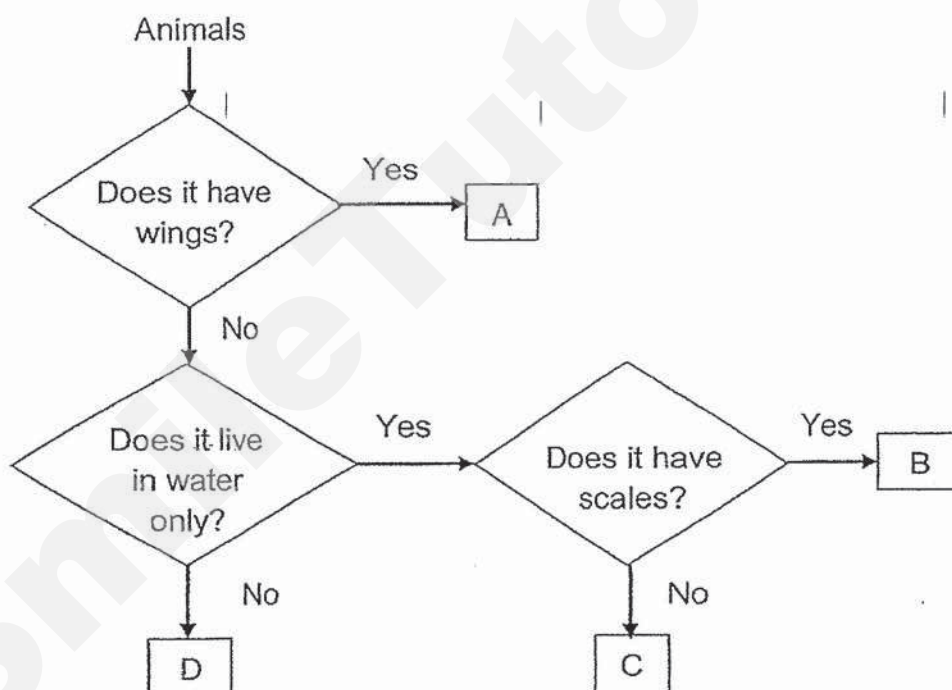
13. A pupil recorded some observations about organism X.

- It is green.
- It has spores.
- It has leaves but no flowers.
- It grows on trees and in the soil.

Which one of the following is possibly organism X?

- (1) fern
- (2) mould
- (3) mushroom
- (4) papaya plant

14. Study the flowchart below.



Based on the flowchart above, which one of the following best represents animal A, B, C and D?

	A	B	C	D
(1)	bee	frog	goldfish	dolphin
(2)	bat	goldfish	dolphin	frog
(3)	pelican	snake	seal	crocodile
(4)	frog	goldfish	dolphin	bat

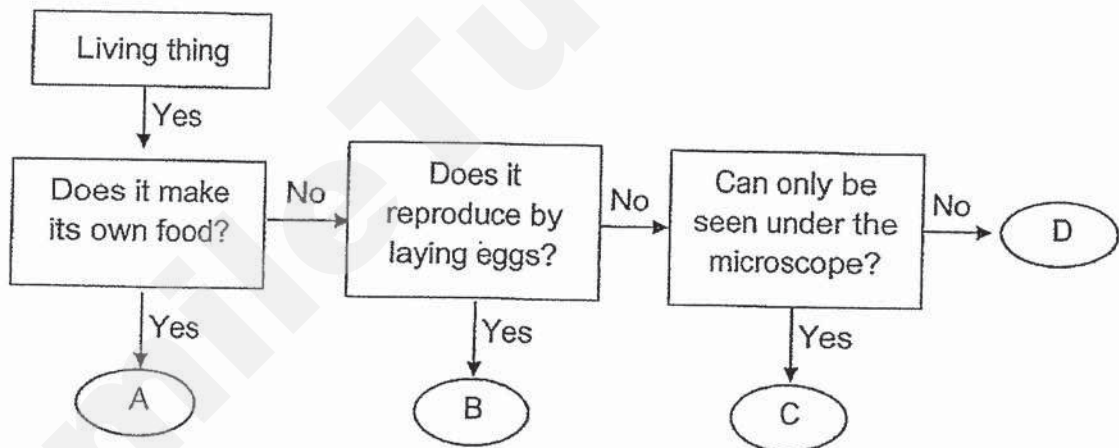
15. Study the characteristics of animals G and H shown in the table below. A tick (✓) shows that the characteristic is present.

Characteristics	Animal G	Animal H
wings	✓	✓
feathers	×	✓
three pairs of legs	✓	×

Which one of the following pairs below best represents the animal groups for animals G and H?

	Animal G	Animal H
(1)	mammal	bird
(2)	mammal	insect
(3)	insect	bird
(4)	insect	mammal

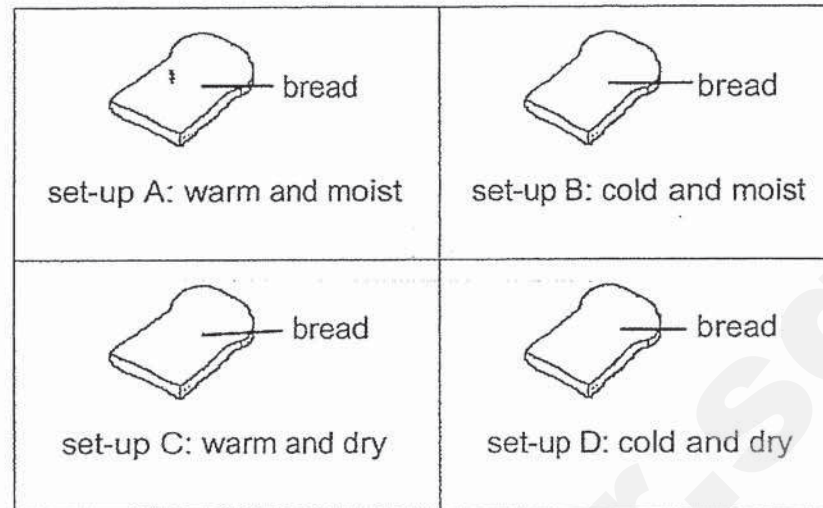
16. Study the flowchart below.



Which of the following correctly shows what A, B, C and D are?

	A	B	C	D
(1)	bacteria	plants	fungi	reptiles
(2)	fungi	reptiles	plants	bacteria
(3)	plants	bacteria	birds	fungi
(4)	plants	birds	bacteria	fungi

17. Daniel carried out an experiment using the four set-ups A, B, C and D as shown in the diagram below.



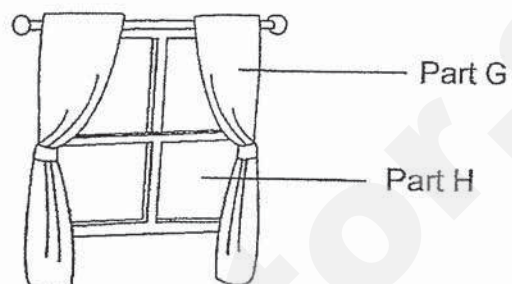
Based on his experiment, in which of the set-ups would mould be growing on the bread after one week?

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

18. The table below shows the properties of four different materials W, X, Y and Z.

Material	Strong	Flexible	Allows light to pass through
W	✓	✓	x
X	x	✓	x
Y	✓	x	✓
Z	x	✓	✓

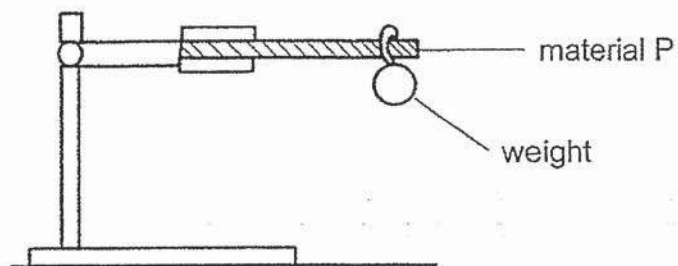
The diagram below shows a window with curtains in a bedroom.



Which of the following are suitable materials for parts G and H?

	Part G	Part H
(1)	material W	material X
(2)	material W	material Y
(3)	material X	material Y
(4)	material Y	material Z

19. Nicole conducted an experiment to find out which materials P, Q, R or T would be suitable to make a pole to hang clothes. She hung weights onto the four materials until it broke.



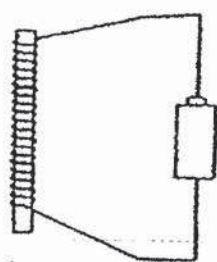
She recorded the amount of weight each material was able to hold before it broke in the table below.

Material	Amount of weight before the material broke / kg
P	2
Q	10
R	4
T	6

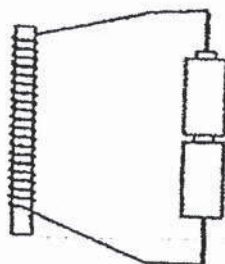
Based on the results, which material would be most suitable to make the pole to hang clothes?

- (1) P
- (2) Q
- (3) R
- (4) T

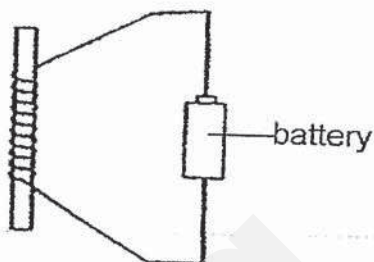
20. Andrew made three electromagnets set-ups K, L and M. He used similar batteries, iron rods and wires as shown in the diagram below.



Set-up K
20 coils



Set-up L
20 coils



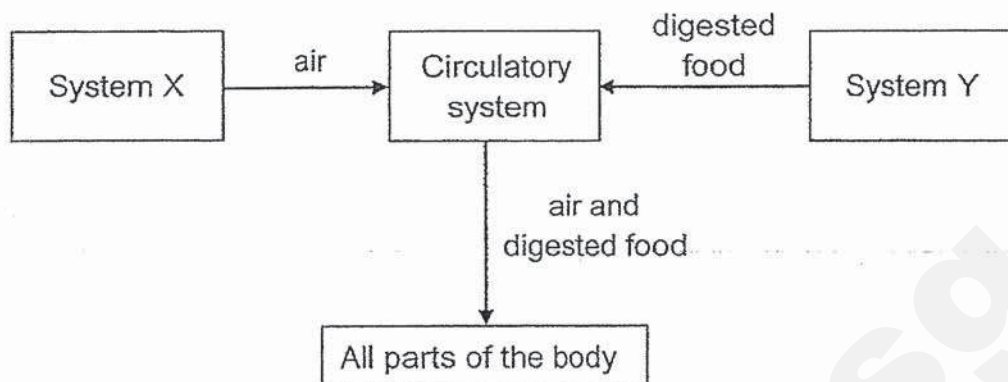
Set-up M
10 coils

He arranged set-ups K, L and M from the one that attracts the least metal clips to the one that attracts the most.

Which of the following shows the correct order of metal clips attracted in the set-ups?

	Least	→	Most
(1)	K	M	L
(2)	L	M	K
(3)	M	K	L
(4)	M	L	K

21. The flowchart shows how air and digested food are transported in the human body.



Which of the following correctly represents systems X and Y?

	System X	System Y
(1)	Circulatory	Digestive
(2)	Skeletal	Respiratory
(3)	Digestive	Circulatory
(4)	Respiratory	Digestive

END OF BOOKLET A

GO ON TO BOOKLET B



MAHA BODHI SCHOOL
2019 SEMESTRAL ASSESSMENT 2
PRIMARY THREE SCIENCE
(BOOKLET B)

Name: _____ ()

Class: Primary 3 _____

Date : 1 November 2019

Total Duration for Booklets A and B: 1 h 30 min

INSTRUCTIONS TO CANDIDATES:

1. Do not turn over this page until you are told to do so.
2. Follow all instructions carefully.
3. Answer all questions.
4. Write all your answer in this booklet.

Booklet	Marks Obtained	Max Marks
A		42
B		28
Total		70

Parent's signature: _____

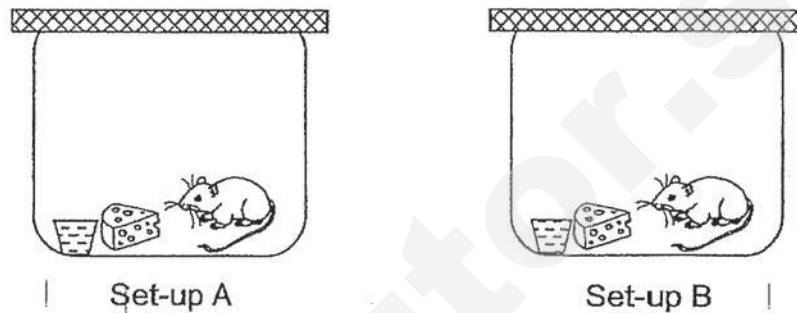
This booklet consists of 8 printed pages.

BOOKLET B : [28 marks]

For questions 22 to 29, write your answers in this booklet.

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

22. Jamie conducted an experiment over one week. He has two set-ups, A and B, as shown in the diagram below. He placed a living mouse in one set-up and a toy mouse in the other set-up. In each set-up, he placed the same amount of food and water at the beginning of the experiment.



Set-up	Amount of food / g	
	At the beginning	After 1 week
A	30	0
B	30	30

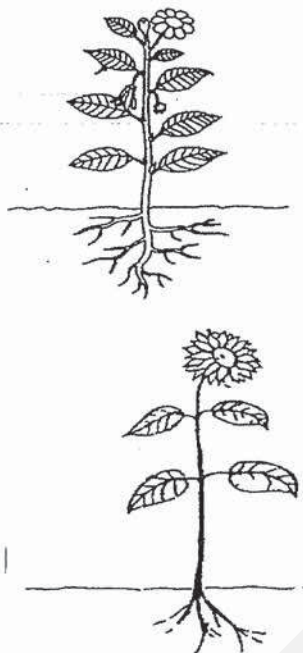

Based on the results above, which set-up, A or B, contained a living mouse?
Explain your answer.

[2]

Marks :

/ 2

23. Study the classification table.

Group P	Group Q
	

- (a) Based on the reproduction method of the plants above, give a suitable heading for groups P and Q. [2]

P: _____

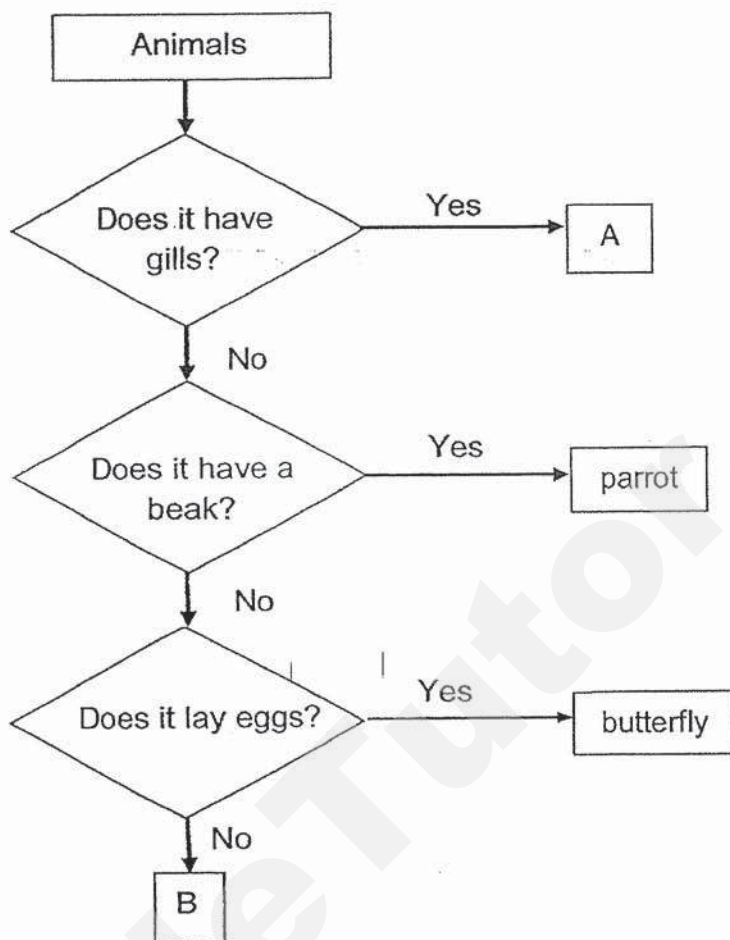
Q: _____

- (b) Which of the group of plants above, P or Q, will bear fruits? Explain your answer. [2]

Marks :

/ 4

24. Study the flowchart below.



- (a) (i) Based on the flowchart above, what is the difference between animal A and a parrot? [1]

- (ii) State the animal group for A: _____ [1]

- (b) State the animal group for animal B. Explain your answer. [1]

Marks :

/ 3

25. Study the table below. It shows the characteristics of animals M, N, P and Q. A tick (✓) shows that the characteristic is present.

Animals	Characteristics		
	has scales	lives in water	has wings
M	✓	x	x
N	x	✓	x
P	✓	✓	x
Q	x	x	✓

- (a) Animal M is an insect. Explain if the statement is correct or incorrect. [1]

- (b) Match the animals above, M, N, P and Q, to the correct animals below. Write M, N, P and Q in the boxes below. [2]

Animals	M, N, P and Q
goldfish	
whale	
snake	
penguin	

Marks : / 3

26. Samuel conducted an experiment to find out the properties of material J, K, L and M. The results are shown in the table below.

Properties	Material			
	J	K	L	M
able to float	No	Yes	No	Yes
able to bend	Yes	Yes	Yes	Yes
waterproof	No	Yes	Yes	No

- (a) State one property that is similar to all of the materials. [1]

- (b) The swimming float below helps the boy to stay afloat in water.



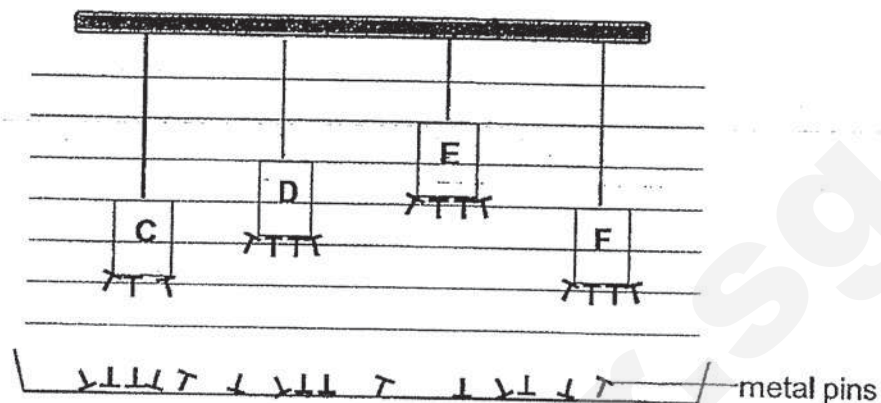
- (i) Which material J, K, L or M is the best to make the swimming float? [1]

- (ii) Explain your answer in (i). [2]

Marks :

/ 4

27. John wanted to find out which magnet is the strongest. He hung four different magnets C, D, E and F above a tray of metal pins. The results are shown below.



- (a) State the property of the metal pins which allowed them to be attracted by the magnets. [1]

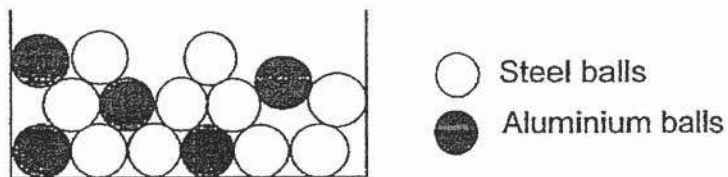
- (b) Arrange the magnets from the strongest to the weakest. Fill in the boxes below with letters C, D, E and F. [2]

strongest → weakest			

- (c) What can be done to magnet C in order for it to attract the same number of pins as the other magnets? [1]

Marks : / 4

28. Ethan mixed different types of metal balls in a container as shown below.



He was given a U-shaped magnet labelled, H and K as shown below.



- (a) Which part of the magnet, H or K, should he use to attract the most number of metal balls? Explain your answer. [1]

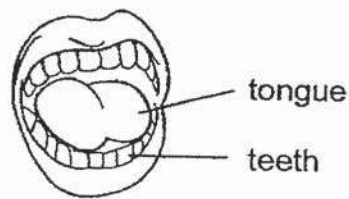
- (b) (i) Using the U-shaped magnet, explain how Ethan can separate the steel balls from the aluminium balls. [2]

- (ii) Which balls, steel or aluminium, could be turned into a magnet? Give a reason your answer. [1]

Marks :

/ 4

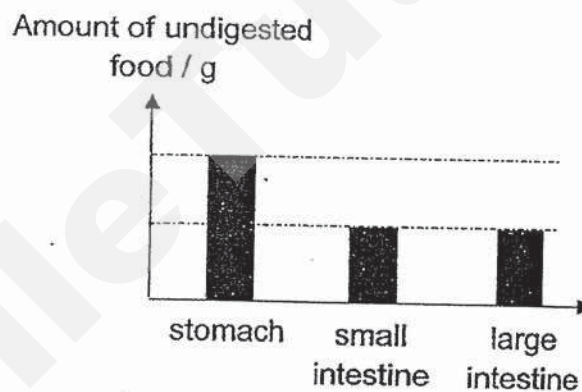
29. The diagram below shows a mouth.



- (a) Tick (✓) in the table below two possible ways how mouth helps in the digestion of food. [2]

(i)	Teeth produce digestive juices.	
(ii)	Food is chewed into smaller pieces.	
(iii)	Saliva moistens and softens the food.	

- (b) The graph below shows the amount of undigested food in the stomach, small intestine and large intestine.



Based on the graph, explain the change in the amount of undigested food from the stomach to the small intestine and large intestine. [2]

Marks :

/ 4

~ END OF PAPER ~

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ANSWER KEY

YEAR : 2019
LEVEL : PRIMARY 3
SCHOOL : MAHA BODI SCHOOL
SUBJECT : SCIENCE
TERM : SA2

BOOKLET A

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

BOOKLET B

Q22 Set-up A. The amount of fod after 1 week was lesser, Living things need food to live.

Q23 (a)P: by seeds

Q: by spores

(b)P. They are flowering plant as flowering plants bear fruits.

Q24 (a)(i)Animal A have gills but the parrot does not.

(ii)Fish

(b)Mammals.Mammals do not have gills, a beak, and does not lay eggs

Q25 (a)Animal A is not insect because insects have no scales.

(b) P

N

M

Q

/

Q26 (a)The ability to bend.

(b)(i)K

(ii)A float must be able to float, and must be waterproof so that the user can sit on it.

Q27 (a)The metal pins are made out of a magnetic material.

(b)E D F C

(c)Make the string longer for magnet C.

Q28 (a)H. It is the pole of the magnet. A magnet is strongest at its poles.

(b)(i)Use the magnet to attract the steel balls. Steel is a magnetic material.

(ii)Steel. It is a magnetic material.

Q29 (a)

(ii)Food is chewed into smaller pieces ✓

(iii)Saliva moisten and softens the food ✓

(b)Amount of undigested food in the small intestine decreased from the amount of undigested food in the stomach as food is digested in small intestine. Amount of undigested food remained the same between small and large intestine as no digestion takes place in large intestine.

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MARIS STELLA HIGH SCHOOL (PRIMARY)

SA2 EXAMINATION

SCIENCE

31 OCTOBER 2019

BOOKLET A

NAME: _____ ()

CLASS: Primary 3 ()

24 questions

48 marks

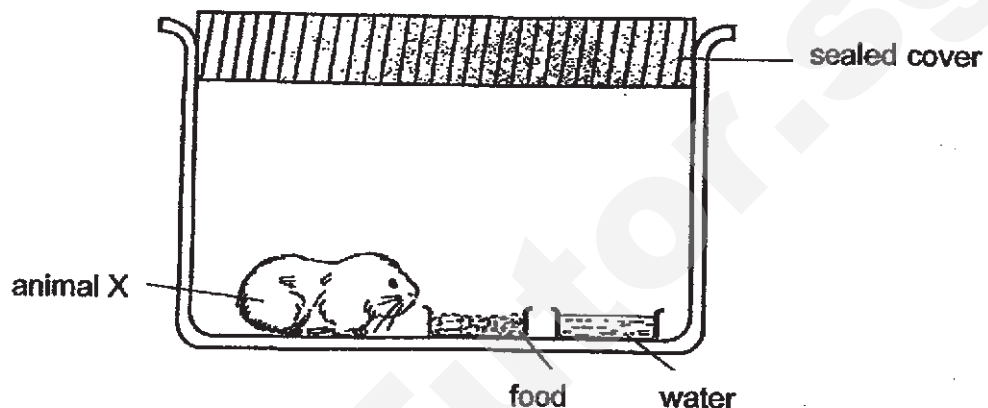
Total Time for Booklets A & B: 1 h 30 min

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

FOLLOW ALL INSTRUCTIONS CAREFULLY.

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

- 1 The diagram below shows animal X in a container.



Animal X died after 3 days.

Which of the following characteristics of living things does the observation show?

- (1) Living things grow.
 - (2) Living things reproduce.
 - (3) Living things need air to survive.
 - (4) Living things need food and water to survive.
- 2 Which one of the following characteristics allows you to confirm that a fish is a living thing?
- (1) It moves.
 - (2) It lays eggs.
 - (3) It is found in water.
 - (4) It responds to changes.

3 The statements below describe the characteristics of organism Y.

- It has lungs.
- It lays eggs on land.
- It has scales on its body.

Which animal group does organism Y belong to?

- (1) fish
- (2) bird
- (3) reptile
- (4) amphibian

4 The pictures below show two organisms.



mushroom



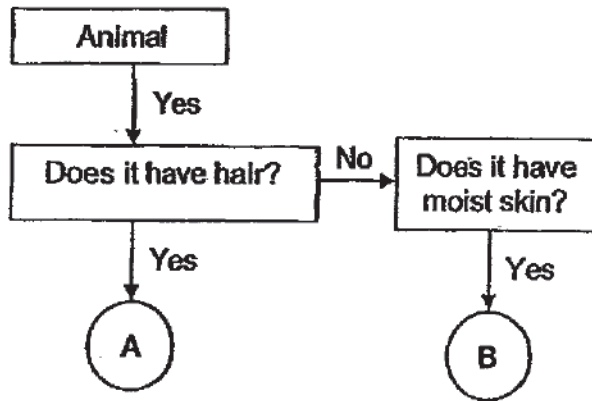
bird's nest fern

What do the two organisms have in common?

- (1) Both produce flowers.
- (2) Both cannot make food.
- (3) Both need light to survive.
- (4) Both reproduce from spores.

(Go on to next page)

5 Study the flowchart below.



Which of the following correctly identifies A and B?

	A	B
(1)	insect	amphibian
(2)	mammal	amphibian
(3)	mammal	fish
(4)	amphibian	reptile

6 Which of the following is an insect?



(1)



(2)



(3)



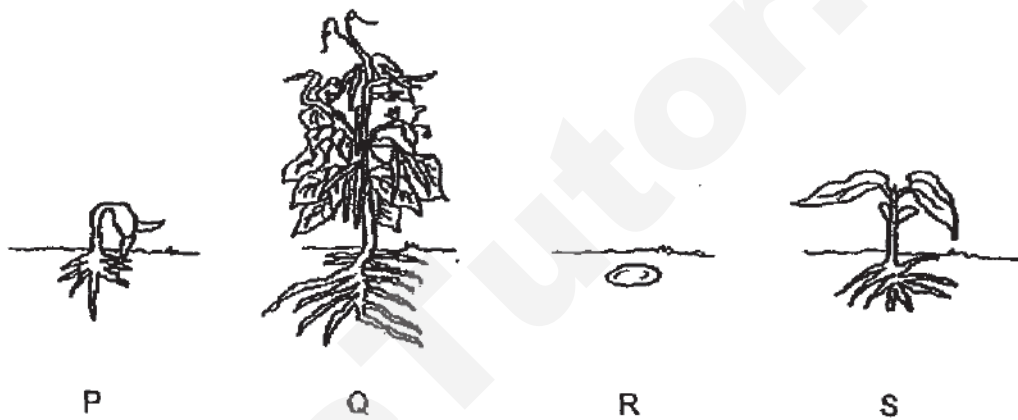
(4)

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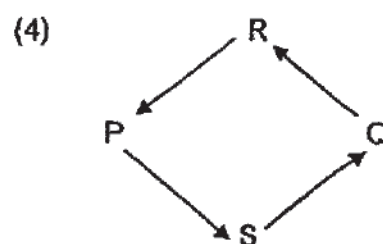
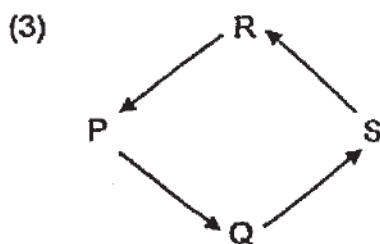
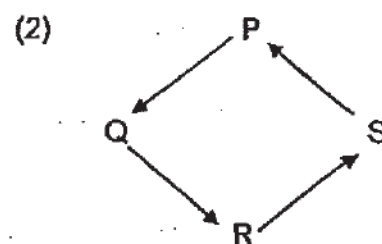
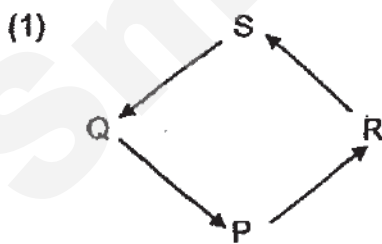
7 Which of the statements is true about bacteria?

- (1) Bacteria will not die.
- (2) Bacteria cannot reproduce.
- (3) Some bacteria are useful to human beings.
- (4) All bacteria can be seen without the microscope.

8 P, Q, R and S represent different stages in a life cycle of plant P.

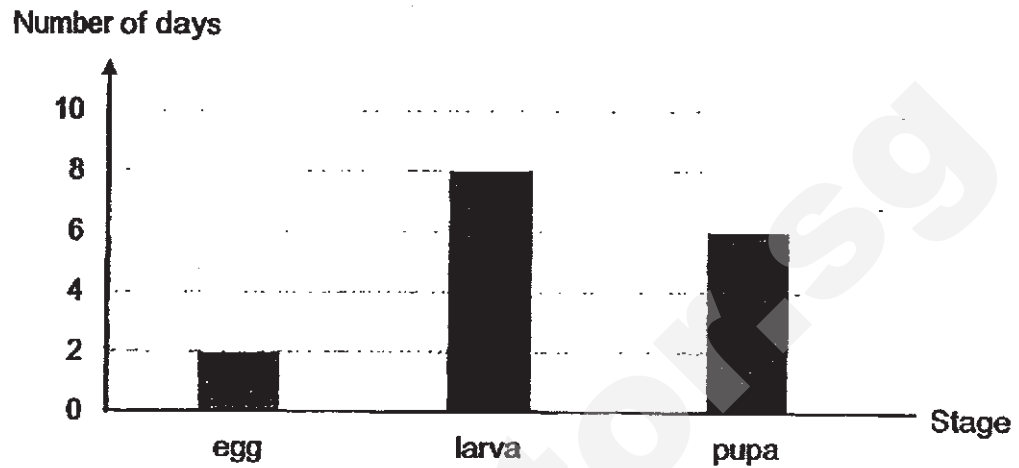


Which of the following life cycles shows the correct order of stages for plant P?



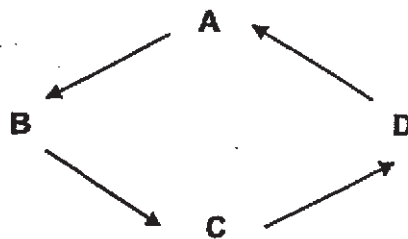
(Go on to next page)

- 9 Jack studied the duration of three stages in the life cycle of insect X. He recorded his observations in the graph below.



Based on the graph, how many days did it take for insect X's egg to hatch?

- (1) 0
 - (2) 2
 - (3) 6
 - (4) 8
- 10 A, B, C and D represent the different stages in the life cycle of a butterfly.

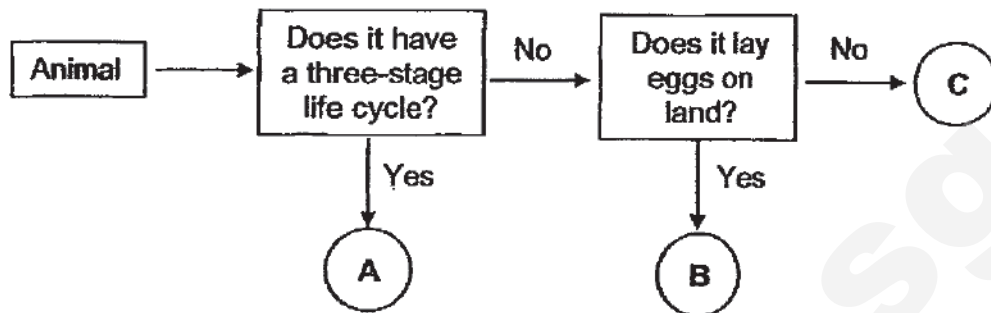


If B represents the adult stage, what stage does D represent?

- (1) egg
- (2) larva
- (3) pupa
- (4) nymph

(Go on to next page)

- 11 Study the flow chart below.



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

	A	B	C
(1)	grasshopper	beetle	mosquito
(2)	frog	mosquito	beetle
(3)	beetle	mosquito	grasshopper
(4)	grasshopper	beetle	frog

- 12 Jane studied four animals, E, F, G and H. She recorded her observation of the animals in the table below.

	E	F	G	H
lays eggs in water	✓			✓
young looks like its adult		✓	✓	
four-stage life cycle	✓		✓	

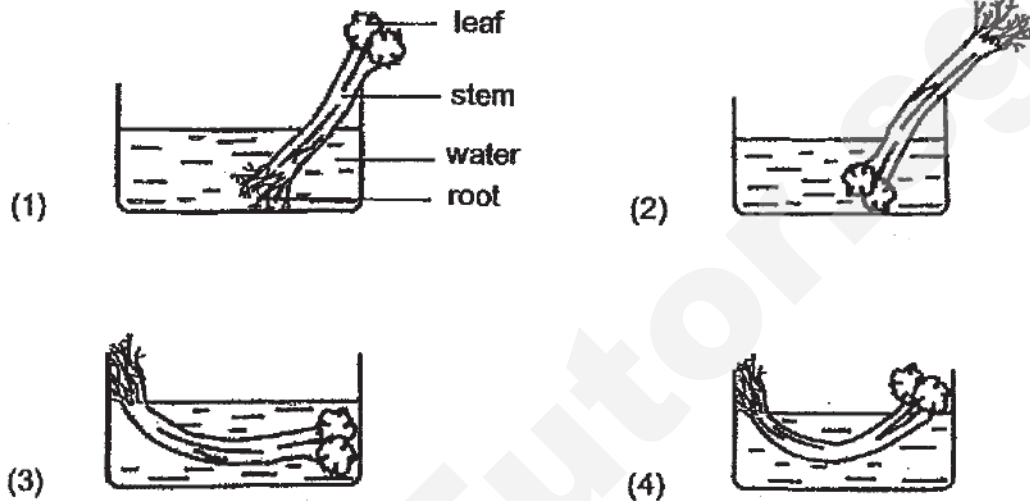
Which of the following animal is most likely a chicken?

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

(Go on to next page)

- 13 Ho Jing told his friend that placing a wilted stalk of celery plant in water would make it 'fresh' again as the celery plant will take in water.

Which of the following set-ups would make the wilted celery plant 'fresh' again?



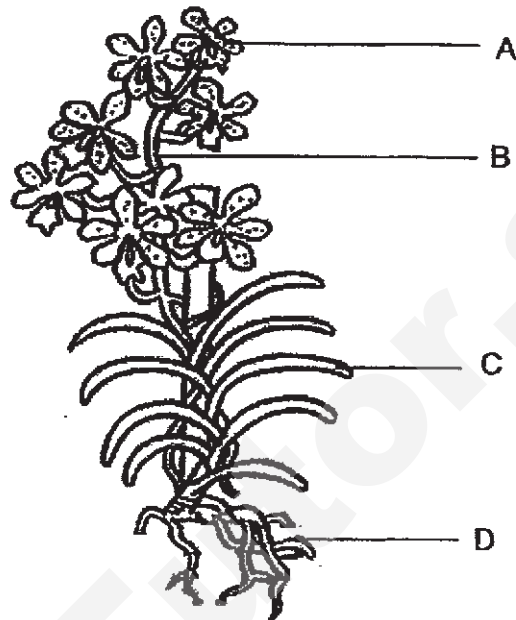
- 14 In which of the following parts are digestive juices produced?

- A gullet
- B mouth
- C stomach
- D large intestine

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

(Go on to next page)

- 15 The picture below shows a plant.



What of the following correctly identifies the different parts of the plant?

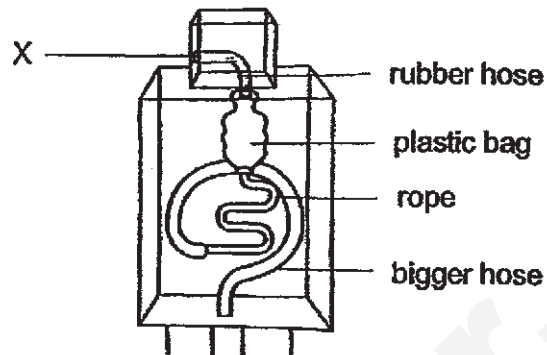
	A	B	C	D
(1)	flower	leaf	stem	root
(2)	flower	stem	leaf	root
(3)	root	leaf	stem	flower
(4)	leaf	root	flower	stem

- 16 Which one of the following systems gives shape to the human body?

- (1) skeletal system
- (2) muscular system
- (3) circulatory system
- (4) respiratory system

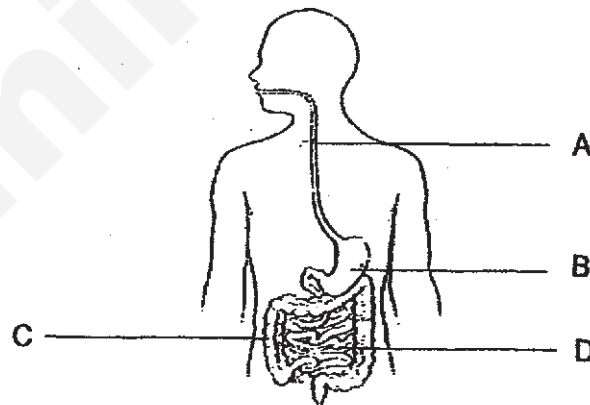
(Go on to next page)

- 17 The diagram below shows a model of the human digestive system.
X represents the mouth.



Which of the following represents the part of the digestive system where digested food is absorbed into the bloodstream?

- (1) rope
 - (2) plastic bag
 - (3) rubber hose
 - (4) bigger hose
- 18 The diagram below shows the human digestive system.

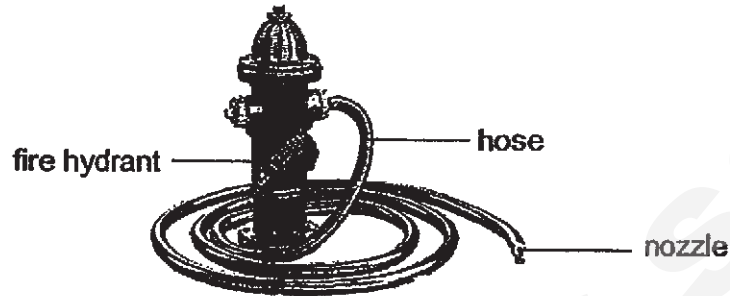


Which part of the system, A, B, C or D, absorbs water from undigested food?

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

(Go on to next page)

- 19 The picture below shows a hose that is connected to a fire hydrant. Water from the fire hydrant moves through the hose and comes out through the nozzle.



Which of the following properties of the hose allows it to help put out fire?

- A It is flexible.
 - B It is waterproof.
 - C It floats on water.
- (1) A only
- (2) B only
- (3) A and B only
- (4) A, B, and C
- 20 Some items are classified into groups X and Y.

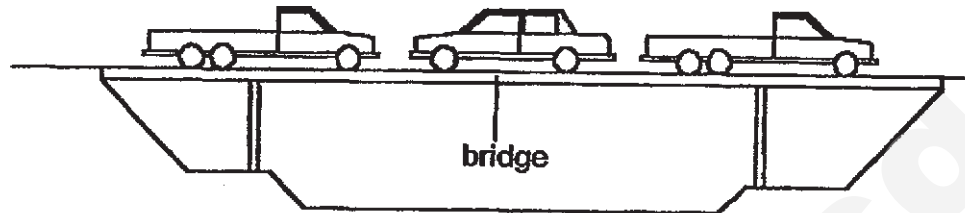
X	Y
plastic bag rubber band cotton blouse	glass tank steel ruler ceramic cup

Which of the following shows the headings represented by X and Y?

	X	Y
(1)	flexible	stiff
(2)	absorbent	waterproof
(3)	floats on water	sinks in water
(4)	allows light to pass through	does not allow light to pass through

(Go on to next page)

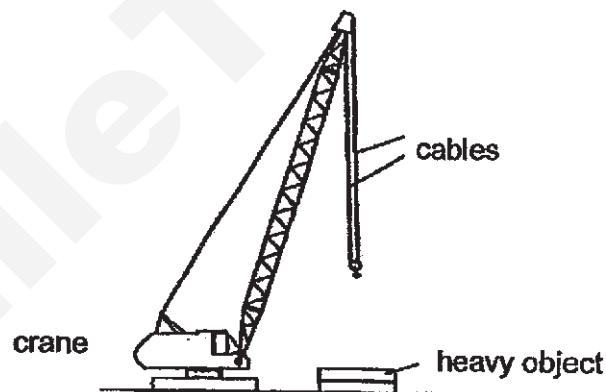
- 21 The diagram shows a bridge.



Iron is used to make the bridge because iron is _____.

- (1) shiny
- (2) strong
- (3) flexible
- (4) transparent

- 22 Cables are used in a crane to lift heavy objects.



Which of the following shows the material the cables are most likely made of and the reason why the material is suitable?

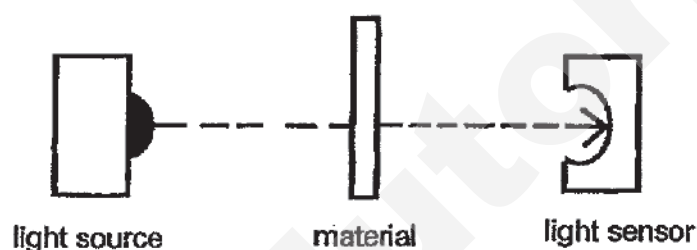
	Material of cable	Reason
(1)	metal	strong to withstand heavy weight
(2)	rubber	able to stretch to reach the object
(3)	wood	stiff to prevent object from swinging
(4)	plastic	light to prevent the crane from falling over

(Go on to next page)

- 23 Maggie wanted to find out which material, K, L, M or N, is most suitable to make part X of the light bulb as shown below.



She sets up her experiment as shown below.



The table below records the amount of light detected by the light sensor when the different materials were placed between the light source and light sensor.

Material	Amount of light detected (units)
None	500
K	9
L	120
M	0
N	490

Which material is most suitable to make part X of the light bulb?

- (1) K
- (2) L
- (3) M
- (4) N

(Go on to next page)

- 24 Four solid objects made of materials, A, B, C and D, are placed in a container of water. Diagram 1 shows the observation made.

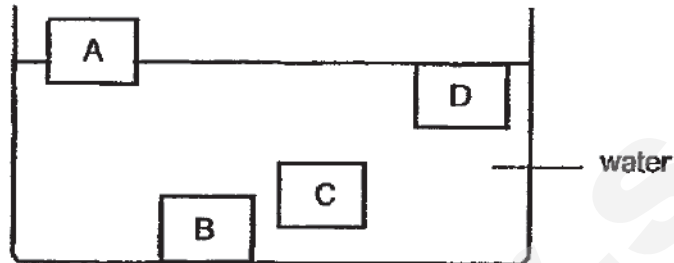


Diagram 1

Which material is most suitable for making the swimming board in Diagram 2?



Diagram 2

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

END OF BOOKLET A

Go on to Booklet B



MARIS STELLA HIGH SCHOOL (PRIMARY)

SA2 EXAMINATION

SCIENCE

31 OCTOBER 2019

BOOKLET B

NAME: _____ ()

CLASS: Primary 3 ()

10 questions

32 marks

Total Time for Booklets A & B: 1 h 30 min

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

FOLLOW ALL INSTRUCTIONS CAREFULLY.

Booklet A: _____ / 48

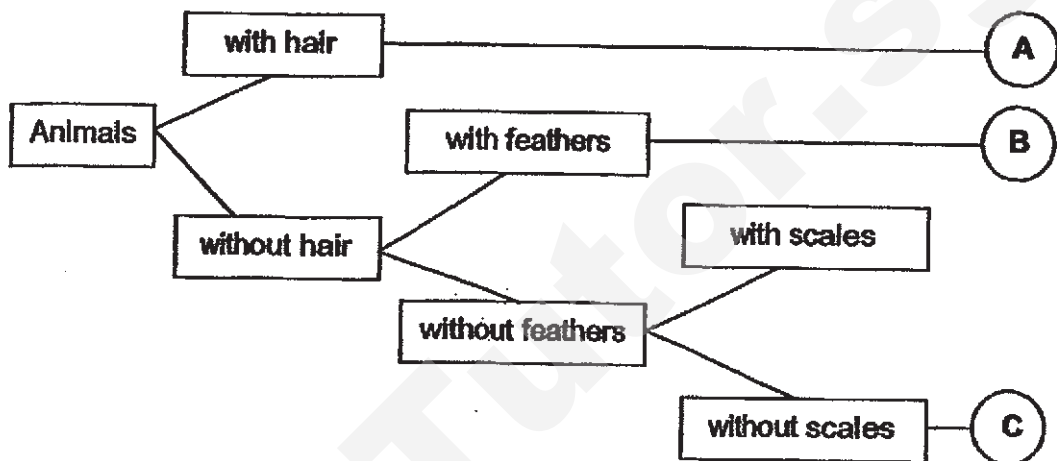
Booklet B: _____ / 32

Grand Total: _____ / 80

Parent's Signature: _____

For questions 25 to 34, write your answers in this booklet. The number of marks available is shown in brackets [] at the end of each question or part question. (32 marks)

25 Study the chart below.



- (a) Other than the characteristic mentioned in the chart above, state another characteristic of animal A. [1]

- (b) Which animal group do animals B and C belong to? [2]

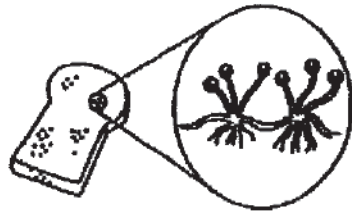
B : _____

C : _____



(Go on to the next page)

26 The pictures below show two living things, X and Y.



X



Y

- (a) Which of the following groups should X and Y be classified under? [2]

Flowering plants	Non-flowering plants	Fungi	Bacteria
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X: _____

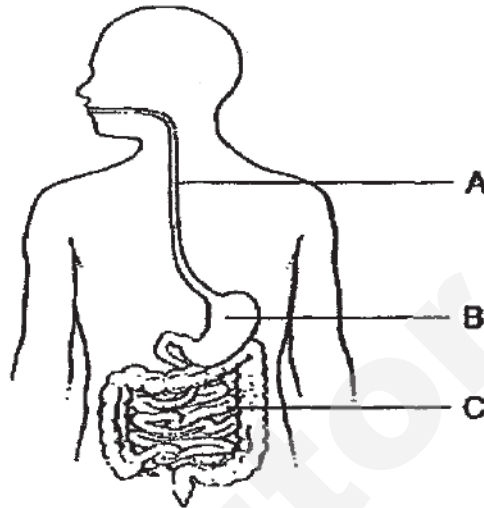
Y: _____

- (b) State a difference between X and Y. [1]

	3
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(Go on to the next page)

- 27 The diagram below shows the human digestive system.



- (a) Name parts A and B.

[2]

A: _____

B: _____

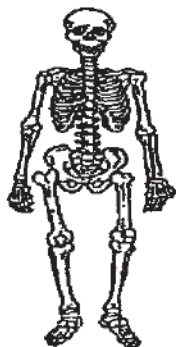
- (b) State a common function of parts B and C.

[1]



(Go on to the next page)

28 The diagrams below show three different systems in the human body.



A



B



C

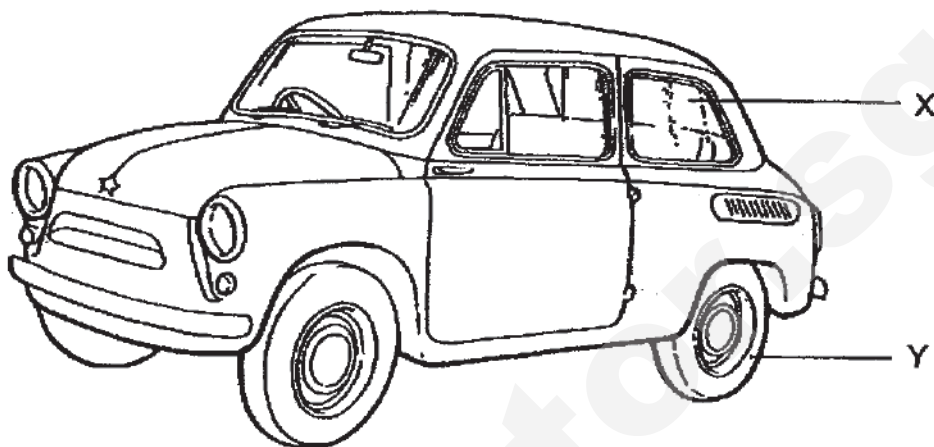
Read the statements carefully. Put a tick (✓) in the appropriate boxes. [3]

	Statements	True	False
(a)	System A supports our body and gives it shape.	<input type="checkbox"/>	<input type="checkbox"/>
(b)	System B breaks down food into simpler substances.	<input type="checkbox"/>	<input type="checkbox"/>
(c)	System C takes in and removes air from the body.	<input type="checkbox"/>	<input type="checkbox"/>

	3
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(Go on to the next page)

- 29 The picture below shows a car.



- (a) Which of the materials listed below are used to make parts X and Y of the car? Match the materials to parts X and Y. [1]

Material	Part
glass	
rubber	

- (b) State two important properties of rubber that makes it suitable to make the part chosen in (a). [2]
- _____



(Go on to the next page)

- 30 The table below shows properties of three different materials A, B and C.

Property \ Material	A	B	C
flexible	✓		✓
able to absorb water		✓	✓
allows light to pass through	✓	✓	

- (a) List all the properties of material B. [1]

- (b) State one difference between materials A and B. [1]

- (c) Which material, A, B or C, is most suitable to make a PE t-shirt?
Explain your answer. [2]

	4
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(Go on to the next page)

- 31 The table below shows the characteristics of animals X, Y and Z.

Animal	Number of stages in life cycle	Number of legs
X	3	8
Y	4	6
Z	3	6

- (a) Which animal, X, Y or Z, is most likely a cockroach? [1]

- (b) State the characteristic of the animal that helped you answer (a). [1]

- (c) State one similarity and one difference between animals Y and Z. [2]

Similarity: _____

Difference: _____

	4
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(Go on to the next page)

- 32 The arrows (\longrightarrow) in the diagram show the movement of a substance in plants.

roots \longrightarrow X \longrightarrow leaves

- (a) Name plant part X. [1]

- (b) What is the substance that moves from the roots to the leaves? [1]

- (c) What do the leaves of the plant make when light is present? [1]

- (d) Draw arrows (\rightarrow) in the diagram below to complete the life cycle of a flowering plant. [1]

young plant

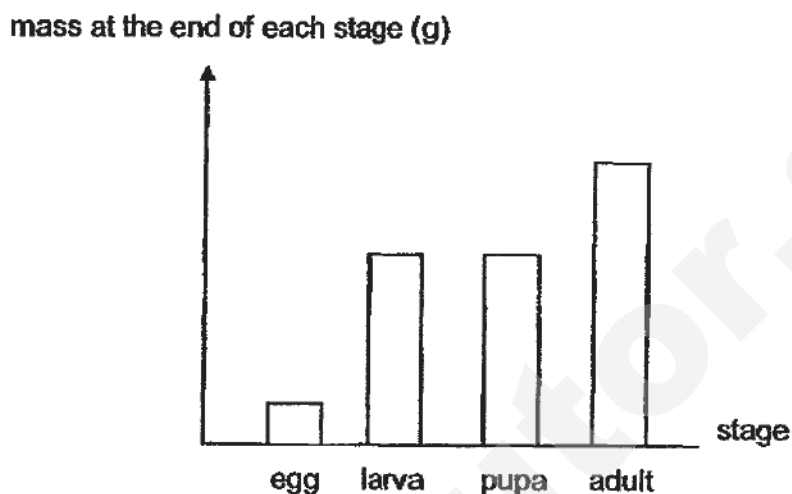
adult plant

seed

4

(Go on to the next page)

- 33 The graph below shows the mass of animal X at the end of each stage of the life cycle.



- (a) At which stage is there no change in the mass of animal X? [1]

- (b) Explain why there is no change in the mass of animal X in the stage named in (a). [1]

- (c) What could animal X be? Tick in the correct box(es). [1]

☐

beetle

☐

mosquito

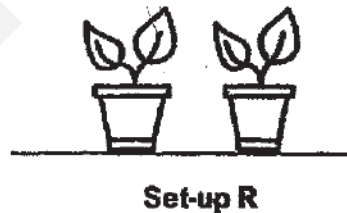
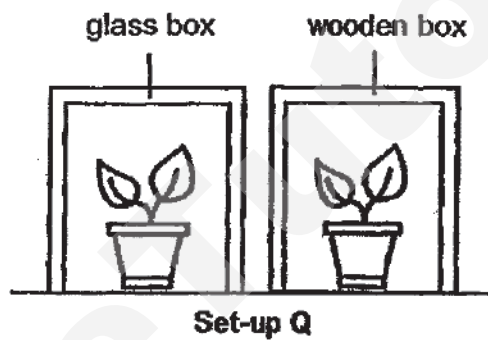
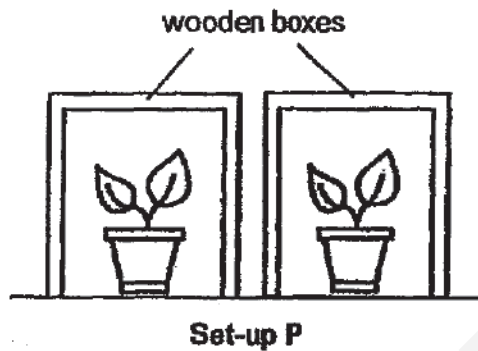
☐

cockroach

	3
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(Go on to the next page)

- 34 Melinda wants to find out if plants need light to grow.



Which set-up, P, Q or R, should she use for her experiment? Explain why. [2]

END OF BOOKLET B

	2
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SCHOOL : MARIS STELLA PRIMARY SCHOOL

LEVEL : PRIMARY 3

SUBJECT : SCIENCE

TERM : 2019 SA2

SECTION A

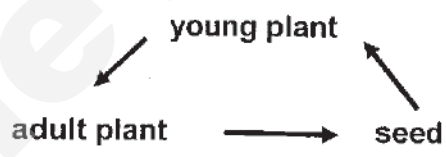
Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
3	2	3	4	2	3	3	4	2	2

Q 11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
1	2	1	2	2	1	1	3	3	1

Q 21	Q22	Q23	Q24
2	1	4	1

SECTION B

Q25)	a) Give birth to young alive. b) B : birds C : amphibians
Q26)	a) X : Fungi Y : Flowering plants b) Y can make its own food but X cannot make its own food.
Q27)	a) A : gullet B : stomach b) Both parts B and C secrete digestive juices into the food and break down the food into smaller substances.
Q28)	a) True b) False

	c)False
Q29)	<p>a) glass : X</p> <p>rubber : Y</p> <p>b)Flexible, waterproof</p>
Q30)	<p>a)Material B is able to absorb water, allows light to pass through and it is not flexible.</p> <p>b)Material A is flexible but material B is not flexible.</p> <p>c)Material C. Material C is flexible and it is able to absorb water a PE t-shirt must be able to absorb water and it also must be flexible.</p>
Q31)	<p>a)Animal Z</p> <p>b)It has six legs</p> <p>c) Similarity : Both animal Y and Z have six legs.</p> <p>Different : Animal Y has a four stage life cycles but animal Z has three stage life cycles.</p>
Q32)	<p>a)Stem</p> <p>b)Water</p> <p>c)The leaves make food.</p> <p>d)</p> 
Q33)	<p>a)pupa</p> <p>b)The pupa stage does not eat.</p> <p>c)beetle</p>
Q34)	Set up Q. Glass allows light to pass through but wood does not.

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METHODIST GIRLS' SCHOOL

Founded in 1887



END-OF-YEAR EXAMINATION 2019
PRIMARY 3
SCIENCE

BOOKLET A

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

INSTRUCTIONS TO CANDIDATES

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

Follow all instructions carefully.

Answer all questions.

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

Name: _____ ()

Class: Primary 3. _____

Date : 22 October 2019

This booklet consists of 16 printed pages including this page.

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For each question from 1 to 28 four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval on the Optical Answer Sheet (OAS). [56 marks]


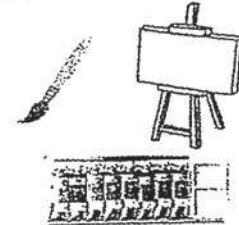
- 1 Kevin found three things, R, S and T, in his house. He observed them for a month and stated their characteristics as shown in the table below.

Characteristics	R	S	T
• Able to grow	No	Yes	Yes
• Able to make its own food	No	Yes	No
• Able to respond to changes	Yes	Yes	Yes
• Able to move from place to place	No	No	Yes

Based on the information given above, which of the following represents R, S and T correctly?

	R	S	T
(1)	remote control car	coconut tree	caterpillar
(2)	caterpillar	coconut tree	remote control car
(3)	remote control car	caterpillar	coconut tree
(4)	coconut tree	remote control car	caterpillar

- 2 Look at the objects in the two groups below.

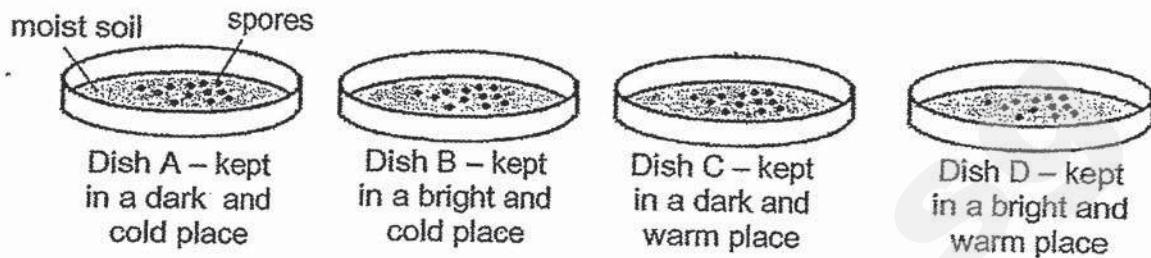
Group A	Group B
	

The above objects are classified according to their _____.

- (1) uses
- (2) sizes
- (3) colours
- (4) shapes

(Go on to the next page)

- 3 Siti wanted to investigate the suitable conditions required for spores to grow. She placed identical spores in four dishes, A, B, C and D, containing moist soil. She then placed the dishes in different locations as shown in the diagram below.

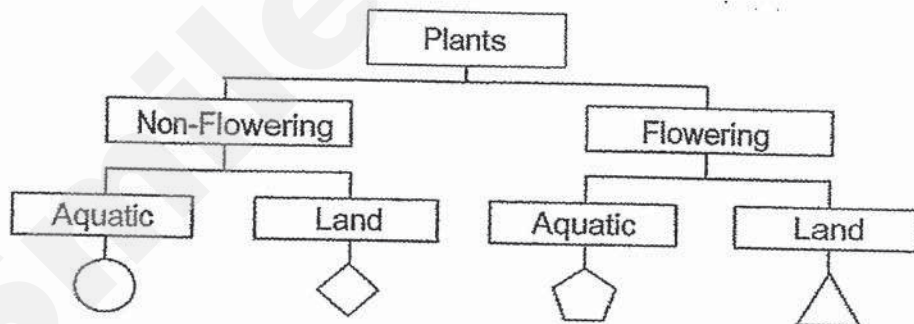


After three days, only the spores in dishes C and D developed into small green plants.

From this experiment, Siti found out that the spores _____.

- (1) need light to grow
- (2) need water to grow
- (3) grow in a dark place
- (4) grow in a warm place

- 4 Study the classification chart below.



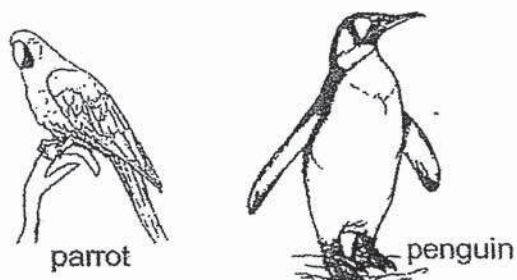
Plant S reproduces from spores and sometimes, grows on the branches of a tall tree.

Based on the characteristic of plant S, which one of the following symbols in the classification chart best represents plant S?

- (1)
- (2)
- (3)
- (4)

(Go on to the next page)

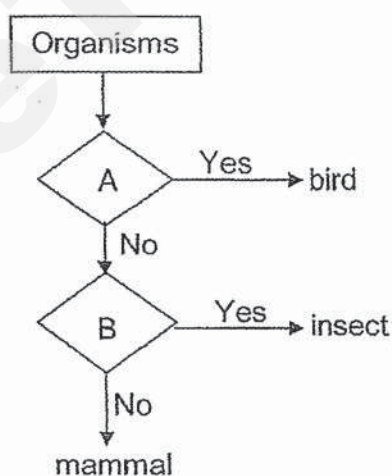
- 5 The diagrams below show a parrot and a penguin.



The parrot and the penguin are similar because they both _____.

- (1) can swim
- (2) have feathers
- (3) have a hard outer covering
- (4) give birth to their young alive

- 6 Study the chart below.

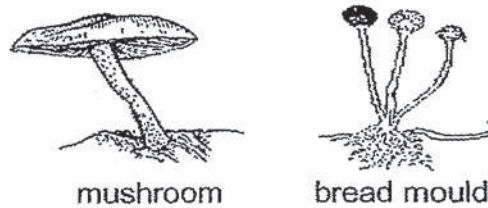


Which of the following shows the questions represented by A and B?

	Characteristics	
	A	B
(1)	Does it have a beak?	Does it give birth to young alive?
(2)	Does it have wings?	Does it have scales?
(3)	Does it have feathers?	Does it have three body parts?
(4)	Does it lay eggs?	Does it have fur?

(Go on to the next page)

- 7 The diagrams below show two organisms.



Which one of the statements is true?

- (1) They both reproduce from spores.
 - (2) They both are non-flowering plants.
 - (3) They both cannot be seen with the naked eye.
 - (4) The mushroom is a fungi but the bread mould is a bacteria.
- 8 The diagram below shows plant X.

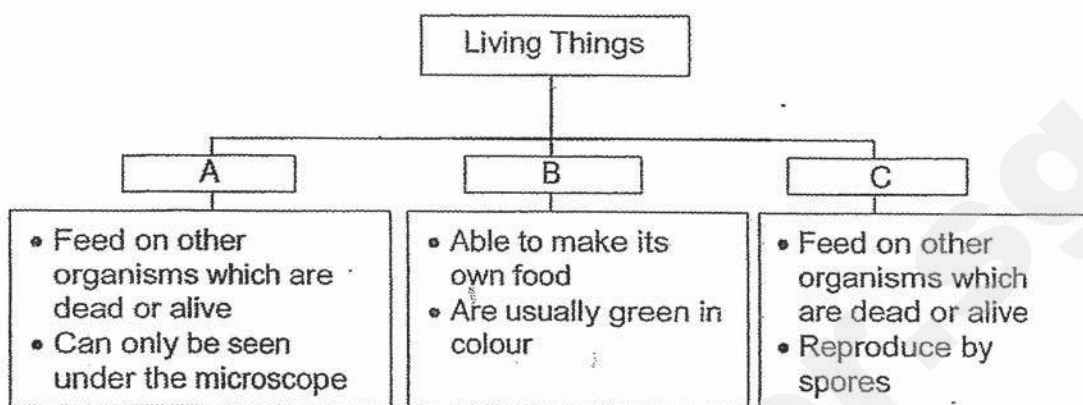


Which one of the following statements about plant X is true?

- (1) Plant X has no roots.
- (2) Plant X has a weak stem.
- (3) Plant X is a non-flowering plant.
- (4) Plant X is not able to make its own food.

(Go on to the next page)

- 9 Study the classification diagram below.



Which of the following represent groups A, B and C correctly?

	A	B	C
(1)	Plants	Fungi	Bacteria
(2)	Bacteria	Plants	Fungi
(3)	Fungi	Plants	Bacteria
(4)	Fungi	Bacteria	Plants

- 10 The diagram below shows the arrangement of leaves from the top view of a plant.

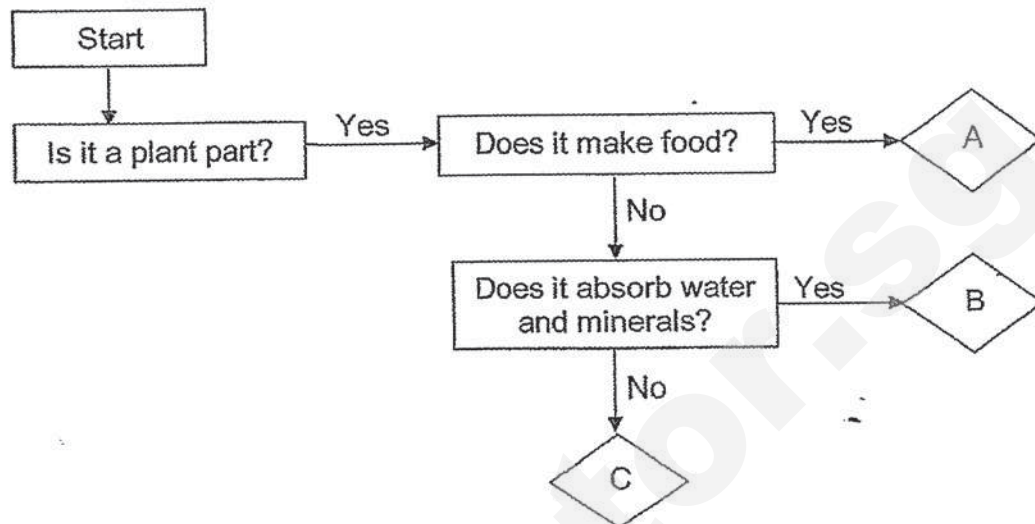


Which of the following best explains why the leaves of the plant are arranged in this way? The leaves are able to _____.

- (1) climb up on other plants for support
- (2) provide more shade for other living things
- (3) trap as much sunlight as possible to make more food
- (4) absorb as much water as possible to make more food

(Go on to the next page)

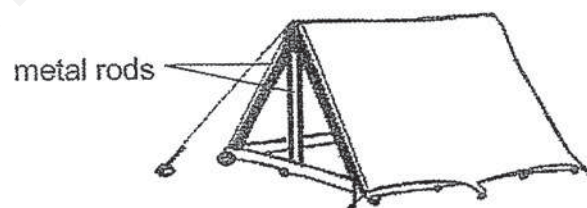
- 11 Study the chart below.



Which parts of a plant do A, B and C represent?

	A	B	C
(1)	leaves	roots	stems
(2)	leaves	stems	roots
(3)	stems	roots	leaves
(4)	roots	stems	leaves

- 12 The picture below shows a camping tent.



Which one of the following systems in our body provides similar function as the metal rods used in the tent?

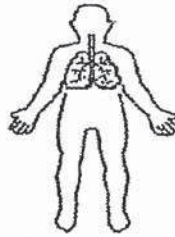
- (1) Skeletal system
- (2) Digestive system
- (3) Muscular system
- (4) Circulatory system

(Go on to the next page)

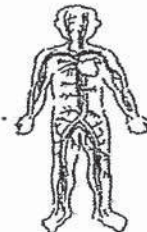
- 13 The diagrams below show three human body systems.



System A



System B



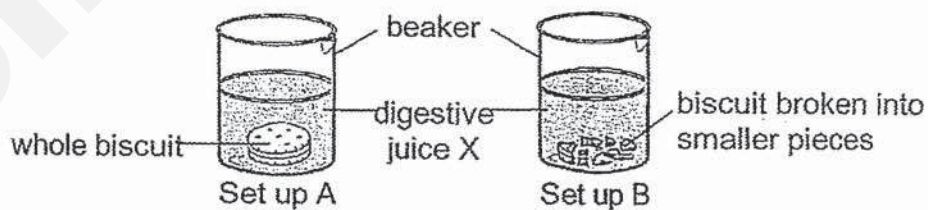
System C

Which of the following statements about the systems are true?

- | | |
|---|--|
| A | System B takes air into the body and removes air from the body. |
| B | System A helps in movement and protects the organs in the body. |
| C | Systems A and C work together to transport food to all parts of the body. |
| D | System C carries useful substances to all parts of the body and carries waste materials away from different parts of the body. |

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

- 14 Mary wanted to find out if breaking a whole piece of biscuit into many smaller pieces would affect the time taken for the biscuit to be completely digested. She prepared two set ups, A and B, as shown in the diagram below.



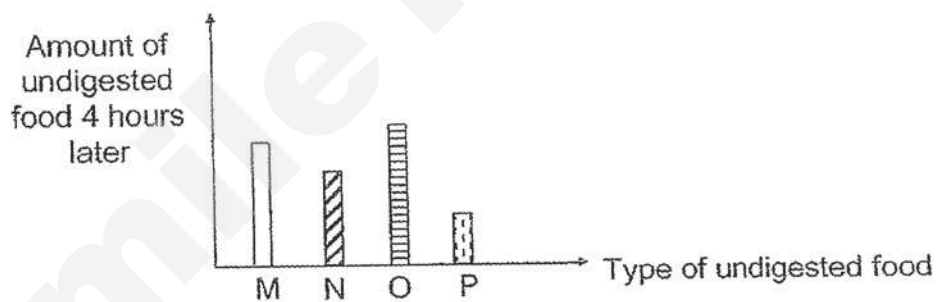
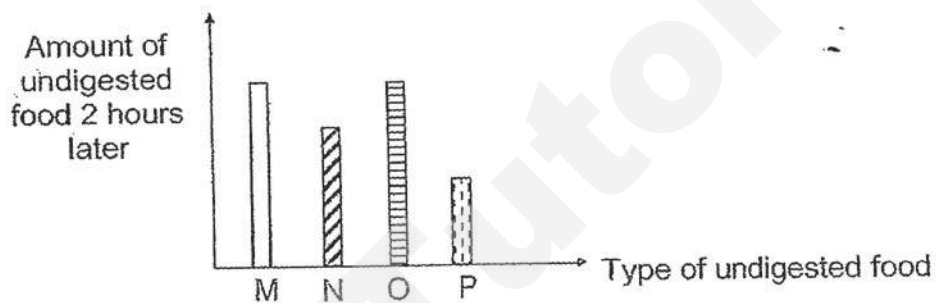
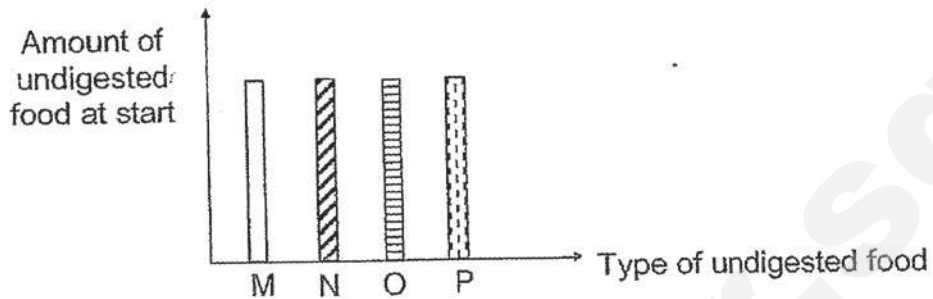
Which variables should she keep the same to ensure a fair test?

- A Type of biscuit
 B Type of beaker
 C Amount of digestive juice X
 D Size of the biscuit before breaking it

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

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- 15 The graphs below show the changes in the amount of four different types of undigested food, M, N, O and P in our digestive system over time.

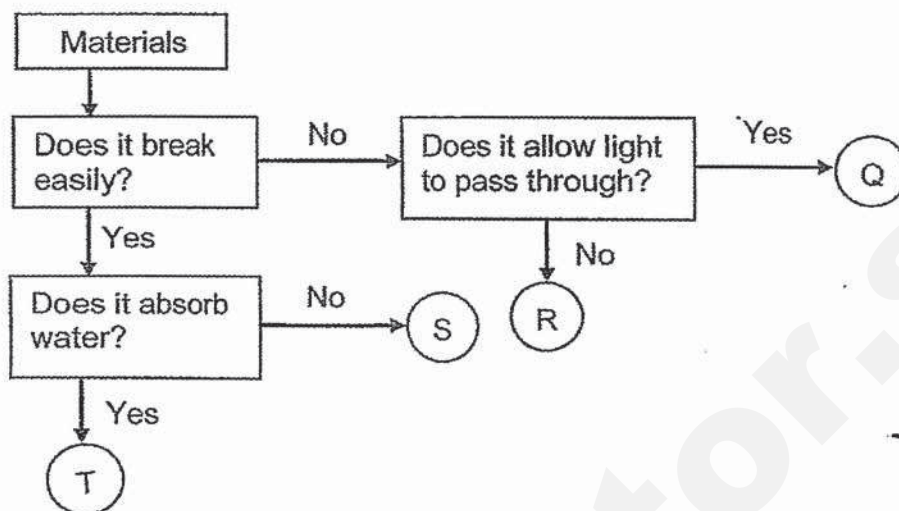


Based on the information given in the graph, which type of food, M, N, O or P, is digested most easily?

- (1) M
- (2) N
- (3) O
- (4) P

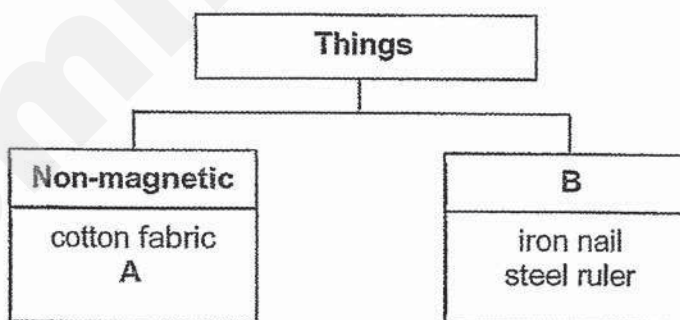
(Go on to the next page)

- 16 Study the chart as shown below.



Which material is likely to be clear glass?

- (1) Q
 - (2) R
 - (3) S
 - (4) T
- 17 Study the classification diagram below.

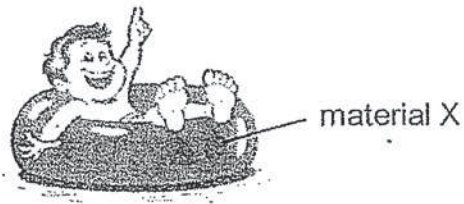


Which one of the following options correctly represent A and B?

	A	B
(1)	aluminum foil	Flexible
(2)	aluminum foil	Magnetic
(3)	iron ring	Magnetic
(4)	glass lens	Absorbent

(Go on to the next page)

- 18 Daniel lies down on a swimming float made of material X as shown below.

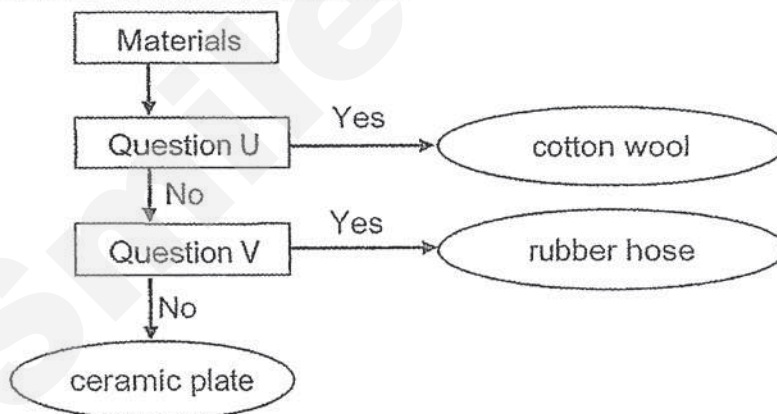


Which of the following properties make material X suitable for making the swimming float?

- A It is stiff
- B It is waterproof
- C It is transparent
- D It can float on water

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

- 19 Study the chart as shown below.

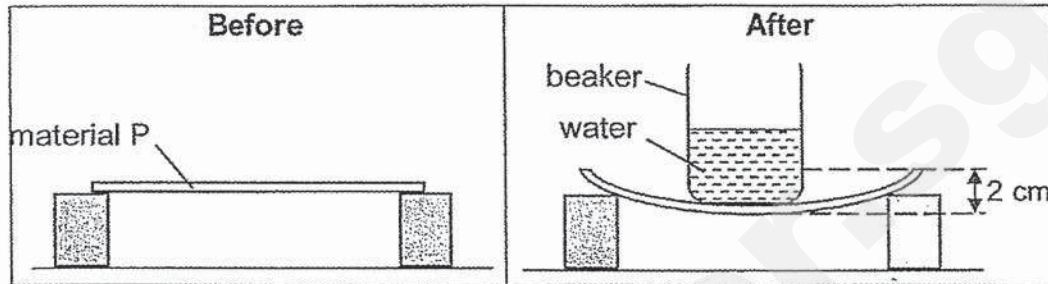


Which one of the following correctly represent questions U and V?

	Question U	Question V
(1)	Does it allow light to pass through?	Is it absorbent?
(2)	Is it waterproof?	Is it able to bend?
(3)	Is it absorbent?	Is it flexible?
(4)	Is it flexible?	Is it waterproof?

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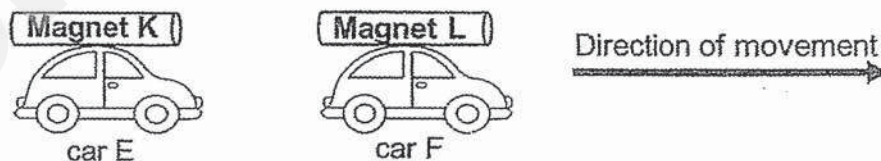
- 20 Yu Qing set up an experiment as shown below to compare the flexibility between the two materials, P and Q. She added different amount of water into the beaker that was placed on top of each material, of similar size and thickness, until each material bends by 2 cm.



Based on her results, Yu Qing concluded that material P was more flexible than material Q. Which of the following results could she have observed in order to make her conclusion?

Amount of water in beaker (ml) for distance D to reach 2 cm		
	Material P	Material Q
(1)	35	35
(2)	95	65
(3)	35	65
(4)	95	95

- 21 Sharon set up an experiment with two toy cars, E and F. Two similar rod magnets, K and L, were placed on top of each car. When Sharon moved car E towards car F, she observed that car F moved forward in the direction as shown below.



Which the following statements best explain Sharon's observation?

- A Magnet L was attracting car E towards it.
- B Magnet K was repelling car F away from it.
- C Like poles of magnet L and magnet K are facing each other.
- D Unlike poles of magnet L and magnet K are facing each other.

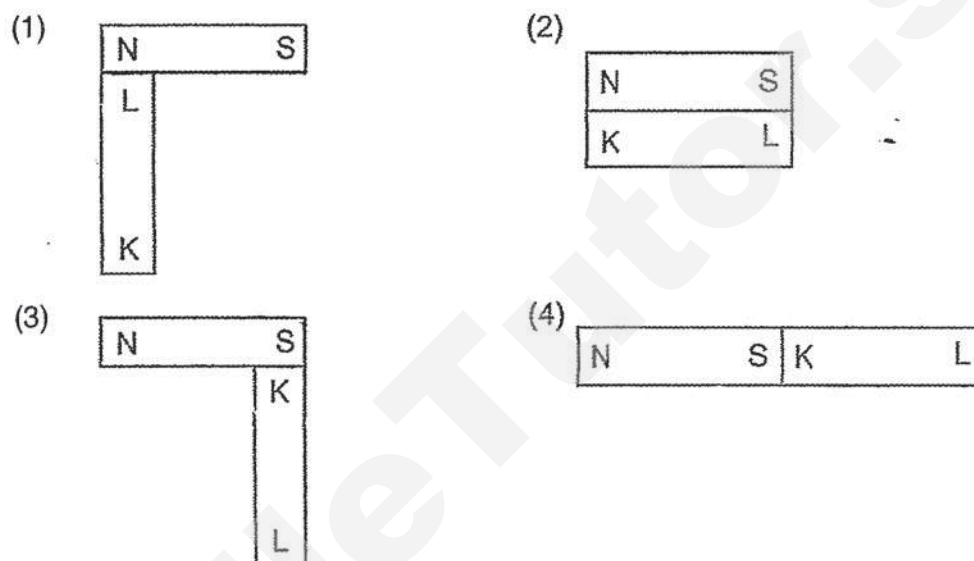
- (1) A and D only
- (2) B and C only
- (3) B and D only
- (4) C and D only

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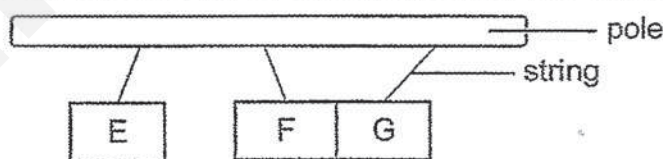
- 22 The diagram below shows the interaction between two magnets when they are placed near each other.



Based on the interaction between two magnets observed above, which of the following diagrams shows the possible arrangement of the two magnets?



- 23 Lucas hung three bars, E, F and G on a pole. The diagram below shows the interaction of the bars when they are brought near one another.



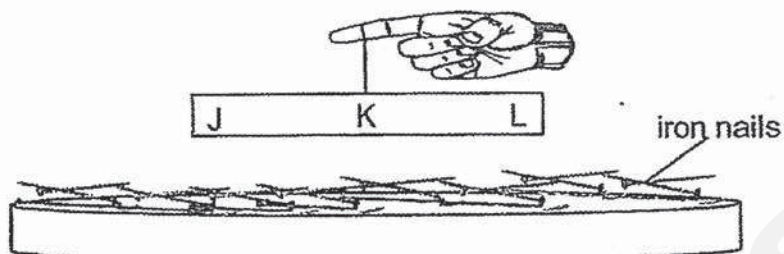
Which of the statements are true?

- A Bar F is a magnet
- B Bar E is made of copper
- C Bars F and G are magnetic
- D Bar G is a non-magnetic material

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

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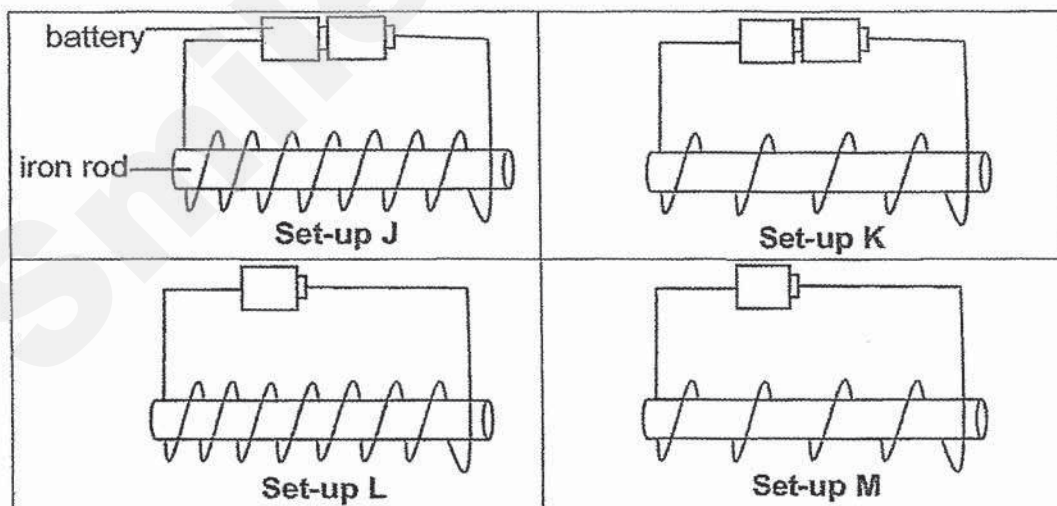
- 24 Jasmine brought a bar magnet close to a small tray of iron nails as shown in the diagram below.



Which one of the following represent the number of iron nails attracted by the different parts J, K and L of the bar magnet correctly?

Number of iron nails attracted			
	Part J	Part K	Part L
(1)	9	4	8
(2)	3	9	4
(3)	4	5	9
(4)	9	4	5

- 25 Viki conducted an experiment using four set-ups J, K, L and M as shown below.

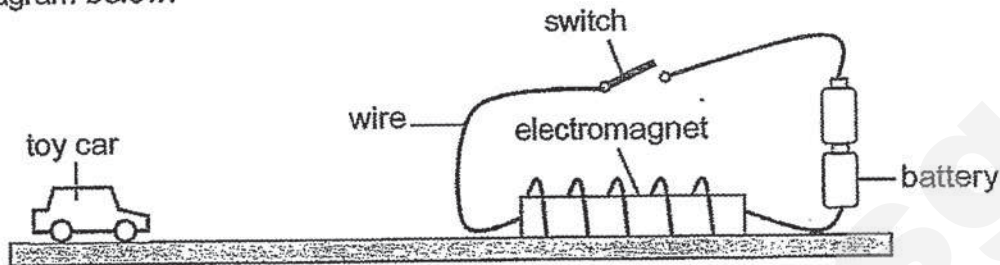


Which two set-ups should Viki use if she wants to find out whether the number of coils of wire affects the magnetic strength of the electromagnet?

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

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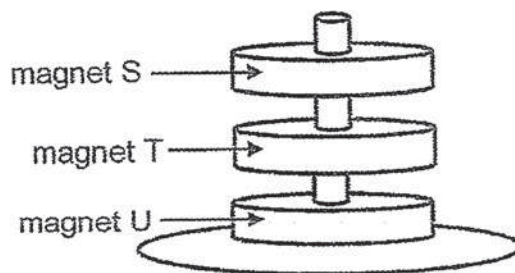
- 26 Alex carried out an experiment with an electromagnet and a toy car as shown in the diagram below.



When Alex closed the switch, he observed that the toy car moved towards the electromagnet.

Which one of the following statements is true?

- (1) The toy car will move towards the electromagnet slower when the number of batteries decreases.
 - (2) The toy car will move towards the electromagnet more quickly when the number of batteries decreases.
 - (3) The toy car will move towards the electromagnet slower when the coils of wire around the electromagnet increases.
 - (4) The toy car will move towards the electromagnet more quickly when the coils of wire around the electromagnet decreases.
- 27 Sarah placed three ring magnets, S, T and U through a wooden rod as shown in the diagram below.

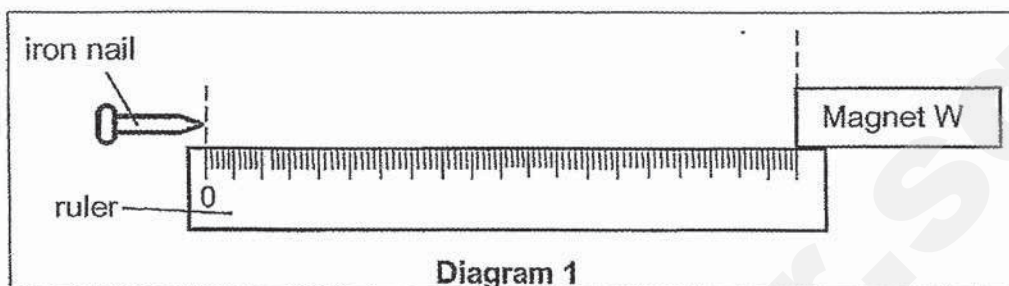


What could Sarah do to allow all the three magnets to attract one another?

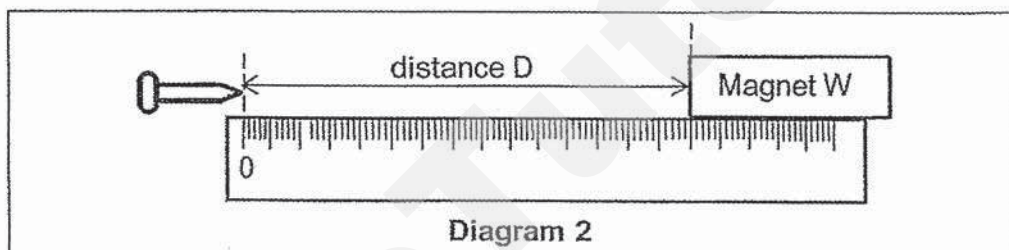
- (1) Flip magnet T
- (2) Flip magnet S
- (3) Flip magnets S and T
- (4) Flip magnets T and U

(Go on to the next page)

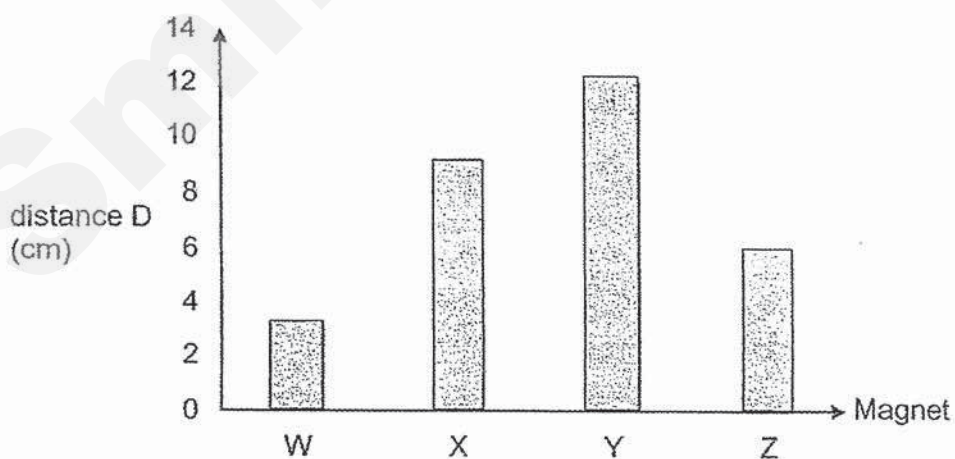
- 28 Josh carried out an experiment on four magnets, W, X, Y and Z. He placed magnet W and an iron nail at both ends of a ruler as shown in diagram 1.



He then moved magnet W towards the iron nail and measured the distance D at which the iron nail was attracted as shown in diagram 2.



He repeated the experiment with magnets X, Y and Z and recorded his results in the graph shown below.



Based on the graph, which magnet has the weakest magnetic strength?

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

METHODIST GIRLS' SCHOOL
Founded in 1887



END-OF-YEAR EXAMINATION 2019
PRIMARY 3
SCIENCE
BOOKLET B

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

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.

Name: _____ ()

Class: Primary 3. _____

Date : 22 October 2019

Booklet A	56
Booklet B	34
Total	90
Parent's Signature	

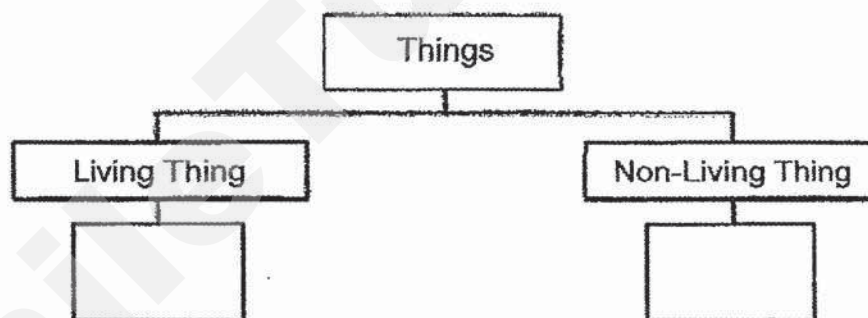
This booklet consists of 13 printed pages including this page.

For questions 29 to 38, write your answers in the spaces provided. The number of marks available is shown in brackets [] at the end of each question or part question. [34 marks]

- 29 John carried out an experiment using two things, W and X. He observed and recorded the heights of W and X for the next four weeks in the table below.

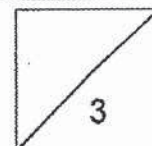
	Height of W (cm)	Height of X (cm)
Week 1	5	18
Week 2	10	18
Week 3	15	18
Week 4	20	18

- (a) Based on the information above, identify W and X in the chart below. Write the letter, **W** and **X**, in the correct boxes. [1]



- (b) Based on the results of John's experiment, state the characteristic of W which explains your answer in (a). [1]

- (c) State a characteristic of X that is not observed in John's experiment. [1]



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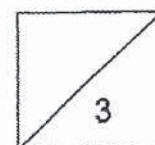
- 30 The table below shows the characteristics of three different animals; X, Y and Z. A tick (✓) indicates that the animal has the characteristic.

Characteristic	Animal		
	X	Y	Z
Has wings	✓		
Has hair		✓	
Gives birth to young alive		✓	
Reproduces by laying eggs	✓		✓
Breathes through lungs and moist skin			✓

- (a) Based on the table above, what is the similarity between animals X and Z? [1]


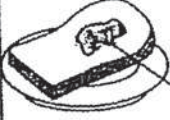


- (b) Which animal, X, Y or Z, could be a dolphin? Give a reason for your answer. [1]

- (c) Which group of animals does animal Z belong to? Give an example of animal Z. [1]



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- 31 Siva conducted an experiment using four identical pieces of bread, A, B, C and D. He added different amount of water on the four slices of bread and kept them in a dark room. After three days, he observed some black patches growing on bread B, C and D. The results of his observation are shown in the table below.

	Bread A	Bread B	Bread C	Bread D
Amount of water added to the bread (ml)	0	12	6	18
Size of black patches grew on bread (if any)				

black patches

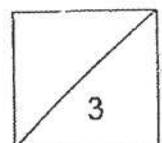
- (a) Explain how the black patches grew on the bread. [1]

- (b) Based on Siva's results, how does adding more water affect the size of the black patches growing on the bread? Circle your answer below. [1]

Adding more water (increases / decreases) the size of the black patches growing on the bread.

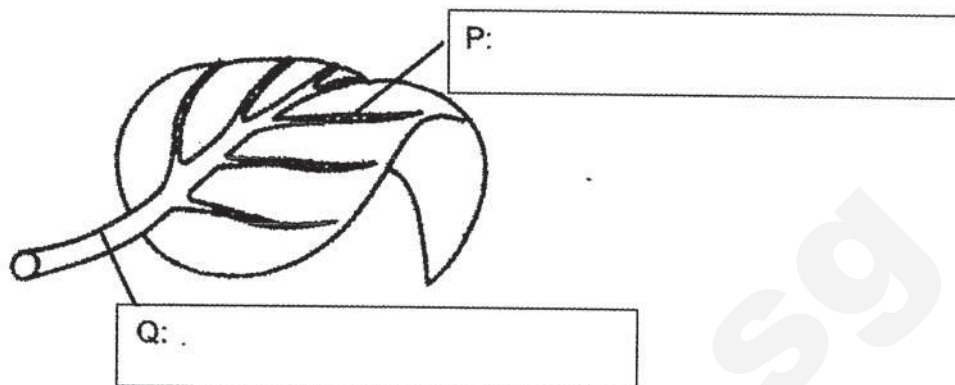
- (c) Which variables must be kept the same for the experiment to be a fair test? Put ticks (✓) in the correct boxes. [1]

Variables	Tick (✓)
Location of experiment	
Size of bread	
Amount of water added to the bread	
Size of black patches	



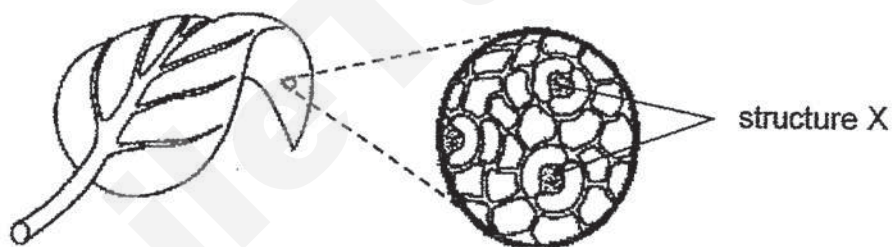
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32 The diagram below shows a leaf.



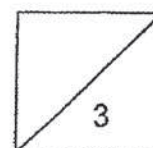
- (a) **Label** the parts of the leaf, P and Q in the boxes provided above. [1]

Sam placed a leaf under a microscope. The diagram below shows what he saw on the underside of the leaf.



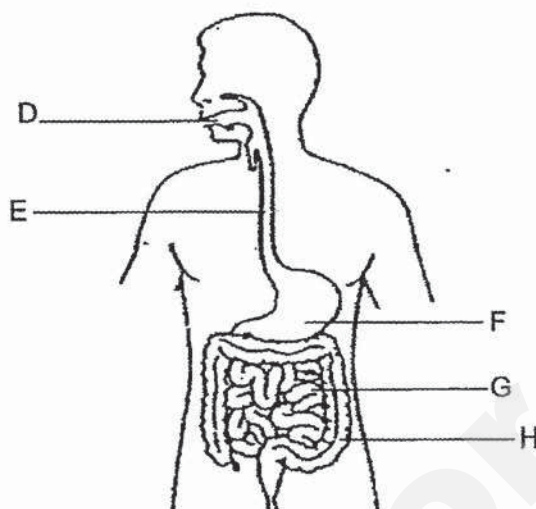
Sam observed that there were many structure X on the underside of the leaf.

- (b) Name structure X and state its function. [2]



(Go on to the next page)

- 33 Study the diagram of the human digestive system as shown below.



- (a) Name organs E and F. [1]

(i) _____

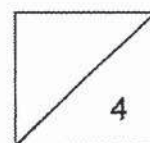
(ii) _____

- (b) What happens at organ D? Fill in the blanks below. [1]

The teeth chew the food into (i) _____ pieces.

The (ii) _____ softens the food.

- (c) At which organ, D, E, F, G or H, is food completely digested and what happens to the digested food? [2]

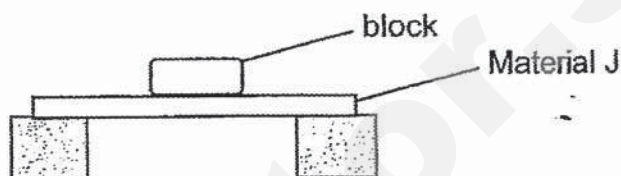


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- 34 Mr Ling conducted an experiment on four different materials to find out which material is the most suitable to make part A of the spade.



He placed blocks of the same mass on each material, one at a time, until they broke and recorded his results in the table below.

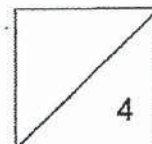


Material	Number of blocks it can hold before it breaks
J	4
K	12
L	6
M	1

- (a) What property of the material was Mr Ling testing in his experiment? [1]

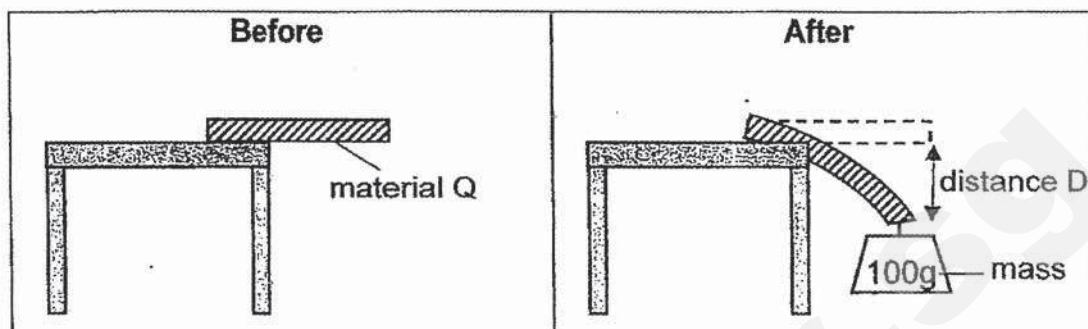
- (b) Based on Mr Ling's results above, which one of the materials, J, K, L or M, is most suitable for making part A of the spade. Explain your answer. [2]

- (c) Why is it important for part A of the spade to have the property stated in (a) in order for Mr Ling to dig the soil? [1]

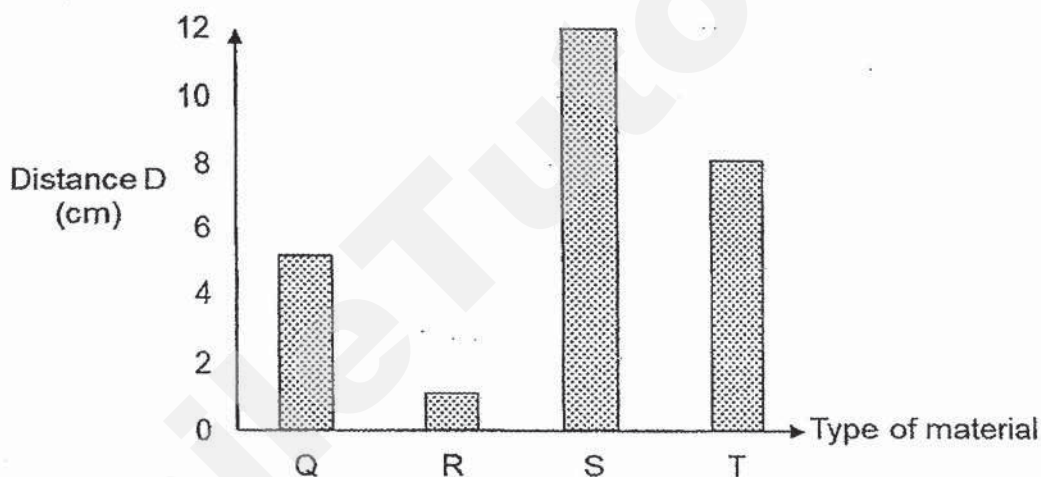


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- 35 Kate set up an experiment as shown below. She hung a 100g mass on four materials, Q, R, S and T, one at a time, and measured distance D, as shown in the diagram below. The materials are of the same thickness and length.



She recorded her readings in the graph below.



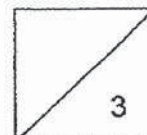
- (a) Put a tick (✓) in the box next to the variable that must be changed in order for the experiment to be a fair one. [1]

Variable	Changed
Type of material	
Mass of the weight	
Thickness of material	

- (b) What could Kate conclude about the property of material R from this experiment? Fill in the blanks below. [2]

Material R is the least (i) _____ because

distance D is the (ii) _____.



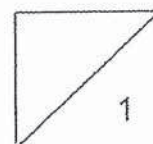
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The diagram below shows a pair of swimming goggles.



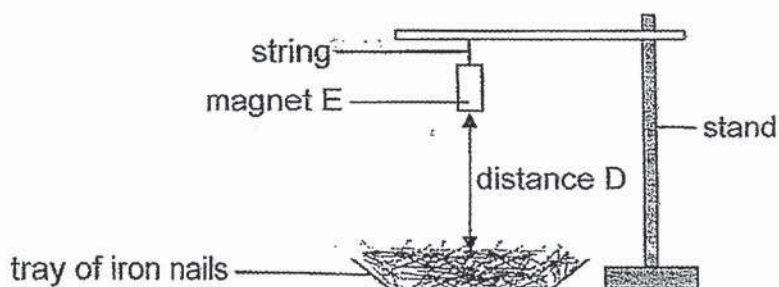
- (c) Which material Q, R, S or T is most suitable for making part X? Give a reason for your answer.

[1]



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36 Michelle set up an experiment as shown below.



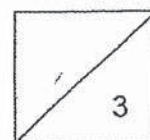
She placed magnets E and F at different distances from the tray of iron nails and recorded the number of iron nails attracted in the table below.

Distance D (cm)	Number of iron nails attracted	
	Magnet E	Magnet F
2	10	20
4	8	18
6	6	15
8	2	12

- (a) Based on the results, show the relationship between distance D and the number of iron nails attracted by magnet E. **Circle** the correct answers below. [1]

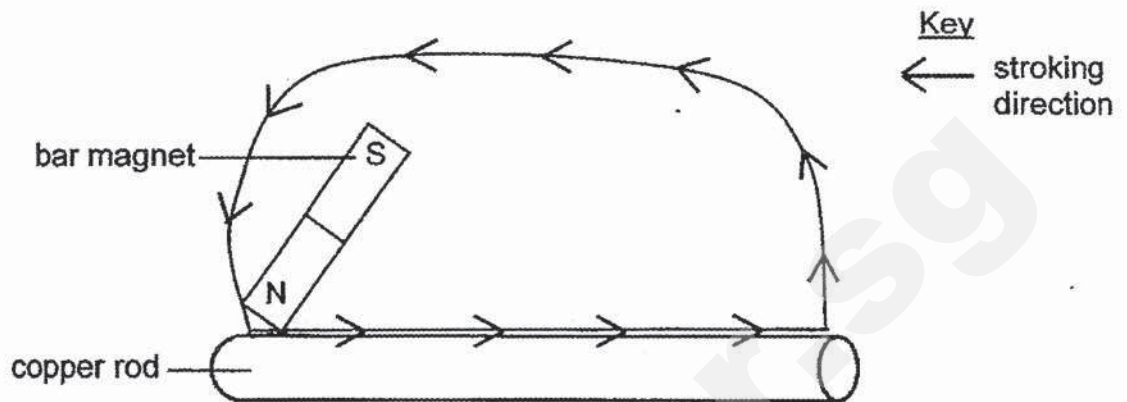
As distance D (increases / decreases), the number of iron nails attracted by magnet E (increases / decreases).

- (b) Do magnet E and F have the same magnetic strength? Explain your answer. [2]



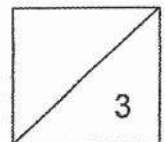
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- 37 Alice used a bar magnet to stroke a copper rod 40 times as shown in the diagram below.



- (a) After stroking it, Alice brought the copper rod near some steel nails. She observed that none of the steel nails was attracted to the copper rod. Explain her observation. [2]

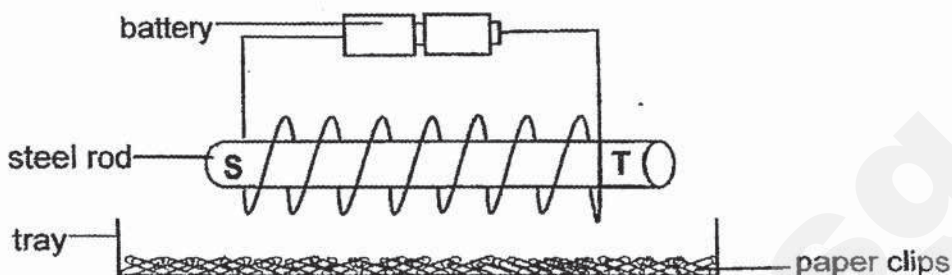
- (b) What must Alice replace in her set-up above so that she could make a temporary magnet by the stroke method? [1]



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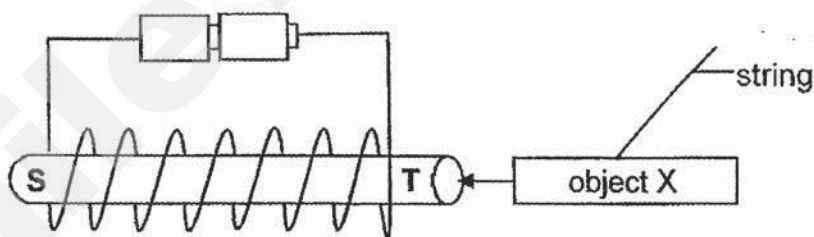
38

Albert carried out an experiment with two batteries. The two ends of the steel rod were labelled S and T as shown in the diagram below. He then placed the steel rod near some steel paper clips.



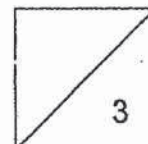
- (a) Albert observed that part S and T of the steel rod attracted the most number of paper clips. Give a reason for his observation: [1]

Albert tied object X to a string and placed it near the end T of the steel rod. He observed that object X moved towards the steel rod as shown in the diagram below.



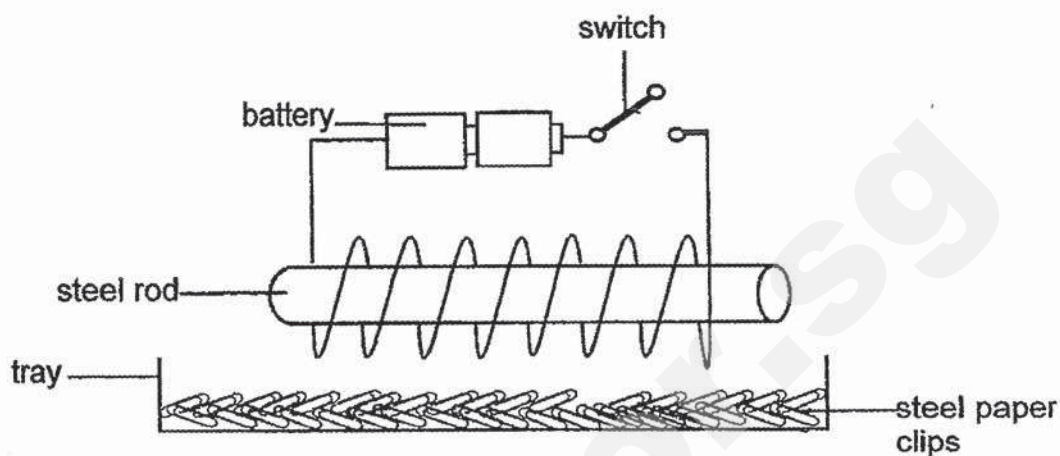
- (b) Based on Albert's observation, is object X definitely a magnet? Explain your answer. [1]

- (c) What could Albert do to the set-up above if he wants to increase the distance that object X moved towards from the steel rod? [1]

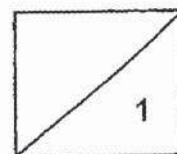


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Albert's friend Daniel then created a similar set-up as shown in the diagram below. He then placed the steel rod near some steel paper clips.



- (d) Daniel observed that none of the steel paper clips was attracted to the steel rod. Give a reason for his observation. [1]



(Go on to the next page)

SmileTutor.sg

ANSWER KEY

YEAR : 2019
LEVEL : PRIMARY
SCHOOL : Methodist Girl's School
SUBJECT : Science
TERM : END-OF-YEAR EXAMINATION 2019

Q8

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
1	1	4	2	2	3	1	2	2	3
Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
1	1	4	4	4	3	2	3	3	3
Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28		
2	2	2	1	4	1	1	1		

BOOKLET B

(29a) Living Thing: W

Non-living thing: X

(29b) W can grow, just like how living things do. Hence, W is a living thing.

(29c) X cannot respond to changes around it.

(30a) Both animals X and Z reproduce by laying eggs.

(30b) Animal Y, as it has hair and gives birth to its young alive, just like a dolphin as it is a mammal and has hair and also gives birth to its young alive.

(30c) Animal Z belongs to the group amphibians. An example of an amphibian like Animal Z is a frog.

(31a) The spores in the air landed on the bread and grew as there were air, food and water.

(31b) increases.

(31c)

Variables	Tick/✓
Location of experiment	✓
Size of bread	✓
Amount of water added	
Size of black patches	

(32a) P: Leaf vein

Q: Leafstalk

(32b) Structure X is stomata. The stomata allows the exchange of gases between the plant and its surroundings.

(33a)(i) Gullet

(ii) Stomach

(33b)(i) smaller

(ii) saliva

(33c) Part G. The digested food is absorbed into the blood.

(34a) strength

(34b) Material K, as it was able to hold the most number of blocks before it broke, showing that it is the strongest showing that it is able to support the spade.

(34c) It would not be easily broken and could support the spade and hold it upright.

(35a)

Variable	Changed
Type of material	✓
Mass of the weight	
Thickness of material	

(35b)(i) flexible

(ii) shortest

(35c) Material S, as it would be able to flex to fit the user's head, making it comfortable for the user as it is the most flexible and could fit the user if the user's head is bigger.

(36a) increases, decreases

(36b) No, as magnet F was able to attract more iron nails than Magnet E, showing it has a stronger magnetic strength.

(37a) Copper is not a magnetic material. Hence, no steel nails were attracted as only magnetic materials can be magnetised into temporary magnet and be able to attract the steel nails.

(37b) She could replace the copper rod with magnetic materials such as iron, cobalt or steel in order to make a temporary magnet by the stroking method.

(38a) A magnet is strongest at its poles and weakest at its centre.

(38b) No, as object X did not repel the magnet.

(38c) The could either increase the number of batteries.

(38d) It is because the switch was not closed so electricity cannot flow through to magnetise the rod.

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**NAN HUA PRIMARY SCHOOL
SEMESTRAL ASSESSMENT 2 – 2019
PRIMARY 3**

SCIENCE

BOOKLET A

24 Multiple Choice Questions (48 marks)

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

INSTRUCTIONS TO CANDIDATES

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

Marks Obtained

Booklet A		/48
Booklet B		/32
Total		/80

Name: _____ () **Class: P 3** _____

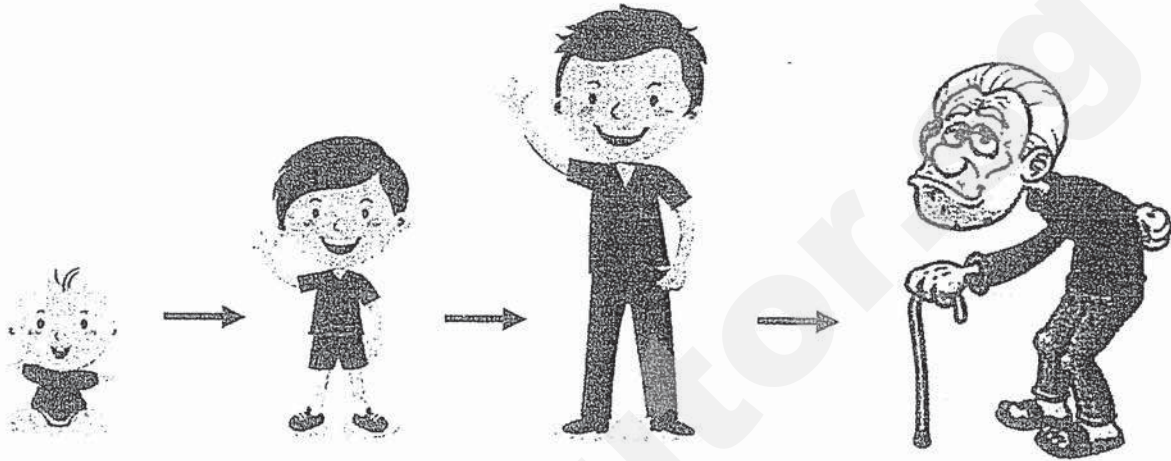
Date : 25 October 2019

Parent's signature: _____

Section A: (24 x 2 marks = 48 marks)

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

- 1 Study the diagram below.



Which of the following characteristics of living things are shown in the diagram above?

- A They can grow.
- B They can reproduce.
- C They need air, water and food to survive.

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

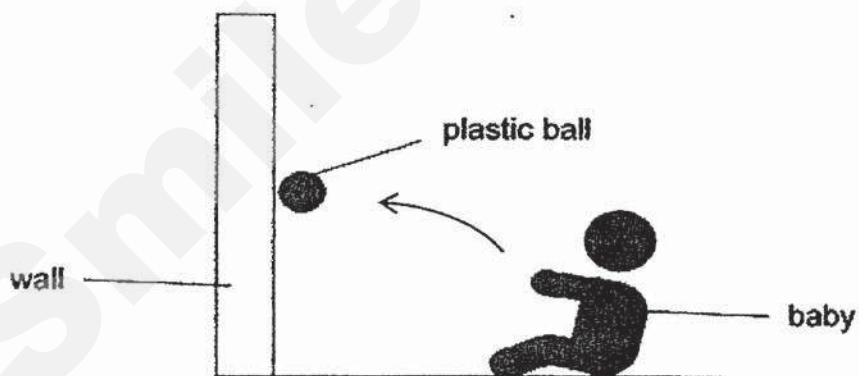
- 2 The table below shows how living things can be classified.

Animals	Plants	C
whale	grass	mould
A	B	D

Which of the following could A, B, C and D be?

	A	B	C	D
(1)	mammal	fern	Fungi	butterfly
(2)	fern	bacteria	mushroom	butterfly
(3)	caterpillar	fern	Fungi	mushroom
(4)	bat	yeast	Fungi	mushroom

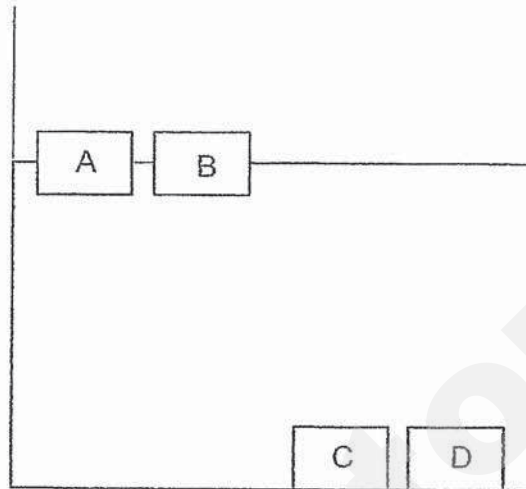
- 3 Mrs Koh's baby likes to throw toys against the wall.



Mrs Koh gives her baby toys that are made of plastic because plastic

- _____.
- (1) is strong
 - (2) is flexible
 - (3) can absorb water
 - (4) can float in water

- 4 Mr Bala placed four blocks made of different materials in the water as shown below.



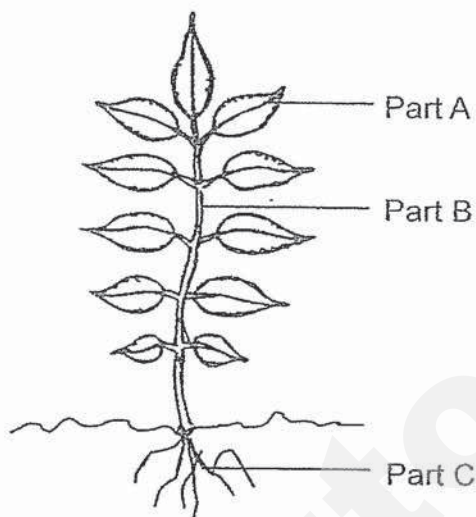
Four of his pupils made the following statements:

- Vicky** : Only blocks A and B float on water.
William : Blocks C and D must be made from the same material.
Xavier : Block D is made of metal
Yanxi : Block B is made of rubber.

Which statement(s) is/are correct?

- (1) Vicky only
- (2) Vicky and William only
- (3) Vicky and Xavier only
- (4) William and Yanxi only

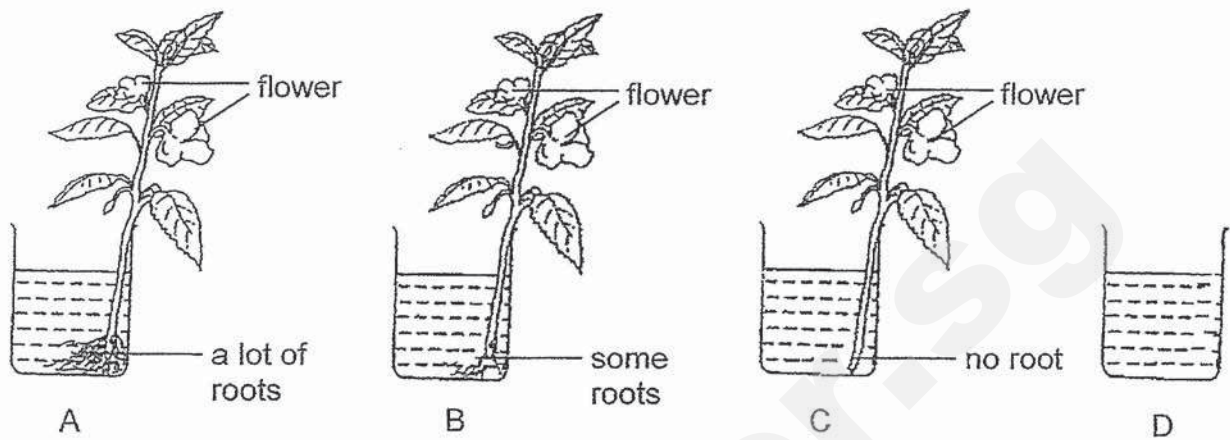
- 5 The diagram below shows a plant.



Which of the following part is matched to the **wrong** function?

	Part	Function
(1)	A	It makes food for the plant.
(2)	B	It keeps the plant upright.
(3)	C	It absorbs water and food from the soil.
(4)	C	It holds the plant firmly to the ground.

- 6 Charlie conducted an experiment as shown below. He placed four set-ups, A, B, C and D near a window of the classroom.



Charlie recorded the amount of water left in each set-up after 5 hours.

Set-up	Amount of water left (ml)
A	50
B	80
C	90
D	100

Charlie was trying to find out if the _____.

- (1) amount of sunlight affects the growth of the plants
- (2) amount of roots affects the amount of water left in the beaker
- (3) plants will grow better when they are placed near the window
- (4) stem of the plant holds the leaves upright to reach for sunlight

- 7 Tom fell and broke his right arm. He was unable to write using his right hand for two months.



Which of the following function(s) of his body system did he lose temporarily?

- A giving his body his shape
 - B protecting important organs
 - C working with the muscles to move his arm
- (1) B only
(2) C only
(3) A and C only
(4) A, B and C
- 8 Darren wrote down some notes on the human digestive system.

- A. Digestion starts from the stomach.
B. Undigested food stays in the large intestine.
C. Digested food is absorbed at the small intestine.
D. Water is absorbed at the large intestine.

Which of the following statement(s) written by Darren is/are **not** correct?

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

9 Which of the following shows how food travels through the digestive system before it gets absorbed by the body?

- (1) mouth → gullet → stomach → small intestine
- (2) mouth → gullet → stomach → large intestine
- (3) gullet → stomach → small intestine → large intestine
- (4) gullet → stomach → large intestine → small intestine

10 Which of the following can be attracted by a magnet?

- (1) gold ring
- (2) plastic bottle
- (3) wooden block
- (4) steel paper clip

11 Three friends made a statement each about magnets.

Alice : Magnets attract magnetic materials.

Betty : Magnets can be made of iron or steel.

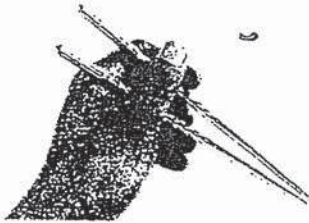
Candy : Magnets can repel non-magnetic materials.

Which statement(s) is/are correct?

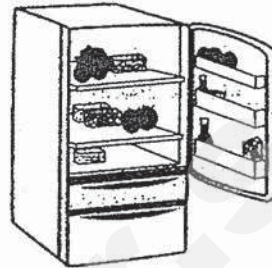
- (1) Alice only
- (2) Alice and Betty only
- (3) Betty and Candy only
- (4) Alice, Betty and Candy

12 Which one of the following objects does **not** make use of magnets?

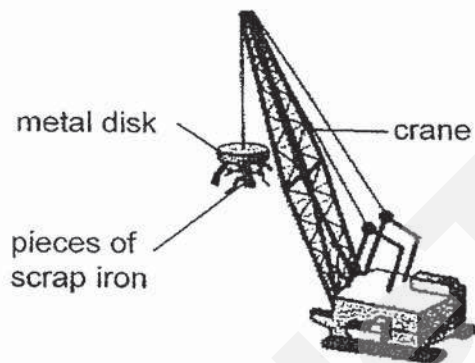
(1) metal chopsticks



(2) refrigerator door



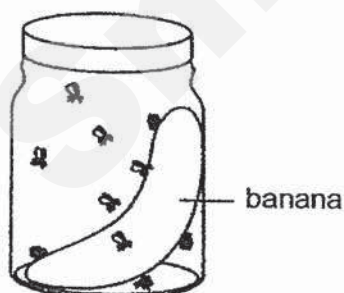
(3) metal scrapyards crane



(4) compass



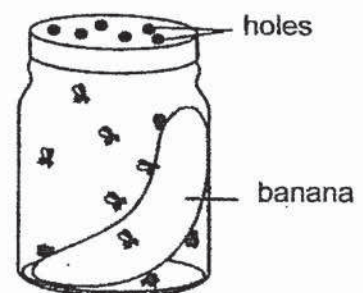
13 Mary placed ten flies in three jars, each having different living conditions.



Jar A



Jar B



Jar C

Arrange the jars in decreasing order of how long the flies will live, starting with the jar that the flies can survive the longest.

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

- 14 The table below shows the characteristics of 3 things, X, Y and Z.

Things	Characteristics		
	Have legs	Can reproduce	Make its own food
X		✓	✓
Y		✓	
Z	✓		

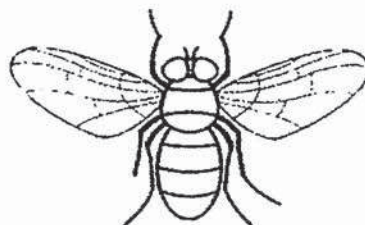
Key
✓: present

Four pupils made the following statements about the three things.

- Zhiying** : X and Y are plants.
Ronnie : Z is a non-living thing.
Doreen : X, Y and Z are living things.
Huabin : X is a plant.

Which pupils were correct?

- (1) Huabin and Ronnie only
(2) Huabin and Doreen only
(3) Zhiying and Doreen only
(4) Huabin, Zhiying and Ronnie
- 15 Jerome sees an animal in the park. He thinks it is a bird since it is able to fly. Which one of the following statements will help him conclude that it is a bird?
- (1) It has a tail.
(2) It lays eggs.
(3) It has wings.
(4) It has feathers.
- 16 Study the diagram below.



animal X

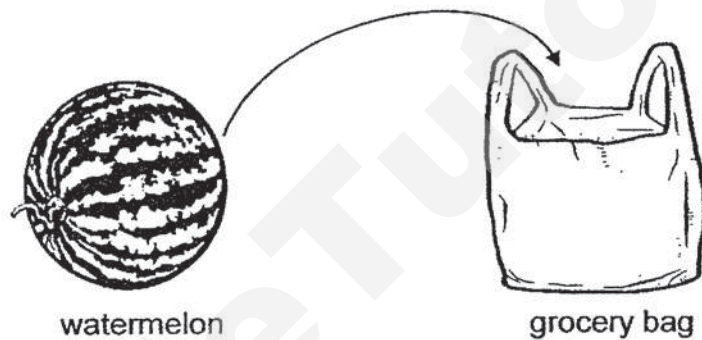
Animal X can be classified as an insect because it _____.

- (1) lays eggs
(2) lives on land
(3) has a pair of wings
(4) has three body parts

- 17 Michael conducted some experiments on materials, T, U, V and W, and recorded his findings on the table below.

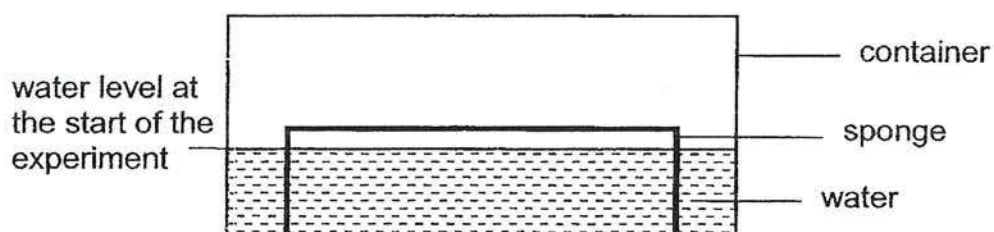
Materials	Numbers of 1kg block the material can hold before it breaks	Flexible	Allow light to pass through
T	7		✓
U	8	✓	
V	4	✓	✓
W	6	✓	✓

Which of the materials, T, U, V and W, are suitable to be made into a grocery bag (shown below) that can carry a 5 kg watermelon?

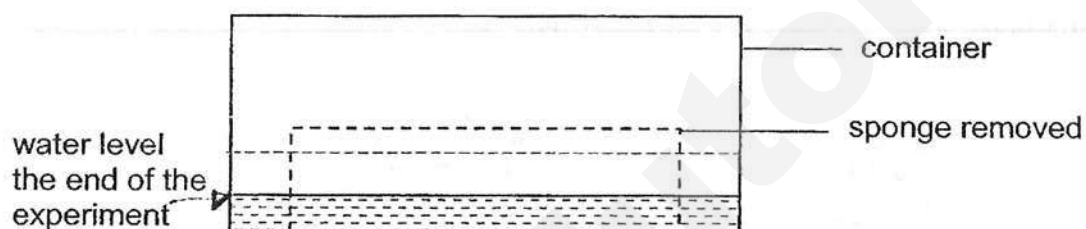


- (1) T and V only
- (2) U and W only
- (3) T, U and W only
- (4) T, U, V and W

- 18 Muthu wanted to find out which type of sponge will absorb more water. He placed a sponge into a container of water as shown in the set below.



After leaving the sponge to absorb the water in the container for 10 seconds, he removed the sponge and measured the drop in the water level.

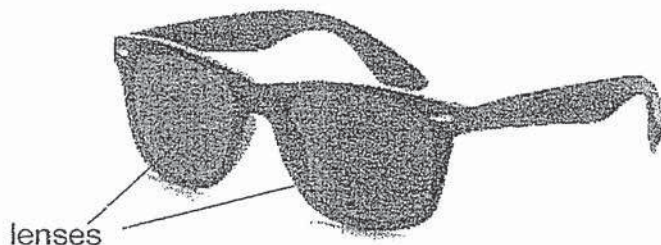


Which two set-ups should he use to ensure a fair test?

Set-up	Type of Sponge	Size	Amount of water in the container at first (ml)
A	X	Small	80
B	X	Big	80
C	Y	Big	80
D	Y	Small	160

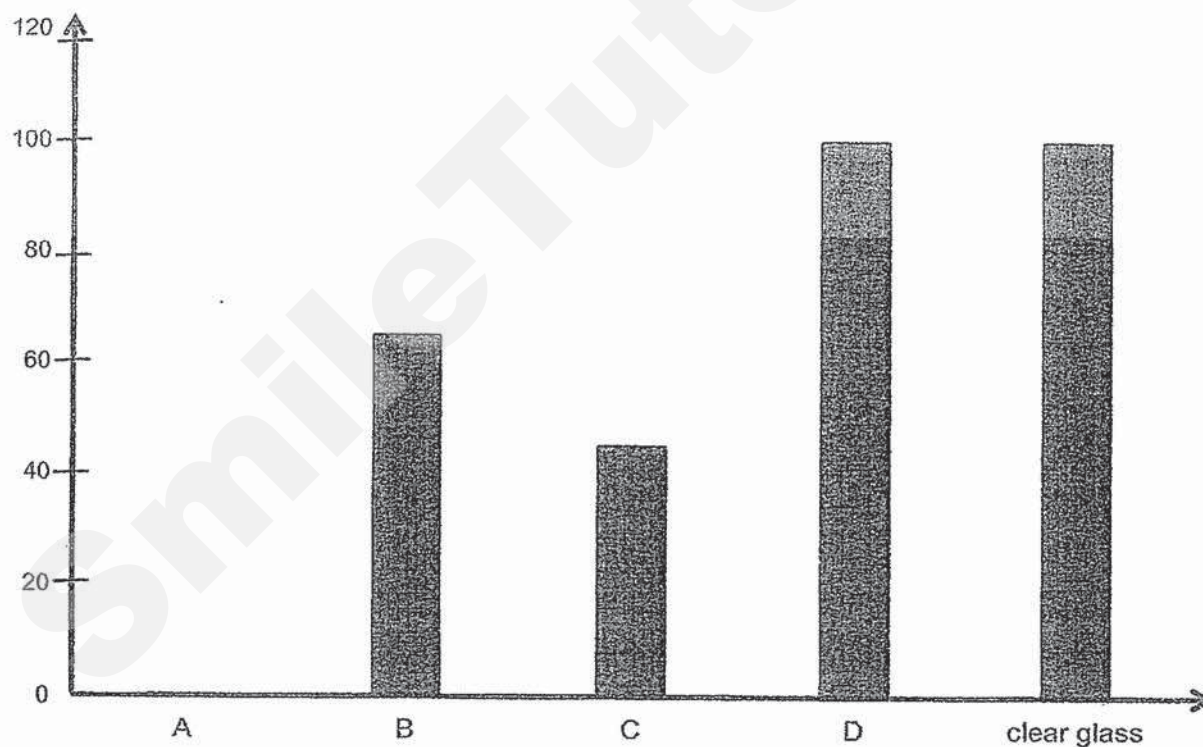
- (1) A and B
- (2) A and D
- (3) B and C
- (4) C and D

- 19 Sunita wears a pair of sunglasses so that she can enjoy the outdoor activity without hurting her eyes. The pair of sunglasses helps to cut down the glare from the strong afternoon daylight.



The graph below shows the amount of light passing through materials A, B, C and D.

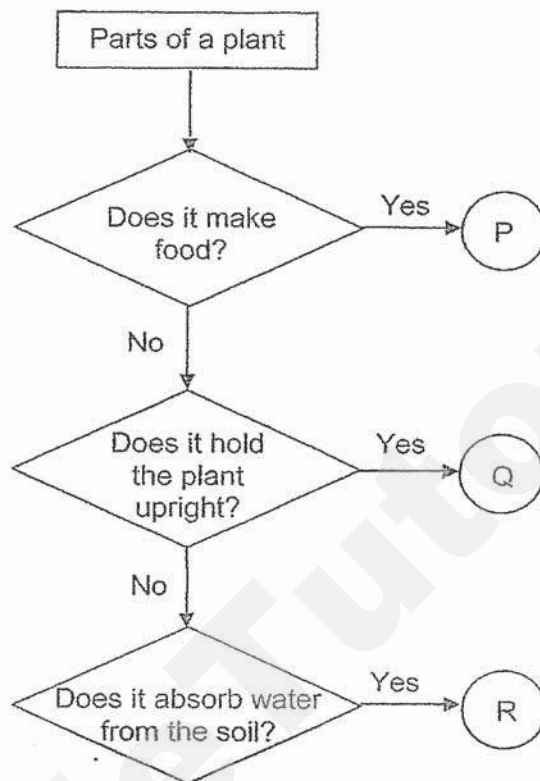
Amount of light that passed through the material (units)



Which of the material(s) is/are most likely used to make the lenses of Sunita's sunglasses?

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

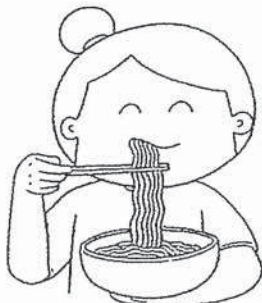
20 Study the flow chart below.



Based on the diagram above, which of the following correctly match the letters P, Q and R to the plant parts?

Parts of the a plant			
	leaf	root	stem
(1)	P	Q	S
(2)	P	Q	R
(3)	P	R	Q
(4)	R	P	Q

- 21 Grandmother is eating her favourite noodles for lunch. Which of the following systems are at work?



	Systems				
	skeletal	digestive	muscular	circulatory	respiratory
(1)	✓	✓	✓		
(2)	✓	✓		✓	
(3)	✓	✓			
(4)	✓	✓	✓	✓	✓

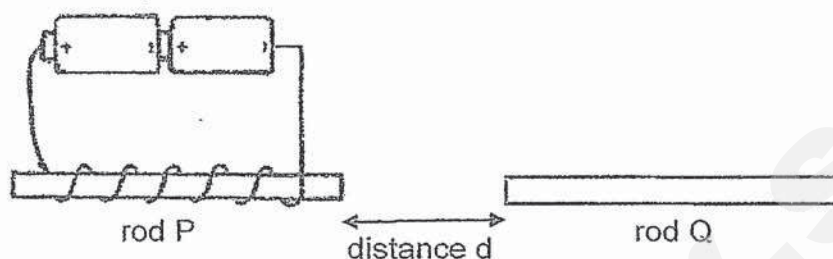
- 22 The table below shows activities taking place in the digestive system. A tick '✓' shows the type of activity taking place.

	Parts of the digestive system			
	P	Q	R	S
Add digestive juices to food	✓		✓	
Digestion takes place	✓		✓	
Water is removed from undigested food				✓
Cut food up into smaller pieces	✓			

Which of the following could be P, Q, R and S?

	Parts of the digestive system			
	mouth	gullet	large intestine	stomach
(1)	P	Q	S	R
(2)	P	Q	R	S
(3)	R	Q	S	P
(4)	S	R	Q	P

- 23 Lily set up an experiment as shown below. She recorded the number of coils around rod P and the distance, d , between the two rods when rod P is able to attract rod Q in the table below.

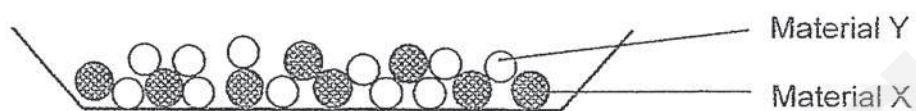


Number of turns of coils on rod P	Distance d (cm)
10	5
15	6
20	7
25	8
30	8

Which one of the following statements is true about her observations?

- (1) As the number of turns of coils on rod P increased, the distance d decreased.
- (2) The like poles of rods P and Q were facing each other.
- (3) Rod P became stronger when the number of turns of coils on rod P increased from 25 to 30.
- (4) Rod Q was a magnetic material.

- 24 Linda had a basket of buttons made from two different materials, X and Y. She did some tests on the properties of the two materials as shown in the table below.



Property	Tests	Material X	Material Y
A	Waterproof	✓	✓
B	Attracted to a magnet	✓	
C	Floats on water		✓

Linda wants to separate the buttons quickly. Which property(ies) can she use to separate the buttons?

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

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**NAN HUA PRIMARY SCHOOL
SEMESTRAL ASSESSMENT 2 – 2019
PRIMARY 3**

SCIENCE

BOOKLET B

10 Open-ended questions (32 marks)

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

INSTRUCTIONS TO CANDIDATES

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

Marks Obtained

Section B

	/ 32
--	-------------

Name: _____ () **Class: P 3** _____

Date : 25 October 2019

Parent's Signature: _____

Section B: (32 marks)

Write your answers to questions 25 to 34 in the space provided.

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

- 25 The classification table below shows how some organisms are grouped.

Group A	Group B	Group C
fern	cockroach	dog
mould	grasshopper	bat
mushroom	mosquito	monkey

- (a) How are the living things grouped based on their characteristics? [1]

- (b) Based on their characteristics in (a), suggest a suitable heading for group A and B. [1]

Group A: _____

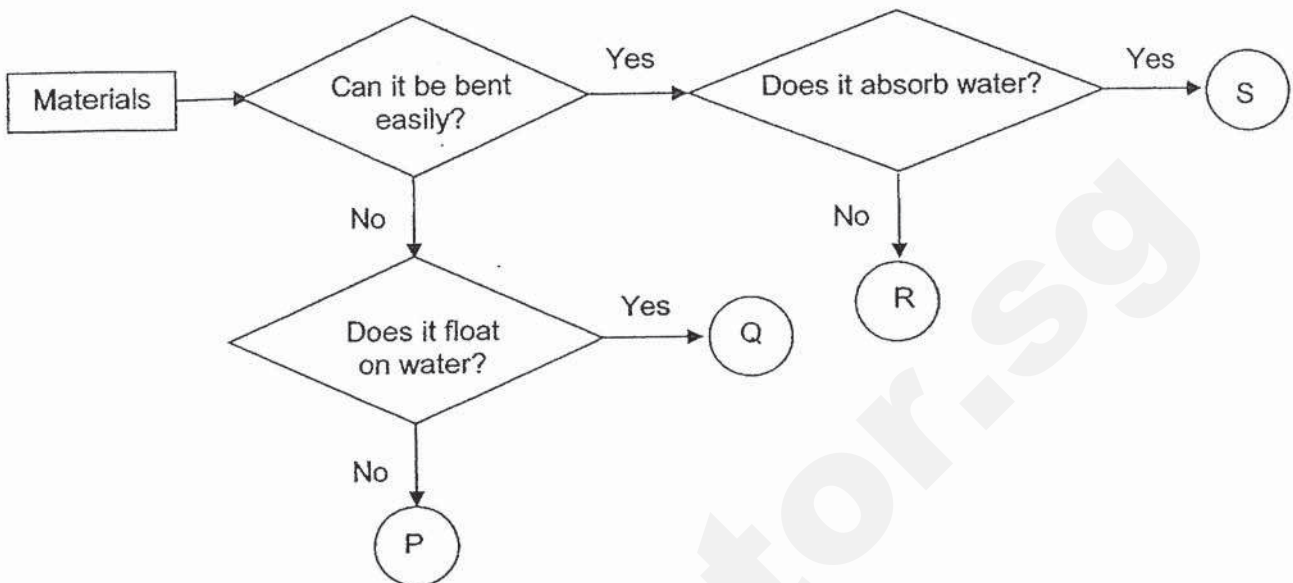
Group B: _____

- (c) Name a living thing that can be classified in group C. [1]

Group C: _____

Score	3
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26 Study the chart below.



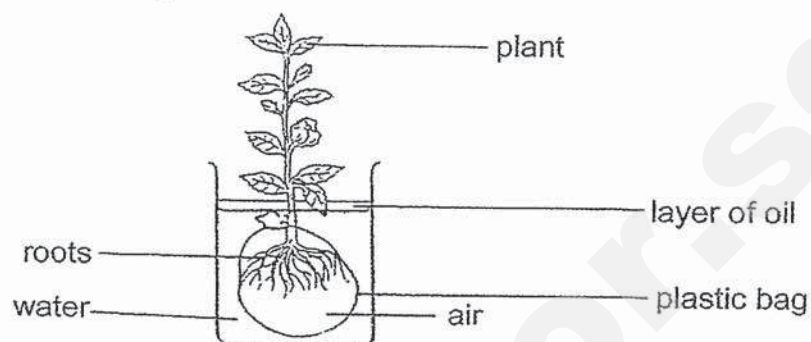
- (a) Mrs Wee bought a pair of gloves to wear while washing dishes so that she could keep her hands dry. Which material, P, Q, R and S, is most likely the material used to make the pair of gloves? [1]

- (b) Based on the chart above, state two properties of material S. [1]

- (c) Based on the chart above, state one difference between materials P and Q. [1]

Score	3
-------	---

- 27 Joseph placed the roots of a plant into a plastic bag and wrapped them up before putting the plant into a container of water as shown in the set-up below. A layer of oil was added to prevent losing water to the surrounding. The set-up was left by the window for a few days.

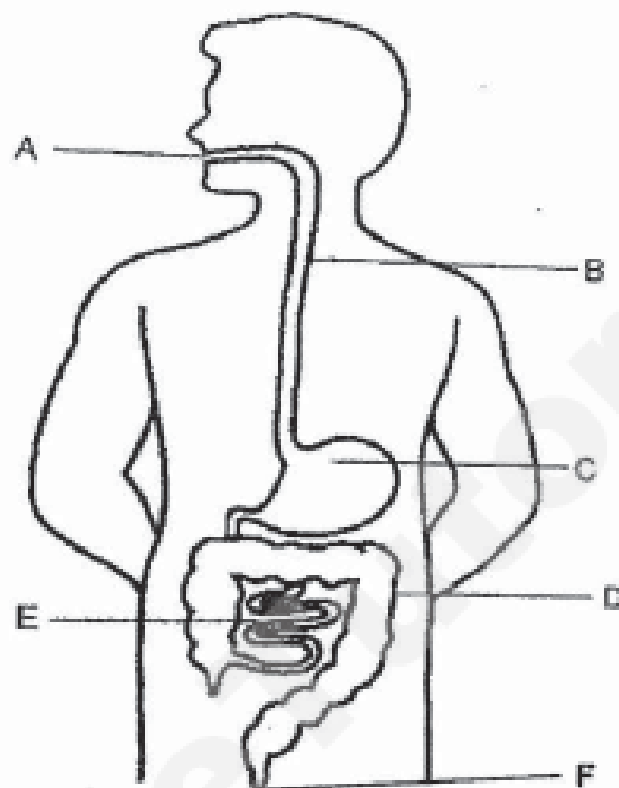


- (a) What would happen to the water level in the water? [1]

- (b) Joseph observed that the plant died after a few days. Explain his observation. [1]

Score	2
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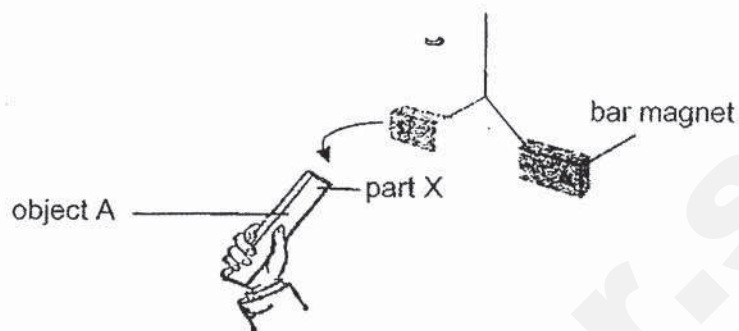
- 28 The diagram below shows a human body system.



- (a) Name the human body system shown above. [1]
-
- (b) List the parts (A, B, C, D, E and/or F) which food must pass through before it enters the blood. [1]
-
- (c) Li Ming has constipation. He has not been able to pass out his stool for a few days. When he finally passes out his stool, he found that his stool is very hard and dry. Which part of the body system above, A, B, C, D, E or F, causes his stool to be so hard and dry? [1]
-

Score	3
-------	---

- 29 Melvin wanted to find out if object A is a magnet. He moved object A towards the South pole of the bar magnet that was freely suspended in the air as shown below. The South pole of the bar magnet moved closer towards object A when object A was 2 cm away from the bar magnet.



- (a) Tick (✓) the correct statement. [1]

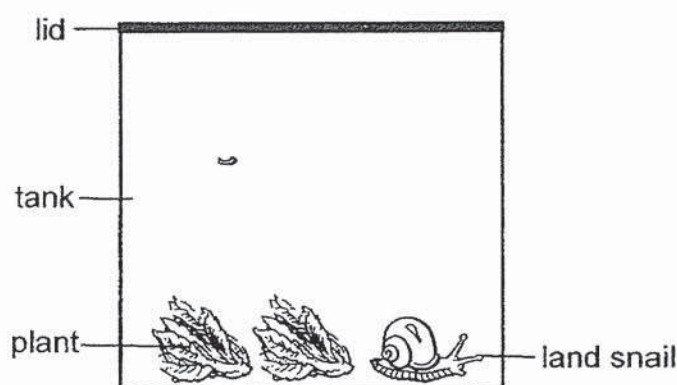
Statement	Tick (✓) if correct
Object A is made of a magnetic material.	
Magnetism can act at a distance from an object.	

- (b) He then removed object A. Which direction will the bar magnet come to rest? [1]

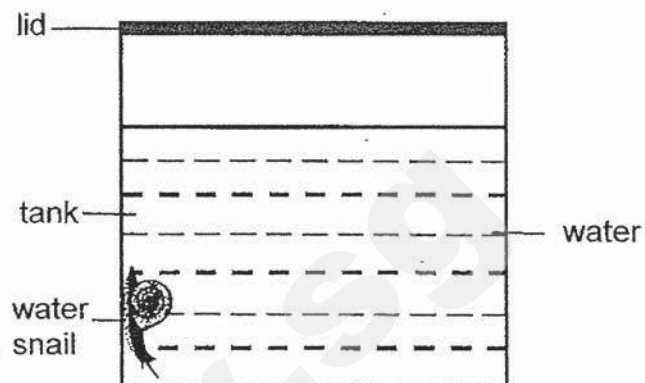
- (c) Melvin then moved part X of object A towards the North pole of the bar magnet. He observed that the North pole of the bar magnet moved away. What could object A be? Explain why. [2]

Score	4
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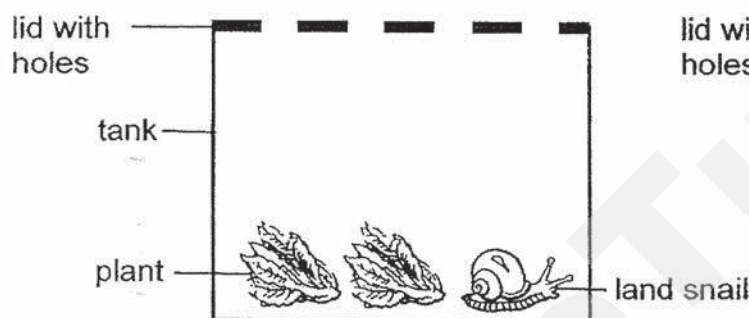
30 Wenbin was given four set-ups in the Science Laboratory as shown below.



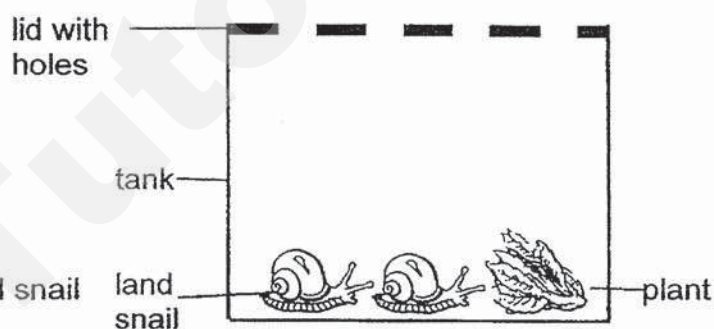
Set-up A



Set-up B



Set-up C



Set-up D

- (a) Wenbin decided to choose set-up A and set-up C for his experiment. Based on the set-ups A and C, what was he trying to find out? [1]

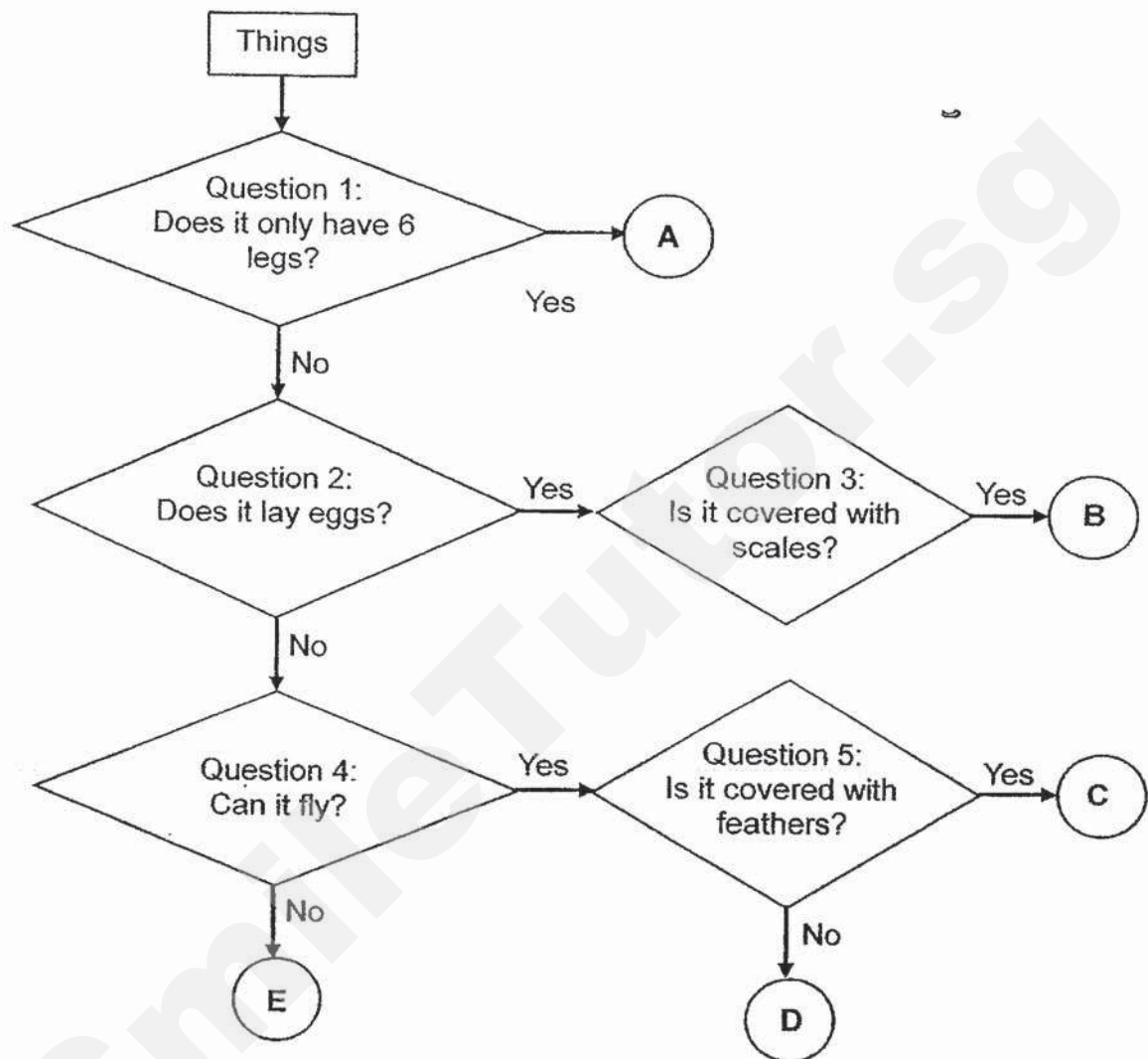
- (b) Tick (✓) all the variables that need to be kept the same for his experiment to work. [2]

Variables	Tick (✓)
Type of snails	
Position of the snails at the start of the experiment	
Number of snails	
Amount of food available	

- (c) Which set-up will allow the snail(s) to survive for the longest time? [1]

Score	4
-------	---

- 31 Study the chart below on classifying groups of animals.



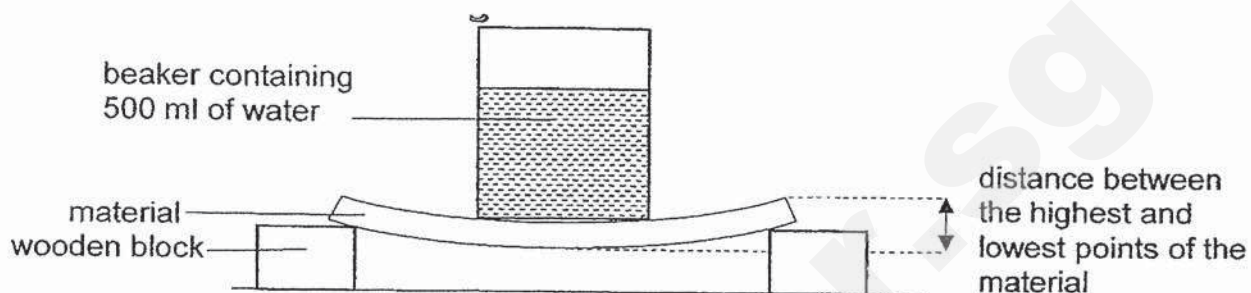
- (a) Jennie was informed that her flowchart was wrong.
Which question, 1, 2, 3, 4 or 5 was wrongly placed? [1]

- (b) Fish M lay eggs and is covered with scales.
Which group, A, B, C, D or E, does fish M belongs to? [1]

- (c) Which group of animals could A belong to? [1]

Score	3
-------	---

- 32 Yati conducted an experiment using the set-up below. He wanted to find out which materials, A, B or C, is most suitable to make a food tray.



He recorded the results in the table below.

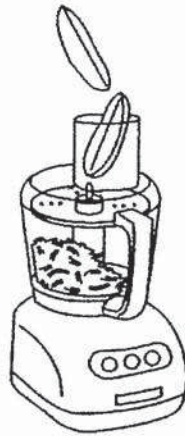
Material	Distance between the highest and lowest points of the material (cm)
A	4
B	2.5
C	1.5

- (a) Based on the information in the table, which material, A, B or C, is most suitable for making a food tray? Explain your answer. [2]

- (b) State one variable of the material that must be kept the same in order for the test to be a fair one. [1]

Score	3
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- 33 The diagram below shows a food processor. The food processor chops the food into smaller pieces.



Mdm Fatimah has a young son who is 9 months old. Besides drinking milk, Mdm Fatimah wants him to try out solid food. She placed a piece of cooked carrot into the food processor before feeding her son.

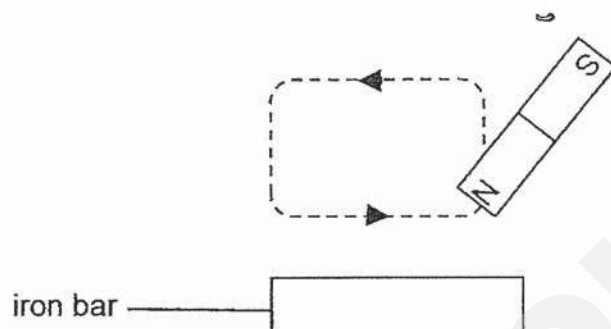
- (a) Explain why the cooked carrot processed by the food processor helps Madam Fatimah's son to digest it faster than one whole piece of cooked carrot. [2]

- (b) Which part of the digestive system does the digested food get absorbed into the blood? [1]

Score	3
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- 34 Rong Ming wanted to find out if he could make an iron bar into a temporary magnet by using a bar magnet.

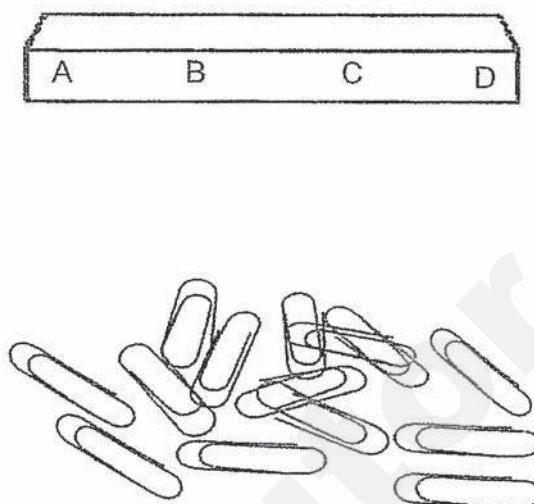
He used the North pole of the bar magnet to stroke the complete length of the iron bar in the direction as shown in the diagram below. He stroked the iron bar five times in the same direction.



- (a) Explain why no steel clips were attracted to the iron bar after stroking. [1]
-
-
- (b) If the above problem had been fixed by Rong Ming, the iron bar should be able to attract some paper clips. What can he do to increase the number of paper clips attracted to the iron bar? [1]
-
-
- (c) Name another method to make the iron bar into a magnet [1]
-

Score	3
-------	---

A bar magnet was placed above some steel clips as shown in the diagram below.



A table is drawn to record the number of steel clips attracted to the different parts of the magnet.

Part of the magnet	Number of steel clips attracted to the bar magnet
A	3
B	1
C	?
D	4

- (d) What could be the possible number of steel clips attracted to part C of the bar magnet? [1]

~ End of paper ~

Score	1
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ANSWER KEY

YEAR : 2019
 LEVEL : PRIMARY 3
 SCHOOL : NAN HUA PRIMARY SCHOOL
 SUBJECT : SCIENCE
 TERM : SEMESTRAL ASSESSMENT 2

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

Q25. (a) They are grouped by how they reproduced.

(b) Group A: reproduce by spores

Group B: reproduce by laying eggs

(c) cat

Q26. (a) Material R

(b) Material S can be bent easily and it can absorb water.

(c) Material P does not float on water, but material Q float on water.

Q27. (a) It will remain the same.

(b) The plant's root is wrapped by a plastic bag and it cannot absorb water.

Q28. (a) Digestive system

(b) Part A,B,C,E

(c) Part D

Q29. (a) Magnetism can act at a distance from an distance.

(b) North-South direction

(c) Object A could be a magnet. Magnets can repel and attract while magnetic materials can only attract.

Q30. (a) Does living things need air to survive.

(b) Type of snails, Number of snails, Amount of food available

(c) Set-up C

Q31. (a) Question 5

(b) Group B

(c) Insects

Q32. (a) Material C. The distance between the highest and lowest points of the material is the smallest, so material C is the least flexible, making it most suitable to be used to make a food tray.

(b) The thickness of the material.

Q33. (a) The smaller piece of cooked carrot has a bigger surface area in contact with the digestive juice so the smaller piece of cooked carrot can be digested faster than the whole piece of cooked carrot.

(b) The small intestine

- Q34. (a) He did not stroke the iron bar enough times.
(b) Increase the number of strokes.
(c) Electrical method
(d) 2 steel clips



2
3/10

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NANYANG PRIMARY SCHOOL
PRIMARY 3 SCIENCE
SEMESTRAL ASSESSMENT 2
2019

BOOKLET A

Date : 22 October 2019
Duration : 1 h 20 min

Name : _____ ()

Class: Primary 3 ()

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.
FOLLOW ALL INSTRUCTIONS CAREFULLY.

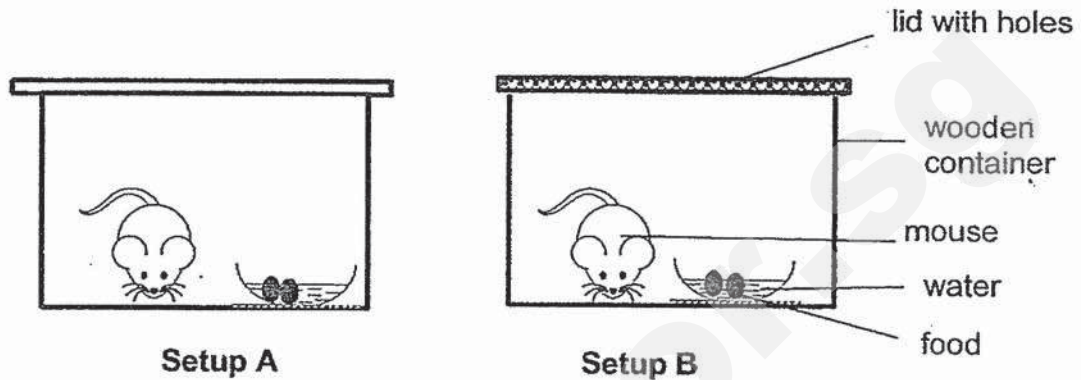
Booklet A consists of 16 printed pages including this cover page.

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Section A (48 marks)

For each question from 1 to 24, four options are given. One of them is the correct answer. Indicate your choice in this booklet and shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet provided.

1. Susanna did an experiment with 2 mice and placed each of them in 2 wooden containers with different lids. She gave food and water to the mice daily.



After three days, Susanna found that the mouse in setup A died while the mouse in setup B survived.

Which of the following statements about the experiment is/are correct?

- A The mouse in setup A might survive with more food.
- B The mouse in setup A died because there was not enough air.
- C The mouse in setup B survived because it had air, food and water.

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

2. The diagram below shows animal T hiding in its shell when touched.



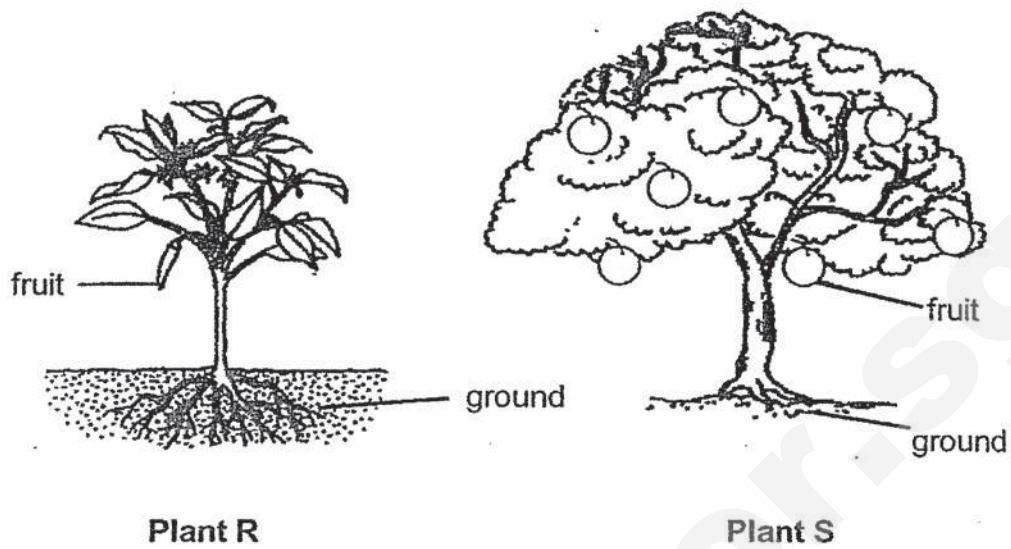
before animal T was touched

after animal T was touched

Which one of the following characteristics of living things does animal T 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. The diagram below shows two plants, R and S.

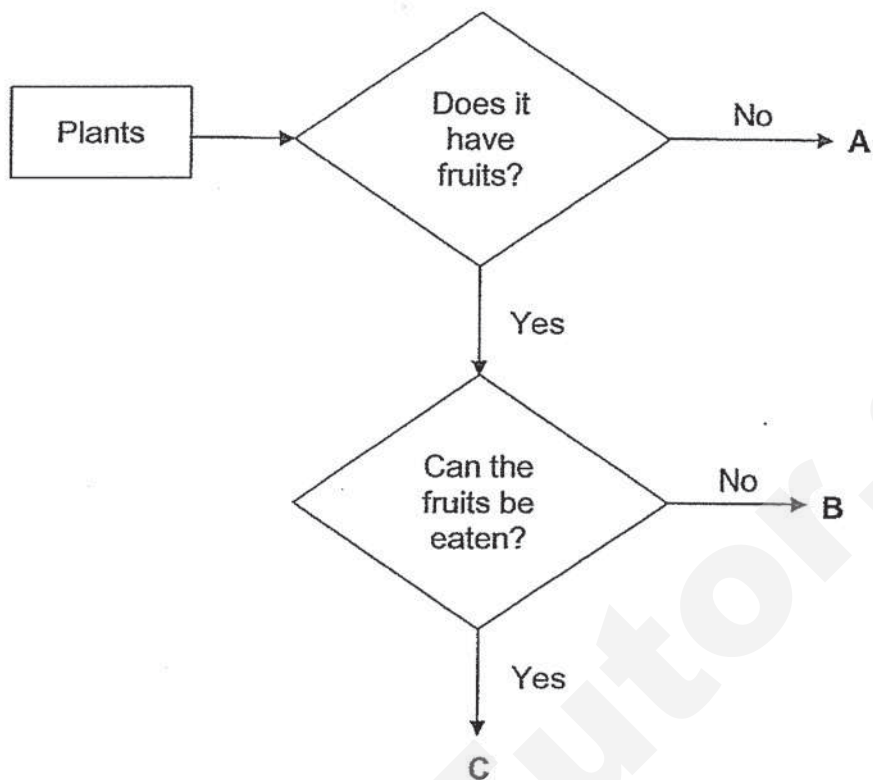


Based on the diagrams above, what are the similarities between plants R and S?

- A Both are land plants.
- B Both are non-flowering plants.
- C Both plants reproduce by seeds.

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

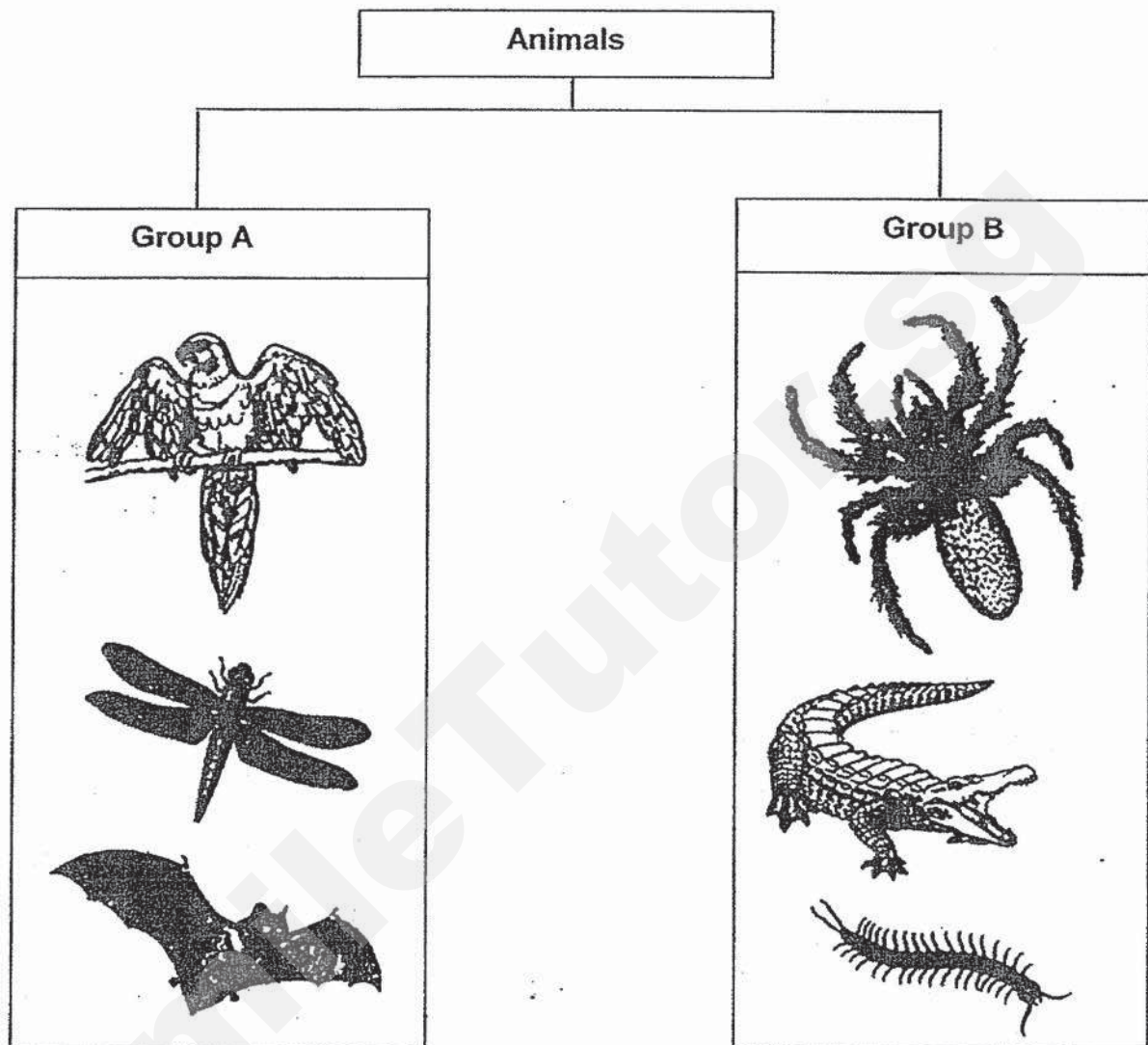
4. Study the flowchart below.



Based on the flowchart above, which plant(s) is/ are flowering plants?

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

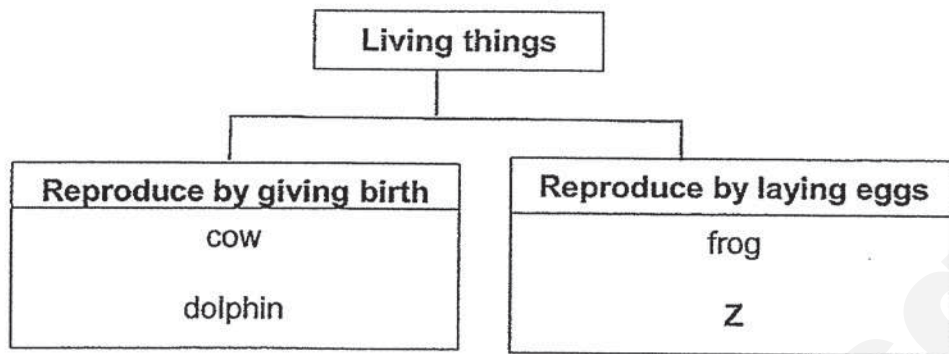
5. The classification chart below shows some animals.



Which one of the following shows the headings that could correctly represent groups A and B?

	Group A	Group B
(1)	Have hair as body covering	Do not have hair as body covering
(2)	Have wings	Do not have wings
(3)	Do not have a tail	Have a tail
(4)	Do not have four legs	Have four legs

6. Study the classification chart below.



Which one of the following animals could Z be?

- (1) ant
- (2) mouse
- (3) monkey
- (4) elephant

7. The table below shows the characteristics of animals R, S, T and U.

Animals	Has wings	Has feathers	Suckles their young
R	✓	✓	
S	✓		✓
T			✓
U			✓

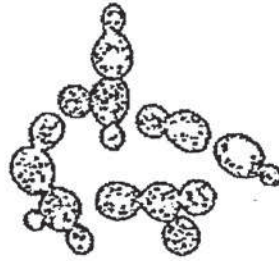
Based only on the information above, which one of the following statements is true?

- (1) Animal R is an insect.
- (2) Only animal U is a mammal.
- (3) Both animals R and S are birds.
- (4) Animals S, T and U are mammals.

8. The diagram below shows two types of living things.



mushrooms

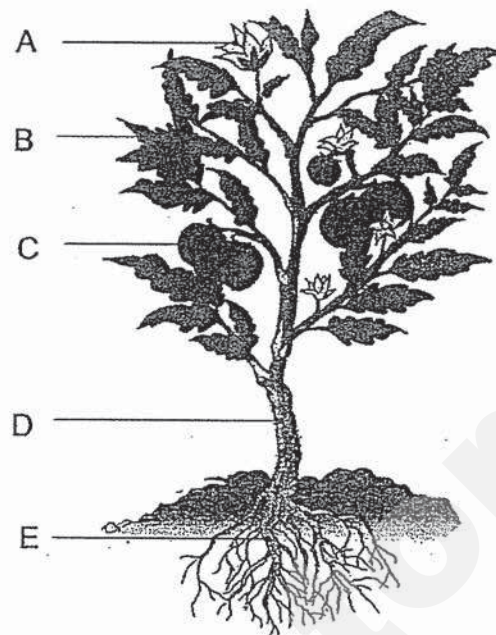


enlarged view of yeasts

Which one of the following statements is true for both mushrooms and yeasts?

- (1) Both are bacteria.
- (2) Both can reproduce.
- (3) Both can make their own food.
- (4) Both do not need air, water and food to stay alive.

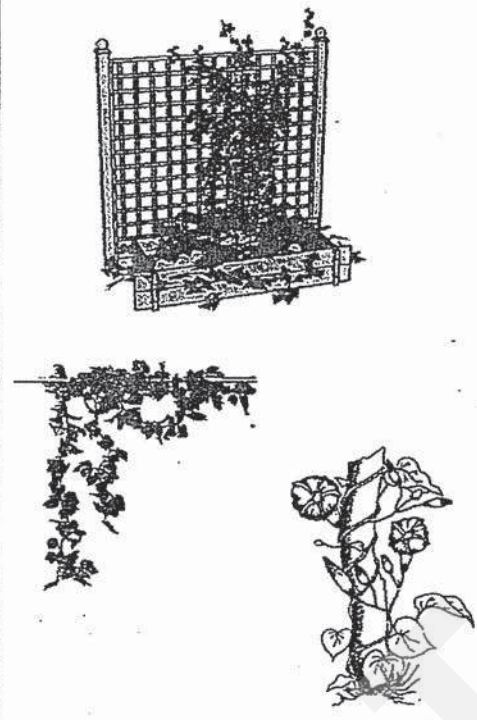

9. The diagram below shows different parts of a flowering plant, A, B, C, D and E.



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

	A	B	C	D	E
(1)	leaf	stem	flower	fruit	root
(2)	leaf	flower	stem	root	fruit
(3)	flower	leaf	stem	fruit	root
(4)	flower	leaf	fruit	stem	root

10. The table below shows 2 groups of plants, P and Q, classified based on their characteristics.

P	Q
	

Which one of the following best represents the headings, P and Q, in the table above?

	P	Q
(1)	do not bear fruits	bear fruits
(2)	do not have stems	have stems
(3)	weak stems	strong stems
(4)	cannot make food	can make food

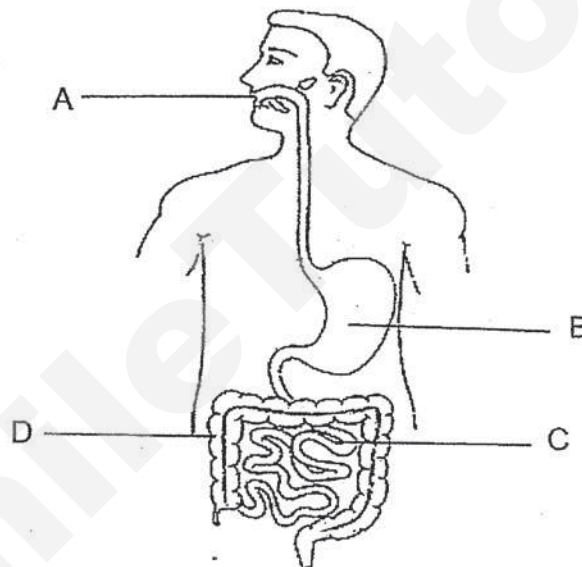
11. A few pupils were discussing about the functions of different organ systems.

Caleb : Skeletal system protects our organs.
Jeremy : Muscular system allows body parts to move.
Ai Shan : Respiratory system takes in air into the body.
Han Ming: Digestive system allows digested food to be absorbed at the large intestine

Which one of the following pupils has made an **incorrect** statement?

- (1) Caleb
- (2) Jeremy
- (3) Ai Shan
- (4) Han Ming

12. Study the diagram of the human digestive system below.



In which parts of the digestive system do digestion take place?

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

13. Study the items in the box below.

X	Y
tracing paper tissue paper	glass jar plain water

Which one of the following could represent X and Y?

	X	Y
(1)	metal	non-metal
(2)	non-flexible	flexible
(3)	magnetic	non-magnetic
(4)	Allow some light to pass through	Allows most light to pass through

14. The frame of a car is made of thick metal sheets.



Which one of the following is the correct reason why metal sheets instead of plastic is used to make the car frame?

- (1) Metal is stronger than plastic.
- (2) Metal is magnetic but not plastic.
- (3) Metal is waterproof but plastic is not.
- (4) Metal sinks in water but plastic floats.

15. The table shows the properties of 3 objects, A, B and C.

Properties	A	B	C
strong	✓	✓	×
flexible	✓	✓	×
waterproof	✓	×	✓

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

	A	B	C
(1)	iron nail	writing paper	pebble
(2)	rubber boots	woollen scarf	glass jar
(3)	pencil lead	string	steel pot
(4)	plastic bag	crayon	envelope

16. Hazif was given 3 objects below to classify into 2 groups.

ice cream stick
gold ring
steel paper clip

Which one of the following shows the correct classification of the objects?

	float	sink
(1)	ice cream stick	gold ring, steel paper clip
(2)	gold ring, steel paper clip	ice cream stick
(3)	ice cream stick, gold ring	steel paper clip
(4)	steel paper clip	ice cream stick, gold ring

17. The suits of fire-fighters as shown below must be made of a special material that can withstand high temperature.



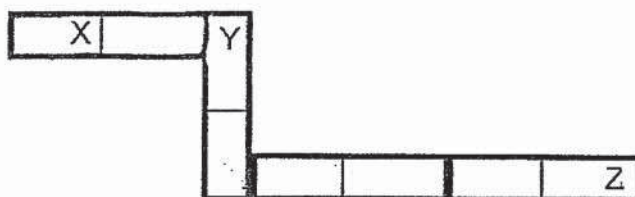
Which of the following properties are important in selecting the material for making the fire-fighter's suit.

- A The fabric must be light.
- B The fabric must be strong.
- C The fabric must be flexible.
- D The fabric must be waterproof.

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

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

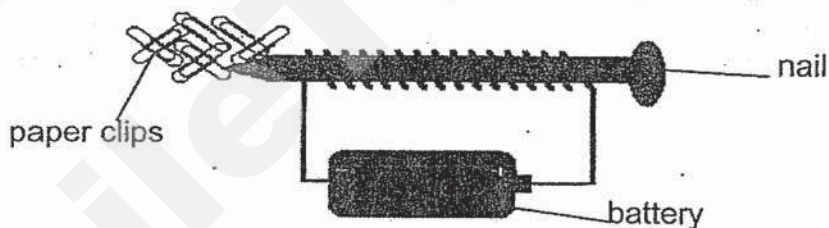
18. Four magnets were placed as shown in the diagram below. They did not repel each other.



Based on the diagram above, which one of the following correctly represents the poles X, Y and Z of the magnets?

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

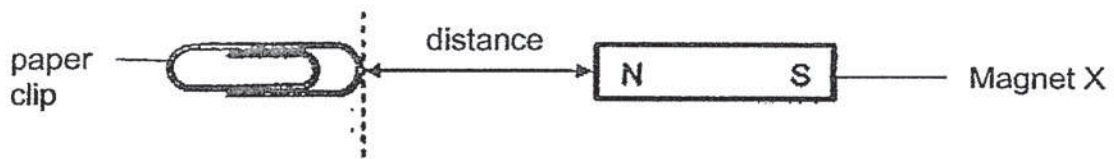
19. Jason set up an experiment as shown below.



Which of the following action(s) should Jason take to allow him to pick up more paper clips using the set-up above?

- A Coil the wire around the battery.
B Add more batteries to the set-up.
C Use a hairdryer to heat up the nail.
D Change the direction of the battery.
- (1) B only
(2) A and B only
(3) A and D only
(4) C and D only

20. Marcus setup the experiment as shown below.



He brought magnet X closer to the paper clip until it was attracted to the magnet. He measured the distance at which the magnet was able to attract the paper clip. He repeated the experiment using magnets Y and Z.

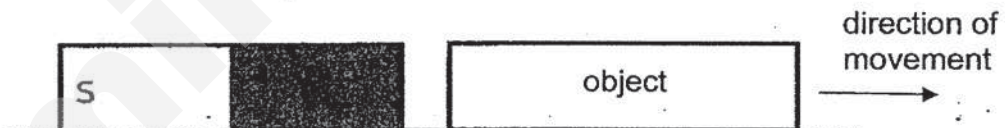
The table below shows the results of his experiment.

Magnet	Distance(cm)
X	4
Y	3
Z	5

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

	weakest	→	strongest
(1)	X	Y	Z
(2)	X	Z	Y
(3)	Y	X	Z
(4)	Z	Y	X

21. Anna brought a magnet near an object as shown below.



It was observed that the object started to move in the direction as shown above when the magnet was brought closer to it.

Based on Anna's observation, which of the following can she definitely conclude?

- (1) The object is made of plastic.
- (2) The object is made of copper.
- (3) The object is a magnet that has its North poles facing the magnet.
- (4) The object is a magnet that has its South poles facing the magnet.

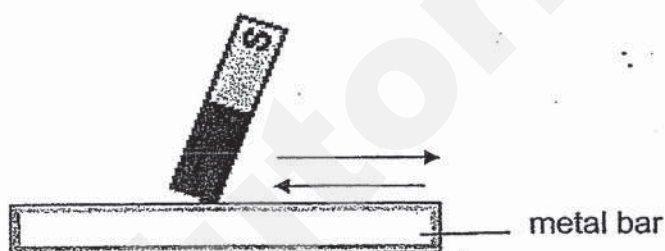
22. Which of the following statements are true of magnets?

- A A magnet can attract all types of metals.
- B A bigger magnet is always stronger than a smaller magnet.
- C An object made of magnetic material can be made into a magnet.
- D The north pole of a magnet will attract the south pole of another magnet.

- (1) A and B only
- (3) B and D only

- (2) A and C only
- (4) C and D only

23. Devin was trying to magnetise a metal bar by using a magnet to stroke the metal bar in the direction as shown below.



He found that the metal bar was not magnetised.

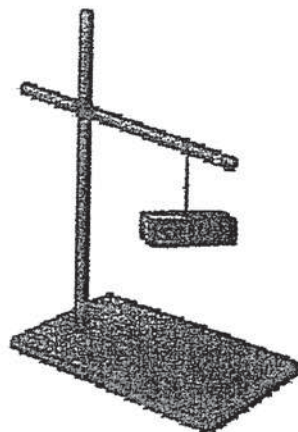
Which of the following could be the possible reasons?

- A The direction of stroking is not correct.
- B The shape of the magnet is not correct.
- C The metal bar is a non-magnetic material.
- D The poles facing the metal bar is not correct.

- (1) A and B only
- (3) B and D only

- (2) A and C only
- (4) C and D only

24. A bar magnet was suspended freely as shown in the diagram below.

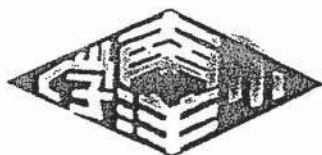


In which direction would the magnet be facing when it is no longer moving?

- (1) East-West
(3) North-East

- (2) North-South
(4) South-West

~ END OF BOOKLET A ~



NANYANG PRIMARY SCHOOL

PRIMARY 3 SCIENCE

SEMESTRAL ASSESSMENT 2
2019

BOOKLET B

Date : 22 October 2019

Duration : 1 h 20 min

Name : _____ ()

Class: Primary 3 ()

Marks Scored:

Booklet A :		48
Booklet B :		32
Total :		80

Any query on marks awarded should be raised by 1 November 2019. We seek your understanding in this matter as any delay in the confirmation of marks will lead to delays in the generation of results.

Parent's signature:

**DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.
FOLLOW ALL INSTRUCTIONS CAREFULLY.**

Booklet B consists of 13 printed pages including this cover page.

Section B (32 marks)

Write your answers to questions 25 to 34 in the spaces provided.

25. Study the diagrams below.



apple tree



bird's nest fern



papaya tree

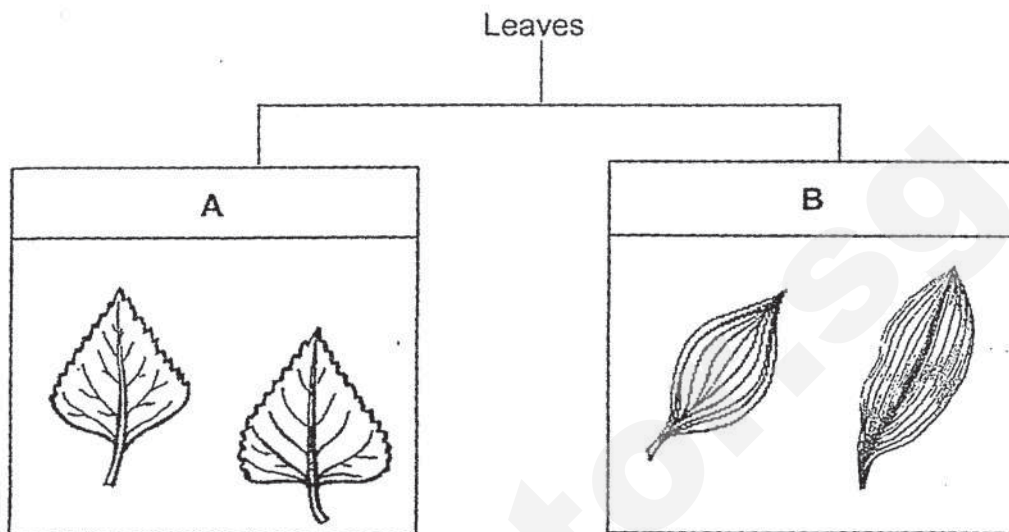


moss on a tree

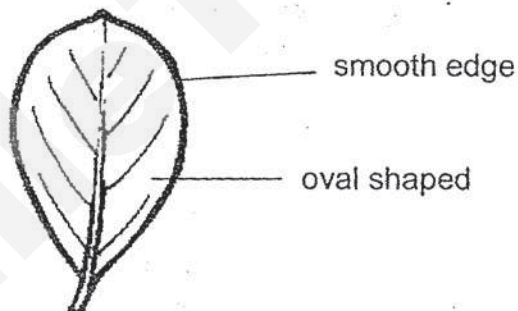
- (a) Classify the plants above into 2 groups. Using the table below, give a suitable heading for each group and complete the classification of the plants.

(i) _____	(ii) _____	[1]
(iii) apple tree _____ _____	(iv) bird's nest fern _____ _____	[1]

Aini studied the classification chart below.

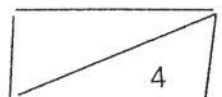


Her teacher gave her the leaf as shown below.

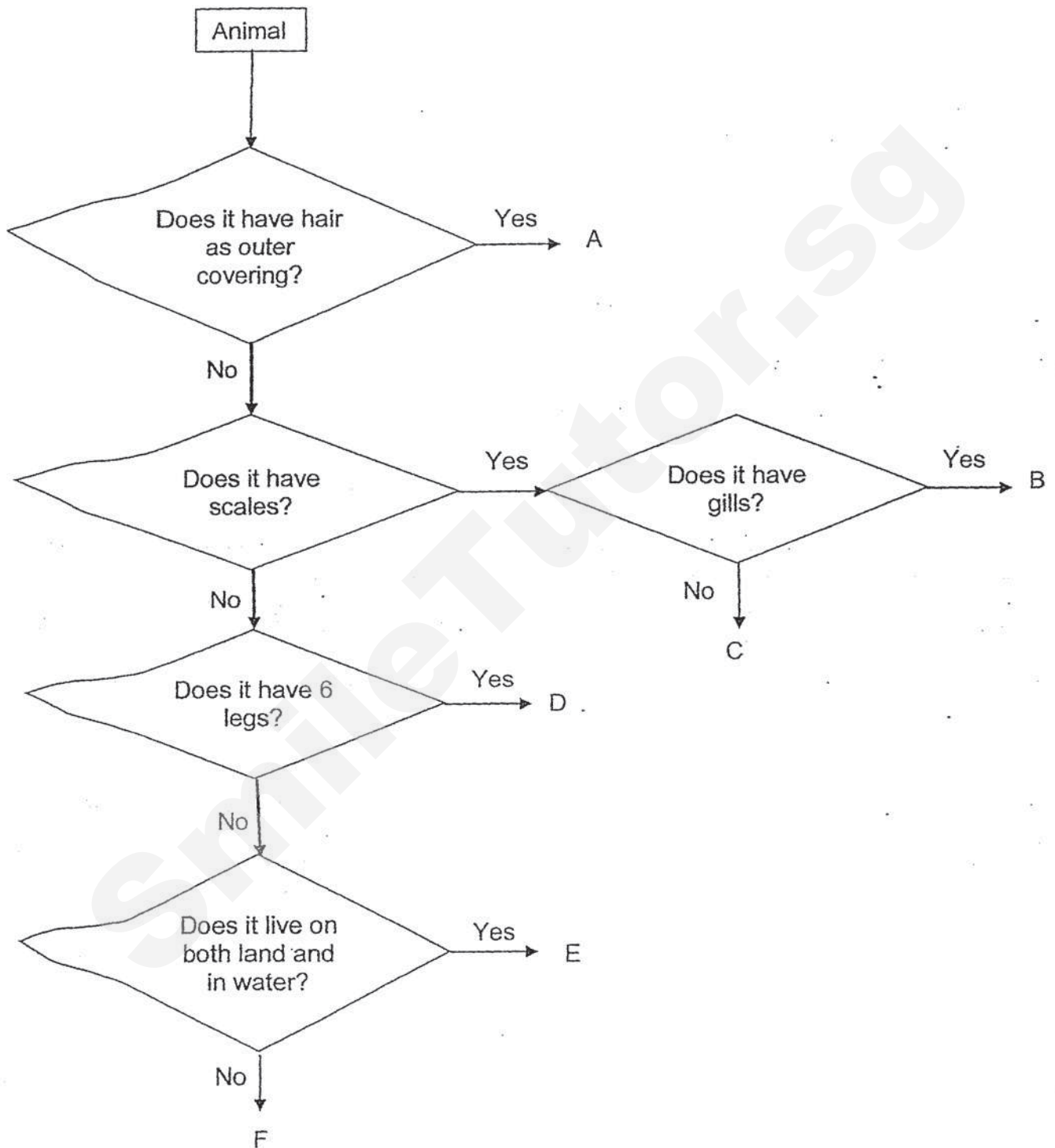


- (b) In which group, A or B, should she classify leaf X?
Give a reason for your answer.

[2]



26. Study the flowchart below to answer the questions based only on the information below.

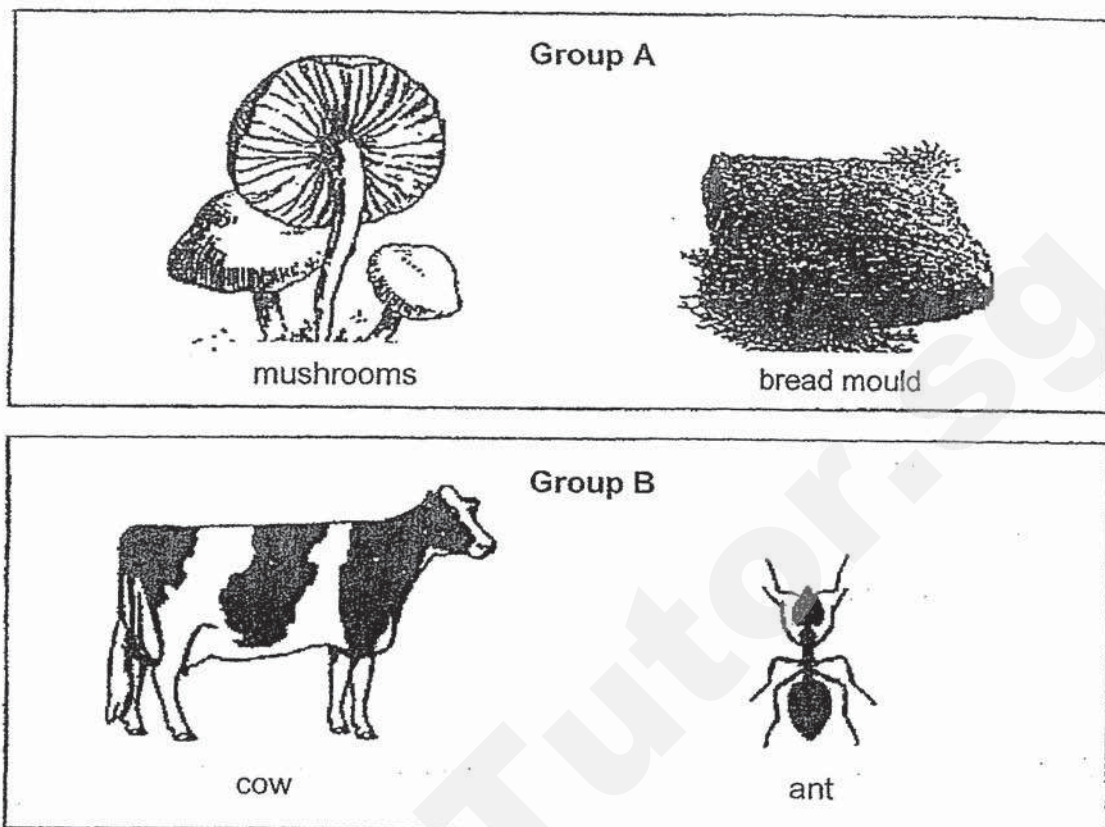


- (a) In the table below, fill in the letters C, D and F to identify the groups that the animals most likely belong to. Three groups of animals have been done for you. [3]

Types of animal	Letter
Bird	
Fish	B
Insect	
Reptile	
Mammal	A
Amphibian	E

- (b) Based on the flowchart, state one **similarity** in characteristics between Animals B and E. [1]

27. The diagrams below show two groups of living things.



- (a) Based only on the **characteristics** of living things, write down the **difference** between the 2 groups of living things, A and B.
(Do not give the animal grouping) [1]

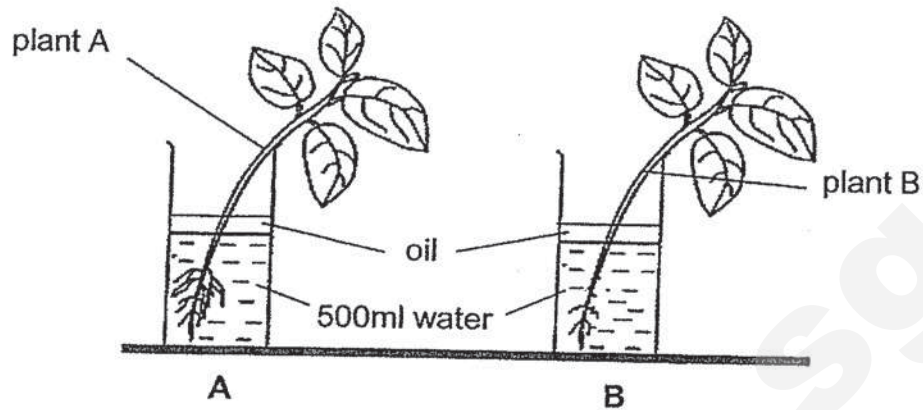
Group A: _____

Group B: _____

- (b) How do the living things in Group A reproduce? [1]

- (c) How do the living things in Group A obtain their food to stay alive? [1]

28. Yusoff set up an experiment as shown below.



Both setups were left in a room next to a window for a week. The table shows the volume of water in both setups at the start and the end of the experiment.

Setup	Volume of water (ml)	
	Start of experiment	End of experiment
A	500	250
B	500	400

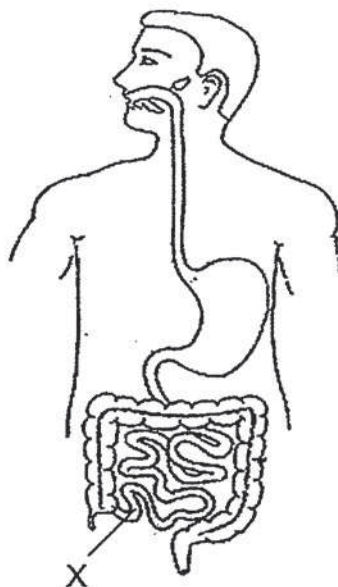
- (a) Which plant had taken in more water?

[1]

- (b) Explain what caused the difference in results between setup A and setup B.

[1]

29. The diagram below shows the human digestive system.



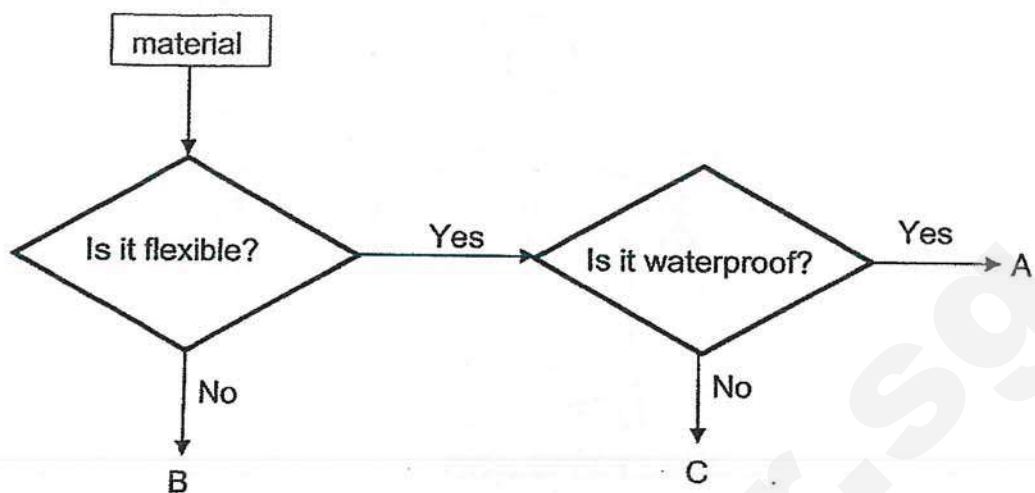
- (a) In the diagram above, **label** and **name** the part of the digestive system that absorbs water from undigested food. [1]

- (b) State a function of part X. [1]

- (c) State the purpose of the chewing process in the digestion of the food. [1]

- (d) Explain how the presence of saliva in the mouth helps in the digestion of food. [1]

30. Study the flowchart below.

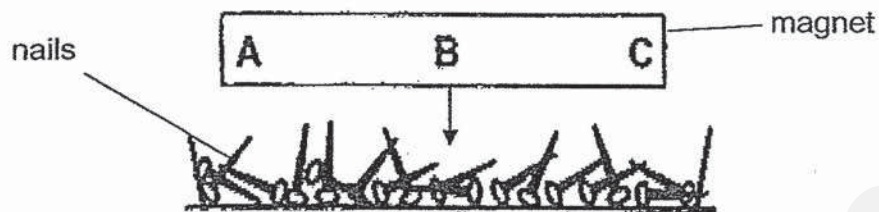


- (a) Based on the flowchart above, state all the properties of material C. [1]



- (b) Which material, A, B or C, is the most suitable for making a swimming float as shown above? Explain your choice based on a property of the material. [2]

31. Mark placed a new bar magnet into a tray of nails. The nails were made of magnetic material.



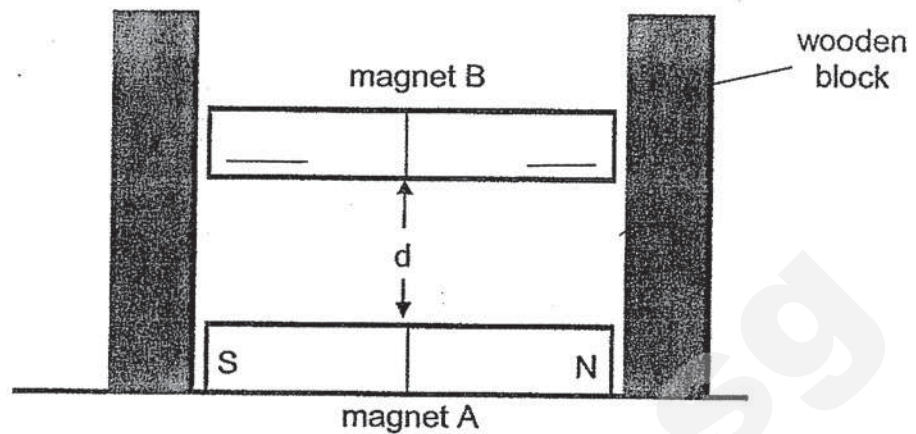
- (a) The table below shows the number of nails attracted at part B. Predict and write down the number of nails attracted at parts A and C. [1]

A	B	C
	3	

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

- (c) If Mark had put the magnet higher above the tray of nails, would the number of nails attracted at B increase, decrease or remain the same? [1]

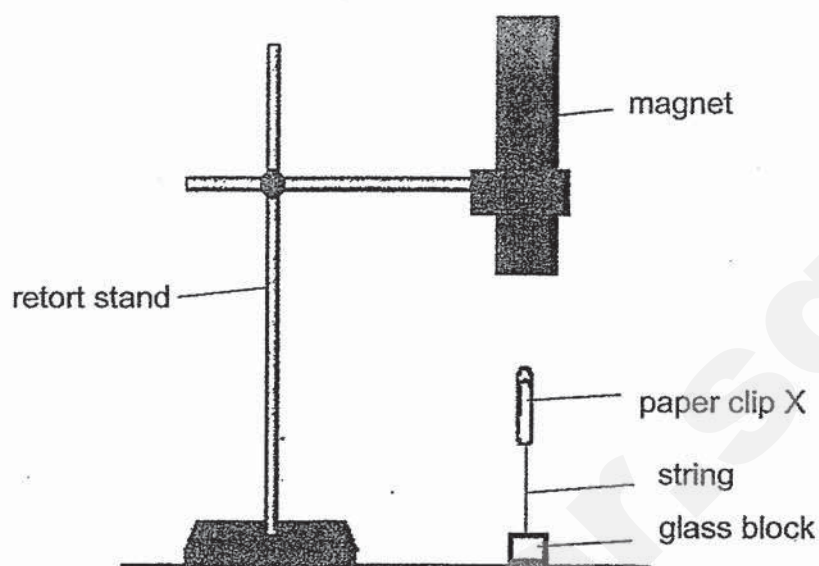
32. Jason placed 2 bar magnets between two wooden blocks as shown below.



Jason observed that magnet B was "floating" above the magnet A. Distance, d , is the distance between the 2 magnets.

- (a) In the diagram above, write "N" and "S" to indicate the North and South Pole of magnet B. [1]
- (b) Suggest one change that Jason could make if he wants to decrease distance, d , between the 2 magnets. [1]

33. Lisa set up the experiment as shown below.



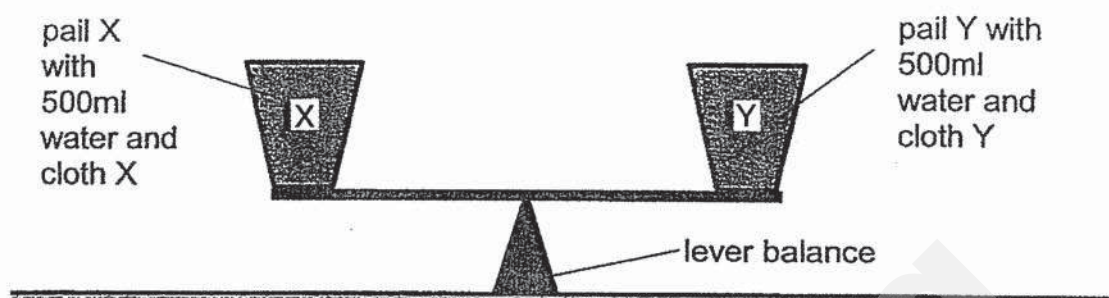
Lisa tied a paper clip to a heavy glass block with a piece of string. She observed that the paper clip X was "floating" in the air when a magnet was brought above it.

- (a) Identify a possible material that the paper clip X could be made of. [1]

Lisa repeated the experiment with paper clip Y.

- (b) Explain why paper clip Y **did not** "float" when a magnet was brought above it, as compared to paper clip X. [2]

34. Mary balanced 2 pails, X and Y, containing 500ml of water each on a lever balance.



She then placed a piece of cloth made of material X into pail X and another piece of cloth made of material Y into pail Y. Both pieces of cloth are of the same size and weigh 50g. After both cloth were added, the lever balance remained balanced as shown above.

After 5 minutes, Mary removed both pieces of cloth from pails X and Y. The lever balance was no longer balanced as shown in diagram below.



- (a) Give a reason why the pails no longer balance each other on the lever balance. [1]

- (b) Which material, X or Y, is more suitable for making a bath towel? Explain your choice. [2]

~ END OF BOOKLET B ~

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Nanyang Primary School
P3 SCIENCE SA2 2019 – Simplified Answer Key

Answer Key
Section A

1	3	11	4	21	3
2	3	12	3	22	4
3	2	13	4	23	2
4	4	14	1	24	2
5	2	15	2	25	
6	1	16	1	26	
7	4	17	4	27	
8	2	18	3	28	
9	4	19	1		
10	3	20	3		

Section B

Qn No	Acceptable Answers												
25.													
(a)	<table> <tr> <td>Flowering plants</td><td>Non-flowering Plants</td></tr> <tr> <td>Apple Tree Papaya Tree</td><td>Fern Moss</td></tr> </table>	Flowering plants	Non-flowering Plants	Apple Tree Papaya Tree	Fern Moss								
Flowering plants	Non-flowering Plants												
Apple Tree Papaya Tree	Fern Moss												
(b)	<p>Group B. Leaf X has the same oval shape as those in Group B. Group A. Leaf X has the same type of vein pattern as Group A.</p>												
26.													
(a)	<table> <tr><td>Bird</td><td>F</td></tr> <tr><td>Fish</td><td>B</td></tr> <tr><td>Insect</td><td>D</td></tr> <tr><td>Reptile</td><td>C</td></tr> <tr><td>Mammal</td><td>A</td></tr> <tr><td>Amphibian</td><td>E</td></tr> </table>	Bird	F	Fish	B	Insect	D	Reptile	C	Mammal	A	Amphibian	E
Bird	F												
Fish	B												
Insect	D												
Reptile	C												
Mammal	A												
Amphibian	E												
(b)	Animals B and E do not have hair as their outer covering												
27.													
(a)	Group A: Living things that cannot move freely on their own. Group B: Living things that can move freely on their own.												
(b)	They reproduce by spores.												
(c)	Mushrooms feed on/get food from the living things they grow on, either dead or alive.												

28.(a)	Plant A.
(b)	Plant A has more roots to absorb more water.
29. (a)	Name and Label large intestines.
(b)	Absorbs digested food into bloodstream.
(c)	Helps the food to be broken down into smaller pieces.
(d)	Caused the food to be moist making it easier to swallow.
30.(a)	C is flexible but not waterproof.
(b)	Material A is flexible so that the float can be inflated with air to allow it to float.
31. (a)	Any number that is more than B.
(b)	Magnet are strongest at their poles and therefore more nails are being attracted at its poles.
(c)	Decrease
32.(a)	South Pole on left side and North Pole on the right.
(b)	Replace magnet B with a weaker magnet.
33. (a)	Iron/ steel
(b)	The magnet attracted the paper clip X as the paper clip X was made of a magnetic material but paper clip Y is not made of magnetic material and will not be attracted by the magnet.
34. (a)	There is less water left in pail X.
(b)	Material X is more suitable to make bath towel as it is more absorbent and the person can use the towel to dry himself better.

2012



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.

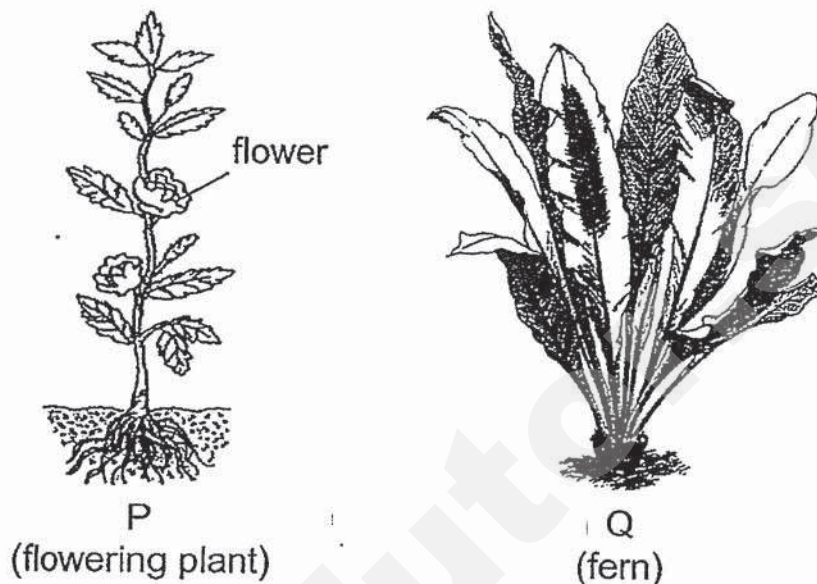
SHADE YOUR ANSWERS ON THE OPTICAL ANSWER SHEET (OAS) PROVIDED.

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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.



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.

- 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)



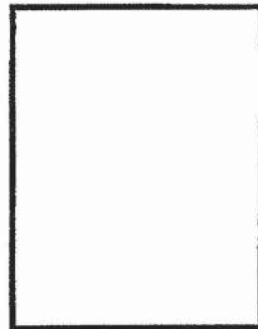
(2)



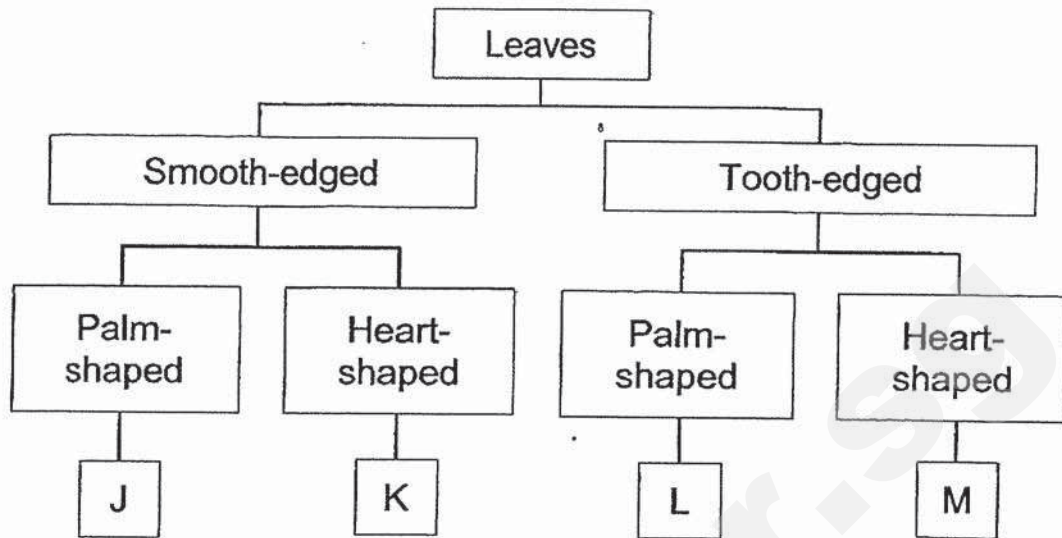
(3)



(4)



3 Study the classification chart carefully.

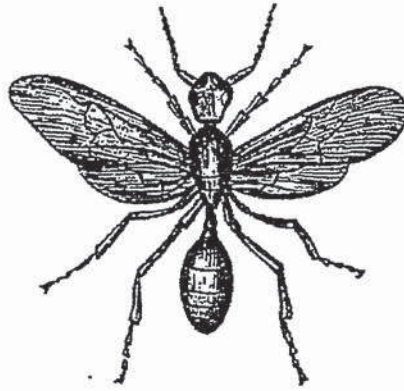


Which letter, J, K, L or M, correctly represents the leaf below?



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

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



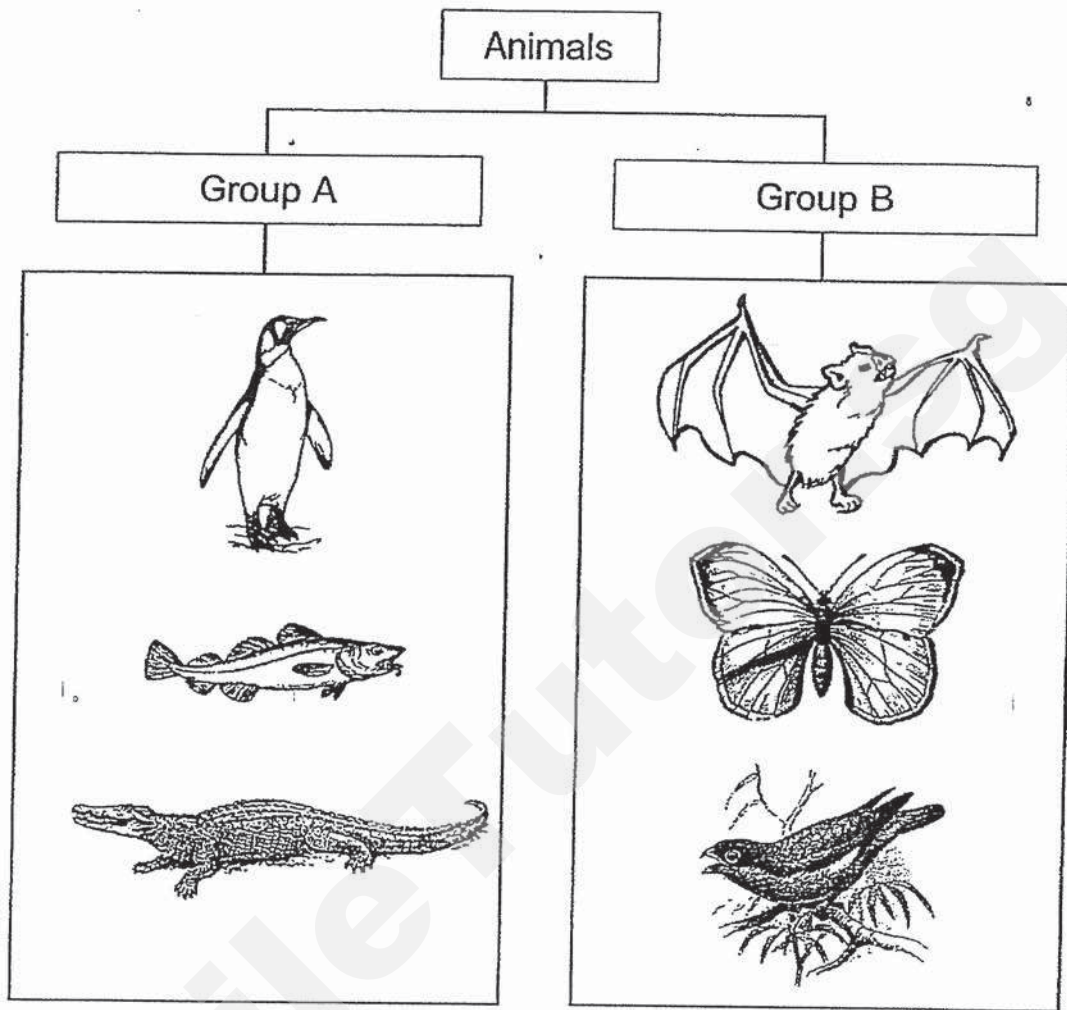
Four children made the following observations about the animal.

- 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

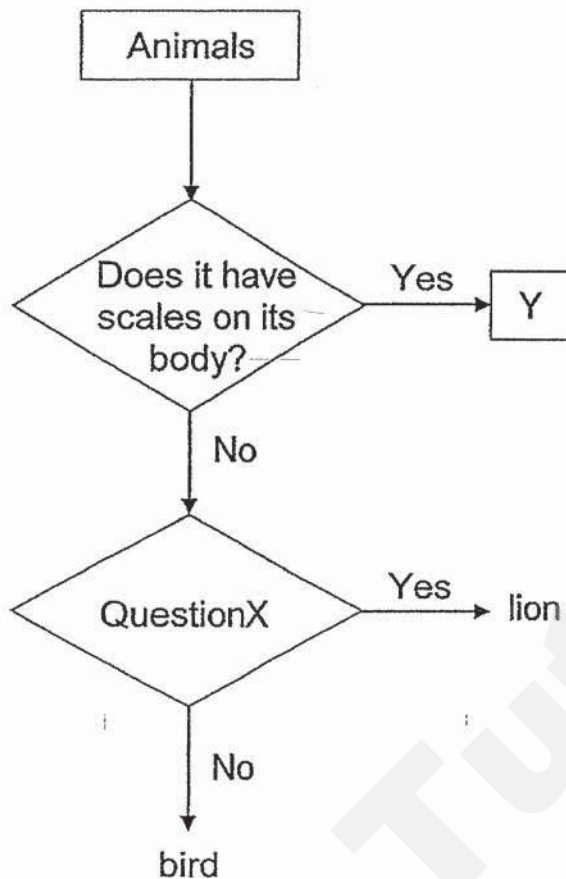
- 5 The diagram below shows how some animals are grouped.



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

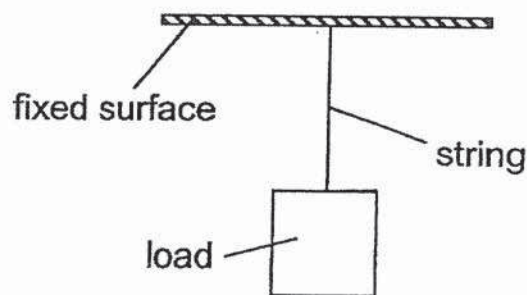
6 Study the diagram below carefully.



Which of the following is correct?

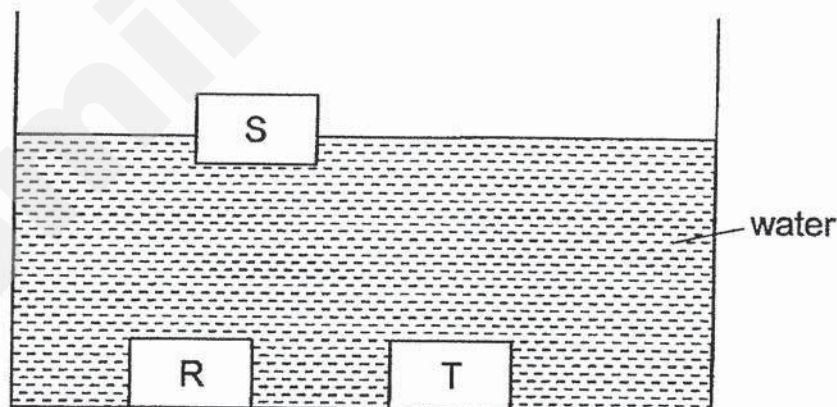
	Question X	Y
(1)	Does it have hair on its body?	ant
(2)	Does it have a beak?	fish
(3)	Does it have hair on its body?	snake
(4)	Does it have a beak?	crocodile

- 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 _____.

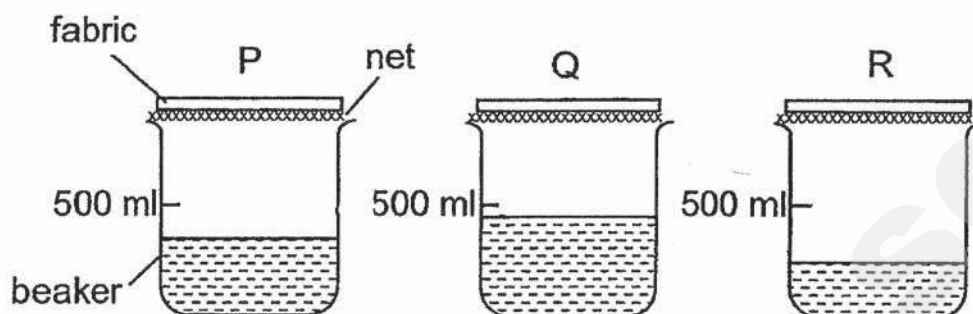
- (1) how flexible the string was
 - (2) how strong the string was
 - (3) how flexible the load was
 - (4) how strong the load was
- 8 Lionel placed three solid blocks, R, S and T, into a tank of water. The three blocks are identical in size. His observation is shown below.



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.

- 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?

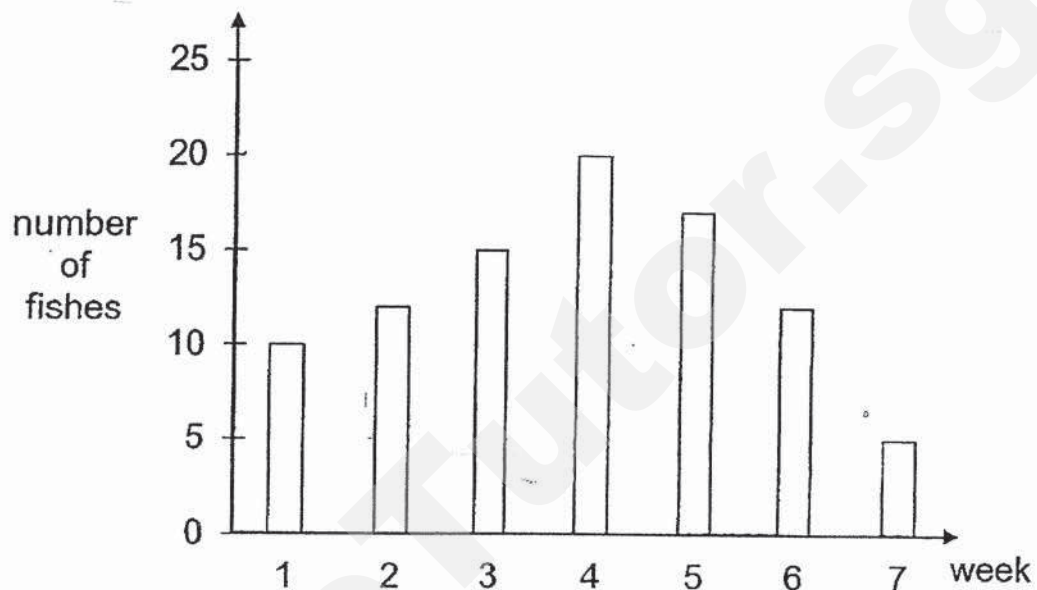
- A : Fabric Q absorbed the most amount of water.
- B : Fabric R absorbed more water than fabric P.
- C : None of the fabrics is waterproof.

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

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.

- 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.



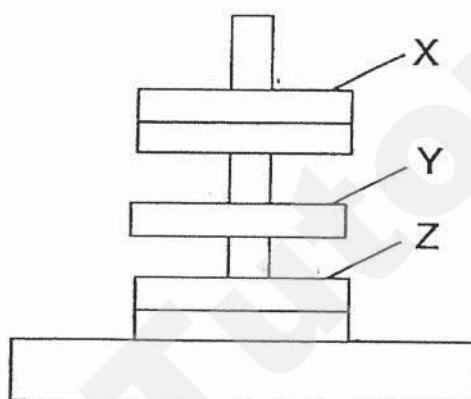
Which organism best represents the toadstool?

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

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.

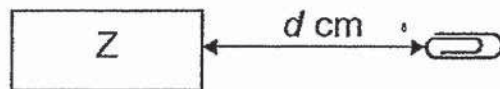
14 Five ring magnets are put in a stand as shown in the diagram below. X, Y and Z are poles of the ring magnets.



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

- 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.



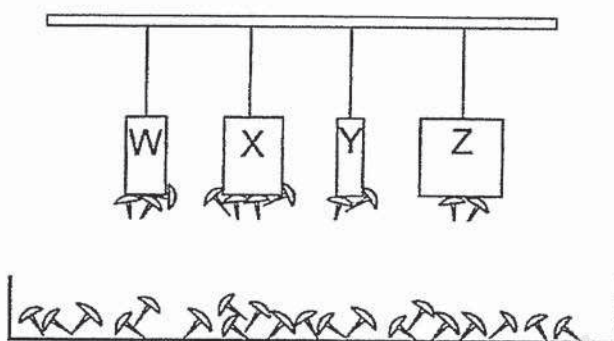
Derek repeated the experiment using two other magnets. One of the magnets is weaker than magnet Z and the other is stronger.

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

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.



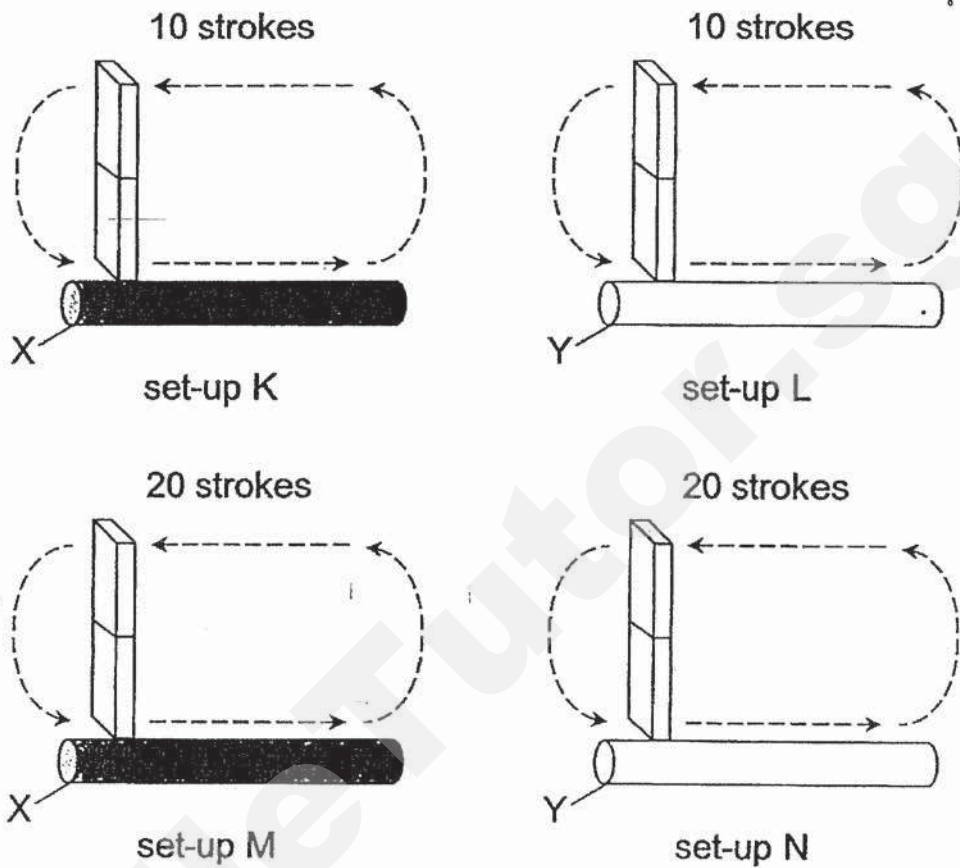
Based on Susan's observation, which of the following statements is/are likely to be true?

- 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

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

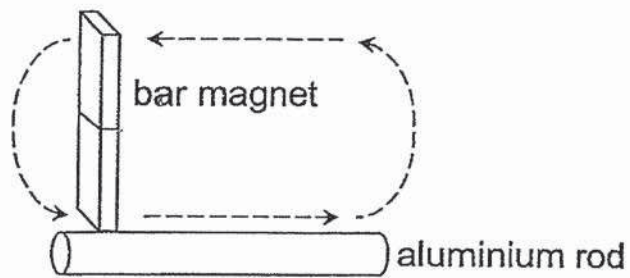
The diagram below shows four set-ups, K, L, M and N.



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

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

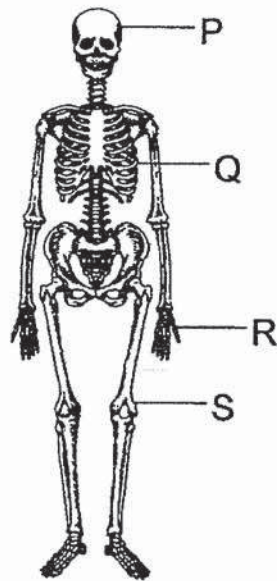


She stroked the rod with the bar magnet for thirty times and placed the rod close to some steel clips. None of the steel clips was attracted to it.

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.

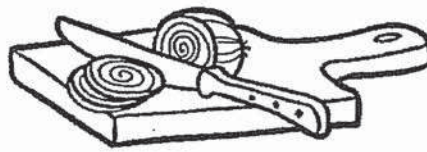
19 Study the diagram below.



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

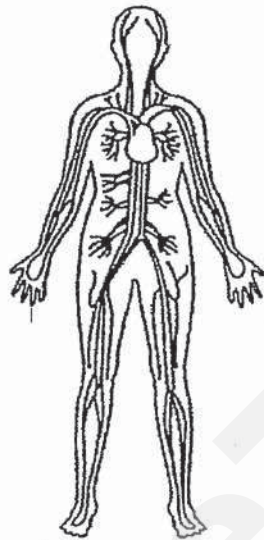
20 Mrs Chan cut herself while chopping onions.



She noticed blood coming out from the cut.

Which organ system causes blood to flow from her finger?

(1)



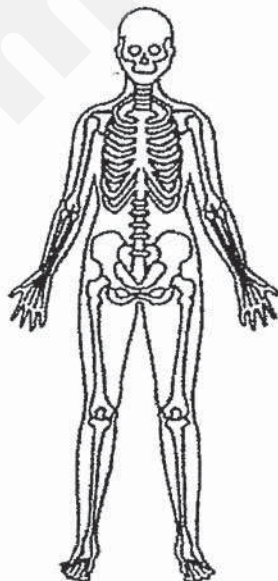
circulatory system

(2)



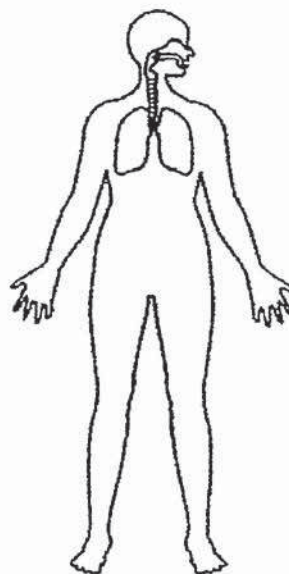
muscular system

(3)



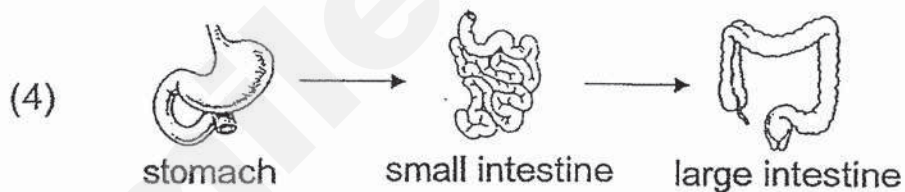
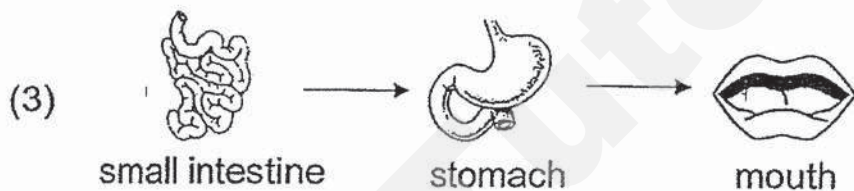
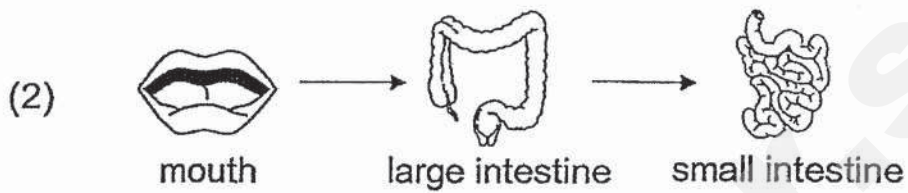
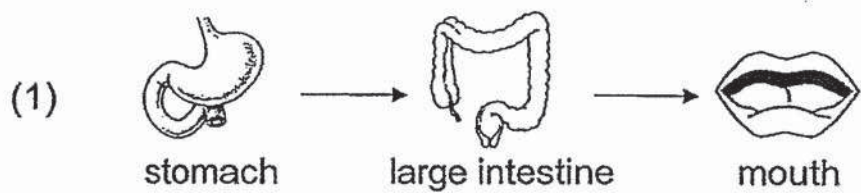
skeletal system

(4)

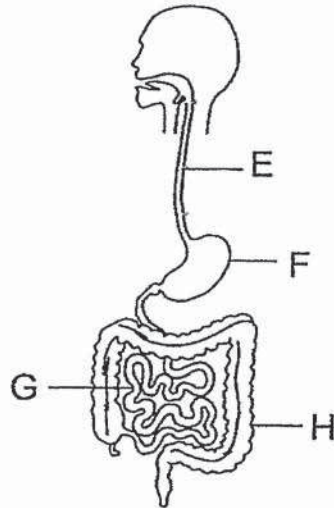


respiratory system

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



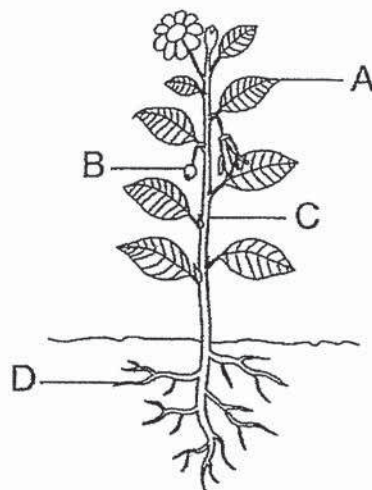
22 The diagram below shows the human digestive system.



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

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

PEI CHUN PUBLIC SCHOOL

PRIMARY 3

SEMESTRAL ASSESSMENT 2 2019

**SCIENCE
SECTION B**

Time: 1h 20 min

Name: _____ ()

Class: Primary 3 / () _____

Date: 25 October 2019

Science Teacher: _____

Parent's Signature: _____

SECTION A	48
SECTION B	32
TOTAL	80

INSTRUCTIONS TO CANDIDATES

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FOLLOW ALL INSTRUCTIONS CAREFULLY.

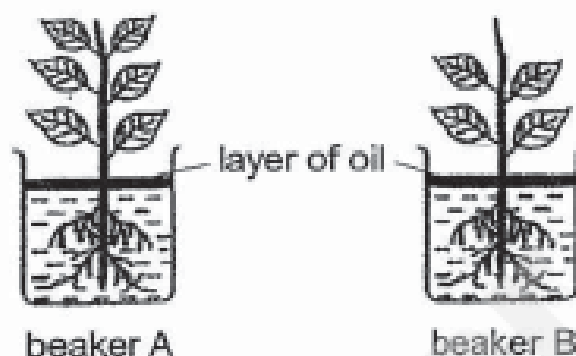
ANSWER ALL QUESTIONS.

WRITE YOUR ANSWERS IN THIS BOOKLET.

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.



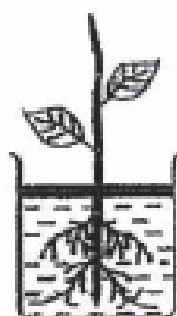
The table shows the amount of water left in each beaker on day 1 and day 5.

	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.

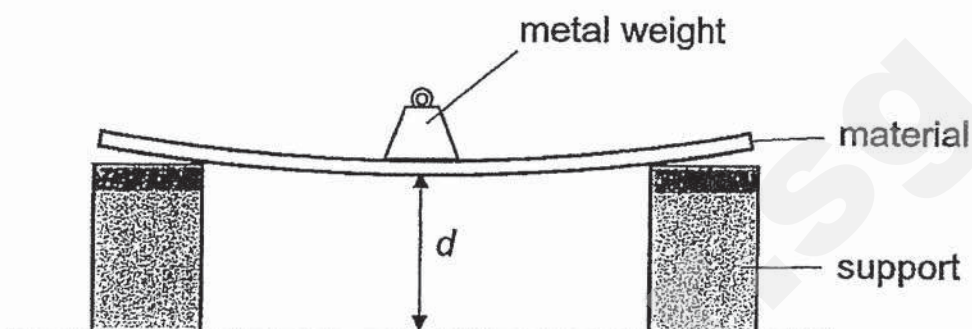
	Does it have scales?	Does it have gills?
P	✓	
Q		✓
R	✓	✓
S		

- (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]

- 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

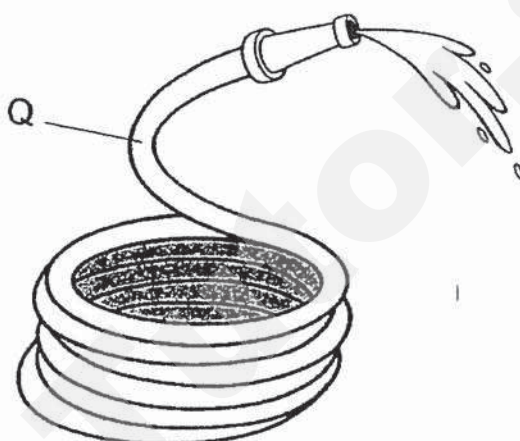
Arrange the materials, X, Y and Z, from the least flexible to the most flexible. [1]

_____ , _____ , _____
(least flexible) (most flexible)

- (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]

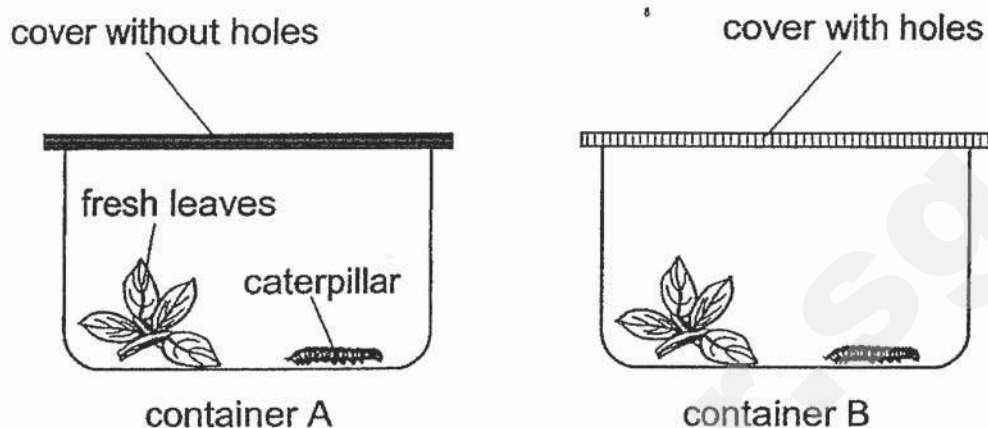
- (c) Give two reasons to support your answer in (b).

[2]

Reason 1 : _____

Reason 2 : _____

- 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.

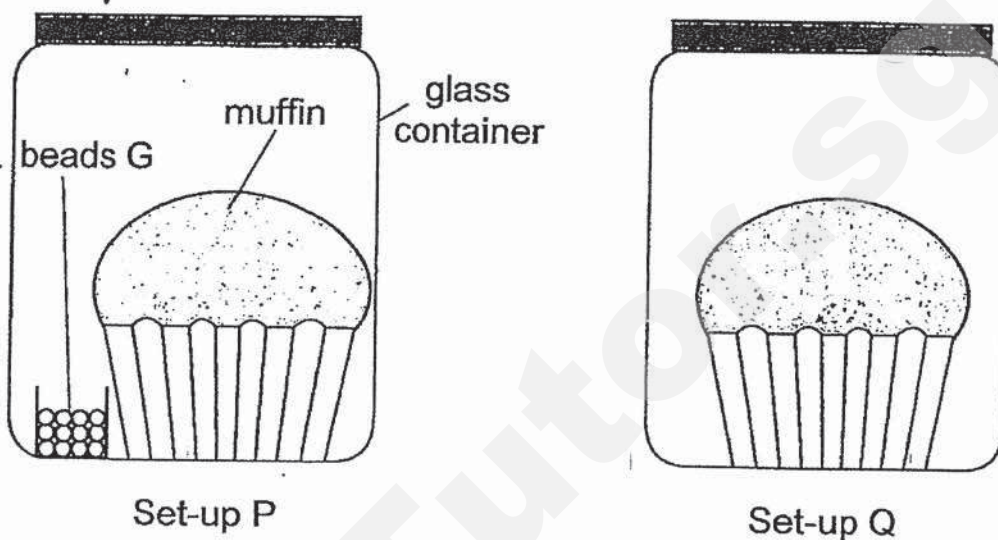


Which characteristic of living things does this show? [1]

- 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.

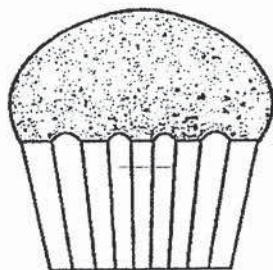


- (a) In which set-up, P or Q, would Jones observe more mould after some time? [1]

- (b) Explain your answer. [1]

- (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]

- 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.

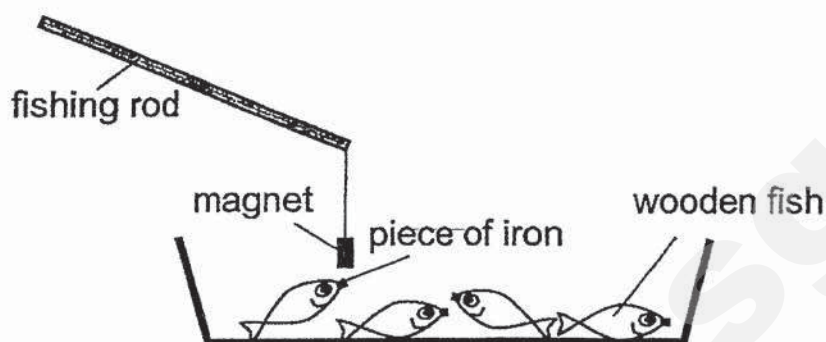
Rod	Observations
X	<p>Diagram 1: Magnet (S-N) near rod (S-C-D). N pole near C. Attraction observed.</p> <p>Diagram 2: Magnet (N-S) near rod (C-D). S pole near C. Repulsion observed.</p>
Y	<p>Diagram 1: Magnet (S-N) near rod (S-E-F). N pole near E. Attraction observed.</p> <p>Diagram 2: Magnet (S-N) near rod (S-F-E). N pole near F. Attraction observed.</p>
Z	<p>Diagram 1: Magnet (S-N) near rod (S-G-H). N pole near G. Attraction observed.</p> <p>Diagram 2: Magnet (N-S) near rod (N-S-H-G). S pole near H. Attraction observed.</p>

- (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.			

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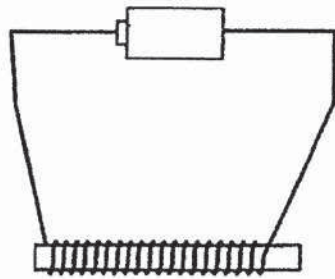
- (b) Jerome had a magnetic fishing game. He was able to pick up the wooden fish, which has a small piece of iron at its tip, using a fishing rod as shown below.



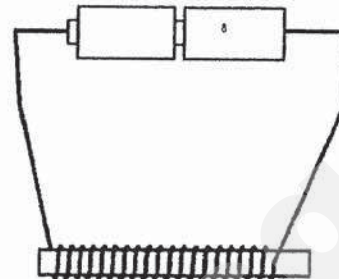
Explain how Jerome can pick up the wooden fish using the fishing rod. [1]

- (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]

- 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



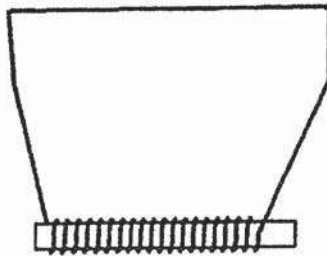
Her daughter's electromagnet

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]

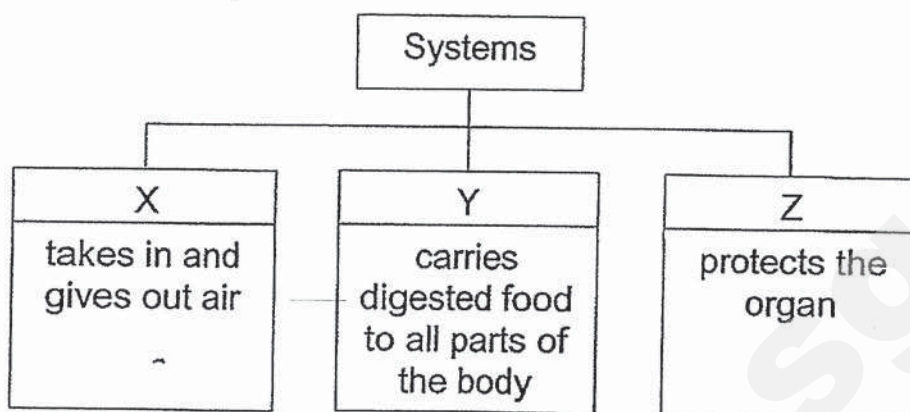
(c) Mrs Poh made another electromagnet as shown below.



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

[1]

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



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

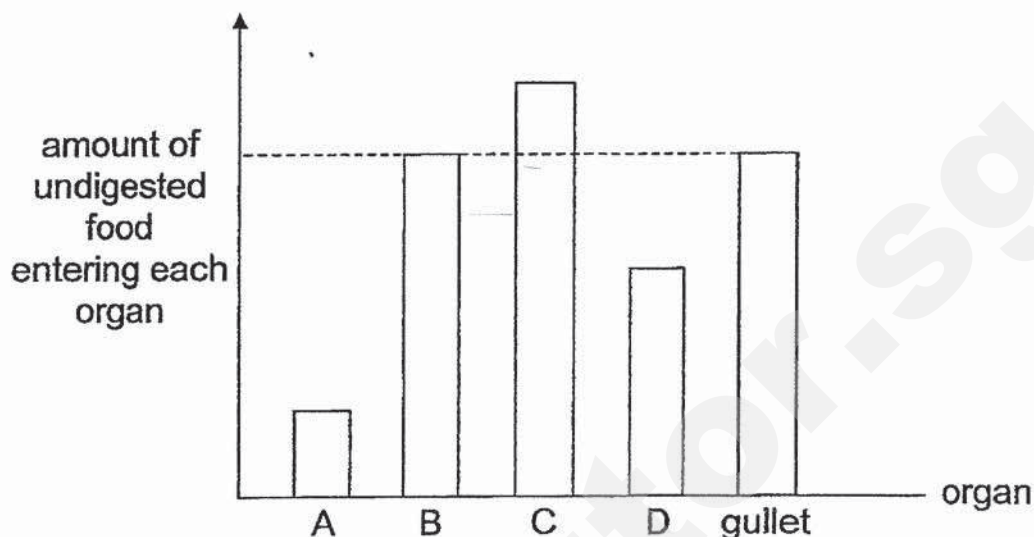
circulatory	digestive	muscular
respiratory	skeletal	

Letter	System
X	
Y	

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

- 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.



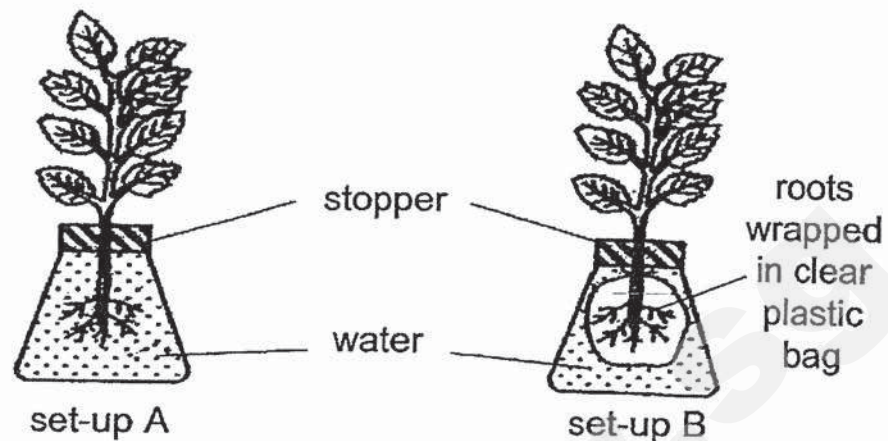
- (a) Based on the diagram, match the letters, A, B, C or D, to each organ in the digestive system. [2]

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*)

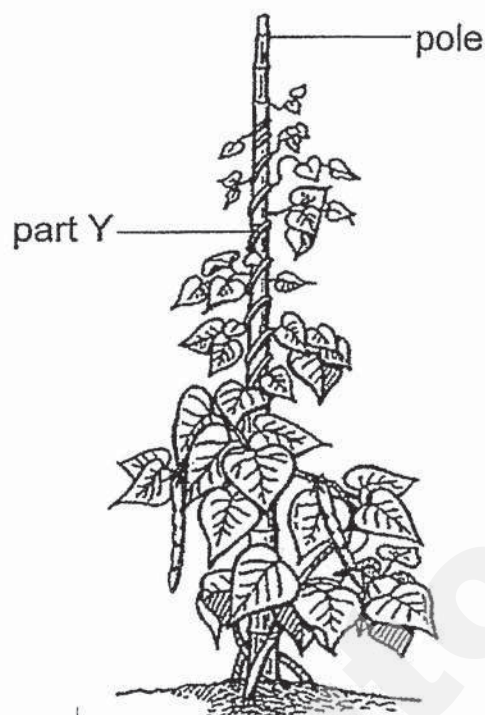
the amount of water left in set-up A.

- (b) Give a reason for your answer in (a).

[1]

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

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

SCORE	
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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)Container B The caterpillar in Container B has enough air to stay alive but the caterpillar in Container A doesn't.

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.

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 roots of the plant in set-up b could not absorb any water as they were wrapped in clear plastic bag.

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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**PEI HWA PRESBYTERIAN PRIMARY SCHOOL
SEMESTRAL ASSESSMENT 2**

**PRIMARY 3
SCIENCE
(BOOKLET A)**

25 OCT 2019

Name: _____ ()

Class: Responsibility _____

Total time for Booklets A and B: 1 h 30 min

INSTRUCTIONS TO CANDIDATES

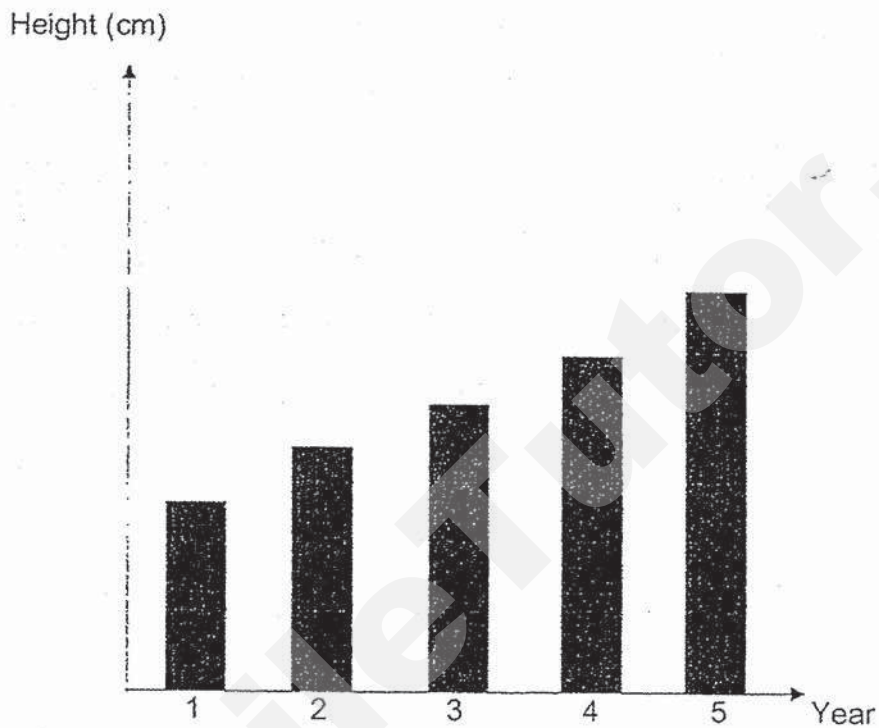
1. Write your Name, Class and Register No. in the spaces provided above.
2. DO NOT turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Shade your answers on the Optical Answer Sheet (OAS) provided.

This booklet consists of 14 printed pages, excluding the cover page.

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For each question from 1 to 24, four options are given. One of them is the correct answer. Make your choice and shade the oval (1, 2, 3 or 4) on the Optical Answer Sheet provided. (48 marks)

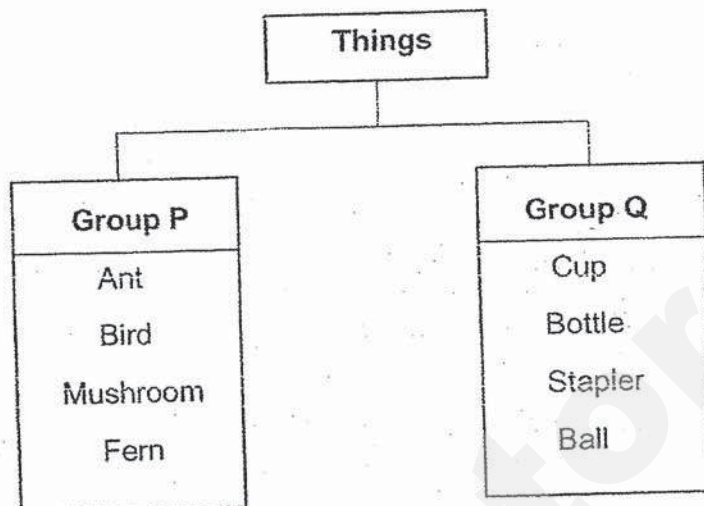
- 1 The graph below shows Mary's height over a period of 5 years.



Which of the following characteristics describes the observation from the graph above?

- (1) Living things can grow.
- (2) Living things cannot move.
- (3) Living things can reproduce.
- (4) Living things respond to changes around them.

- 2 The classification chart below shows how some things are grouped.



Which of the following describes how the 2 groups of things are grouped?

	Group P	Group Q
(1)	Cannot grow	Can grow
(2)	Cannot reproduce	Can reproduce
(3)	Cannot respond to changes	Can respond to changes
(4)	Need air, food and water	Do not need air, food and water

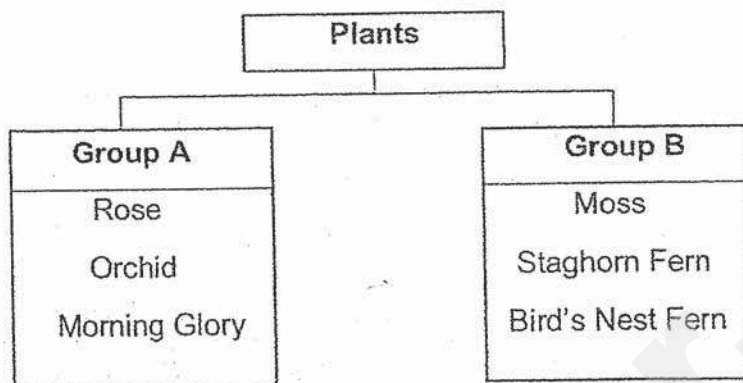
- 3 Mary observed some things. A tick (✓) shows that it has the characteristic. A cross (X) shows that it does not have the characteristic.

Things	Reproduces	Respond to changes	Need air, food and water
Bat	X	✓	✓
Moss	X	✓	✓
Clock	✓	✓	X
Water Lily	✓	✓	✓

Which one of the things correctly describes a living thing?

- (1) Bat
- (2) Moss
- (3) Clock
- (4) Water Lily

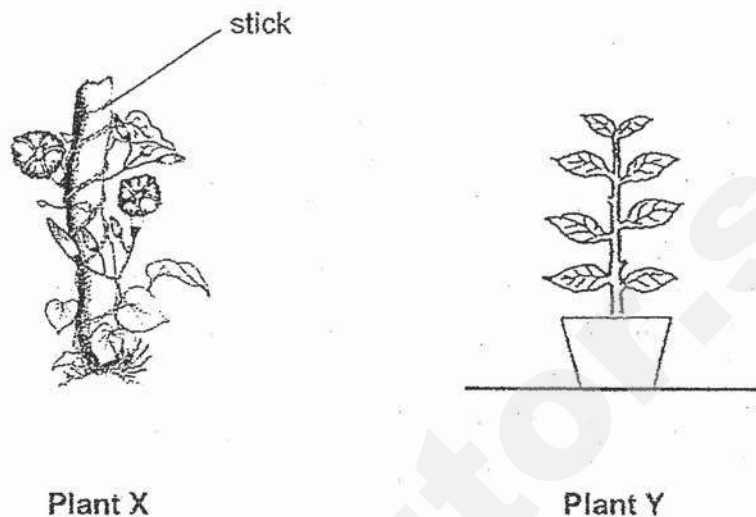
- 4 Denny classified some plants as shown below.



Which of the following are suitable headings for Groups A and B?

	Group A	Group B
(1)	Land Plants	Water Plants
(2)	Fungi	Flowering Plants
(3)	Flowering Plants	Non-flowering Plants
(4)	Non-flowering Plants	Fungi

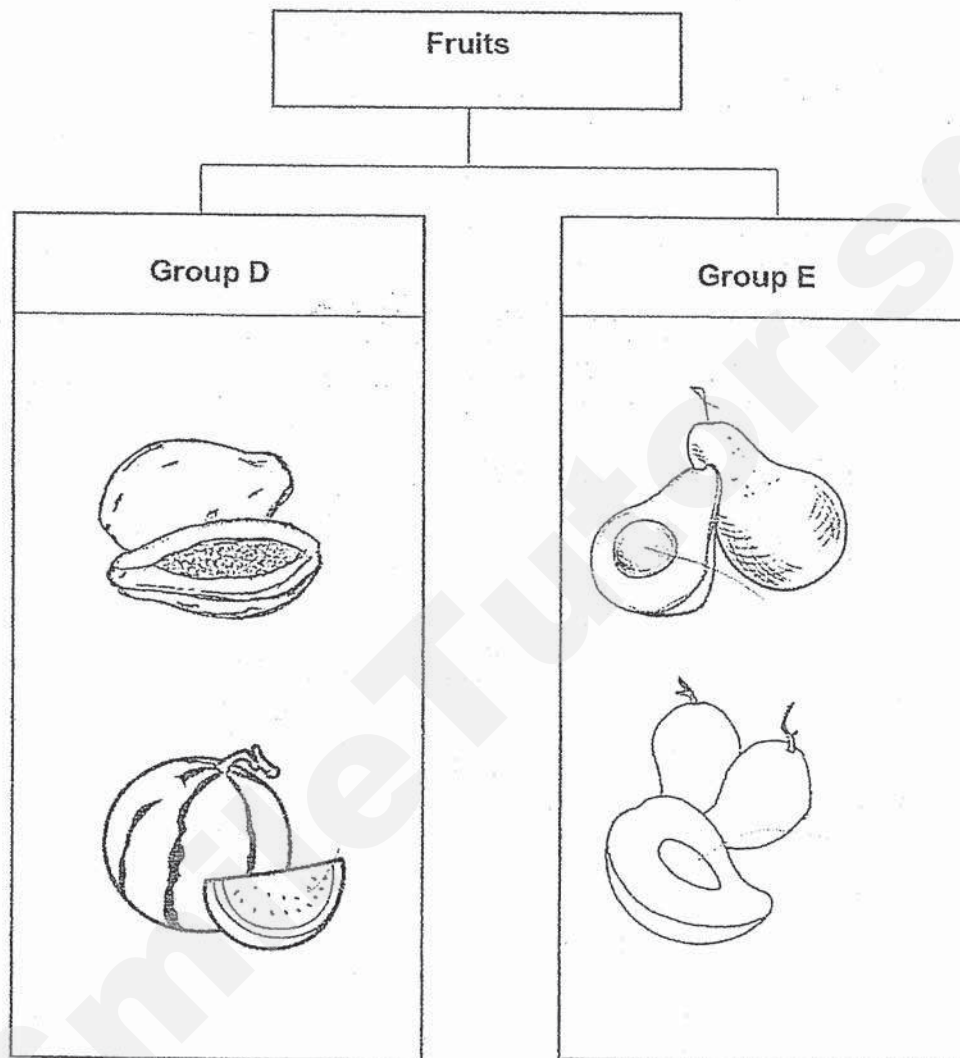
- 5 Jenny observed plants, X and Y, in her school garden.



Based on the diagrams above, what is the difference between the two plants?

- (1) Plant X cannot make its own food but Plant Y can.
- (2) Plant X has no flower at all but Plant Y has flowers.
- (3) Plant X has ~~weak~~ ^{strong} stem but Plant Y has ~~strong~~ ^{weak} stem.
- (4) Plant X does not have leaves but Plant Y has leaves.

- 6 The classification chart below shows how some fruits are classified.



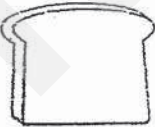

They are classified according to _____.

- (1) shapes
- (2) the skin texture
- (3) where they grow
- (4) the number of seeds

7 Which one of the following is a fungi?

- (1) Rose
- (2) Orchid
- (3) Bacteria
- (4) Bread Mould

8 Tricia added different amount of water on two similar pieces of bread, P and Q. She then observed the amount of bread mould growing on the bread after 7 days and recorded her observations in the table below.

	Bread P	Bread Q
Amount of water added to the bread (ml)	0	20
Amount of bread mould observed after 7 days		

Patches of bread mould

Based on her experiment, bread mould grows better _____.

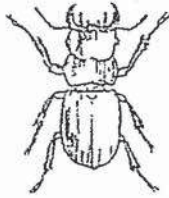
- (1) in the dark
- (2) when there is water
- (3) in the presence of light
- (4) on Bread P than on Bread Q

9 Which of the following pairs is correctly grouped?

	Living Thing	Non-living Thing
(1)	Fire	Water
(2)	Rock	Goldfish
(3)	Yeast	Radio
(4)	Shadow	Mushroom

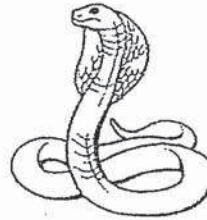
- 10 Which one of the following animals does not belong to the same animal group as the rest?

(1)



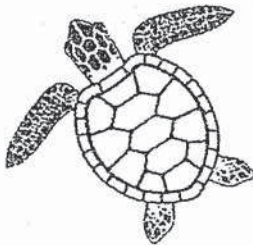
Beetle

(2)



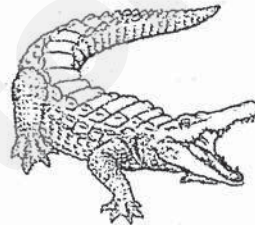
Snake

(3)



Turtle

(4)



Crocodile

- 11 Look at the diagrams below carefully.



Platypus



Dog

Both animals are mammals as it has _____.

- (1) fur
- (2) feathers
- (3) dry scales
- (4) moist skin

- 12 Study the three animals shown below.



Bee



Bird



Bat

What are the physical characteristics do they have in common?

They have _____.

- (1) wings and legs
- (2) six legs and a tail
- (3) beak and a pair of wings
- (4) six legs and a pair of eyes

- 13 Tina observed two animals, E and F, and recorded her observations in the table below.

Animal E	Animal F
<ul style="list-style-type: none">• give birth to live young• has a pair of wings• has two legs• has hairs on body	<ul style="list-style-type: none">• lay eggs• has a pair of wings• has two legs• has feathers on body

Which animal groups do animals E and F belong to?

	Animal E	Animal F
(1)	reptile	bird
(2)	amphibian	insect
(3)	mammal	bird
(4)	mammal	insect

- 14 Gina wrote down some notes about Bird X as shown below.

- Has a pair of small wings
- Has feathers
- Has a heavy body
- It stays away from water

When Gina showed her notes to four classmates, they made the following comments:

Adrian: Bird X has scales.

Billy: Bird X can fly in the air.

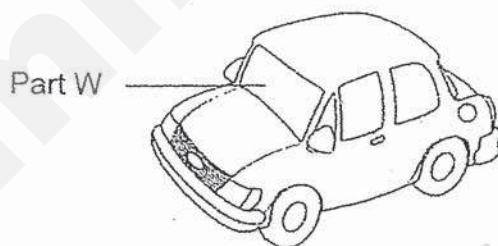
Candy: Bird X cannot fly at all.

Diana: Bird X can swim in the river.

Based on the notes written by Gina, which of her classmates made a correct comment?

- (1) Adrian
- (2) Billy
- (3) Candy
- (4) Diana

- 15 Study the picture of a car carefully.



Which material is most suitable to make Part W so that the driver could see the road?

- (1) Wood
- (2) Glass
- (3) Fabrics
- (4) Ceramics

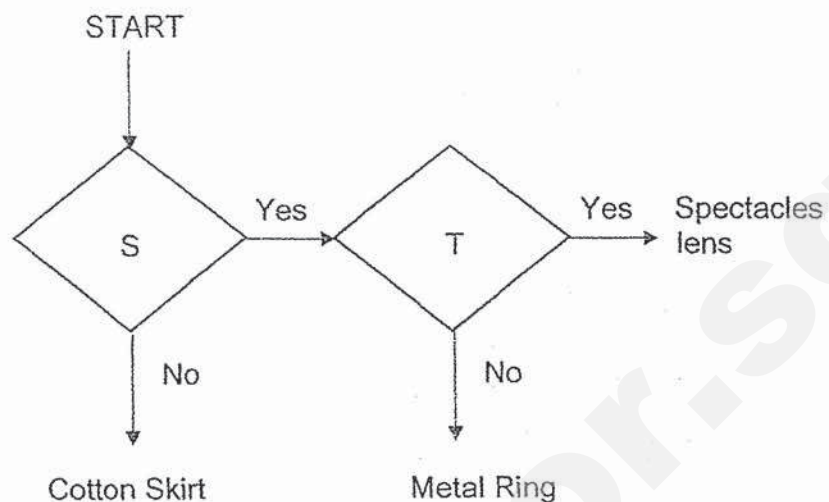
- 16 Janet wanted to make a beach ball. The table below shows the properties of the materials given to her.

Material	Flexible	Waterproof	Breaks Easily
J	No	No	Yes
K	Yes	Yes	No
L	No	Yes	Yes
M	Yes	No	No

Based on the information above, which one of the materials is most suitable for making the beach ball?

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

- 17 Study the flow chart below carefully.



Which one of the following represents the missing questions, S and T, in the flow chart?

	S	T
(1)	Does it absorb water?	Is it flexible?
(2)	Does it allow most light to pass through?	Is it strong?
(3)	Does it absorb water?	Does it allow most light to pass through?
(4)	Is it waterproof?	Does it allow most light to pass through?

- 18 Xiang Ting needs to choose a material to build Part K of a camping tent.

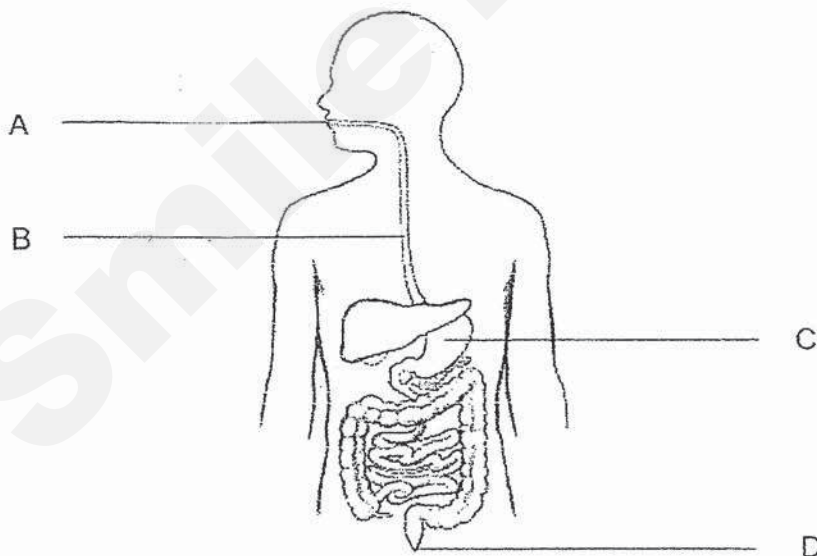


Which of the following properties should she consider when choosing a material?

- A flexibility
- B waterproof
- C ability to float on water

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

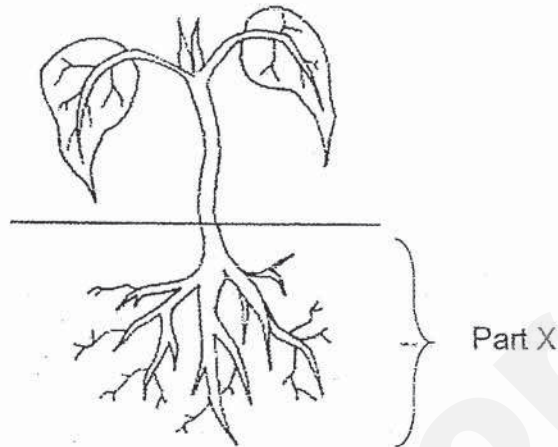
- 19 Which two parts do not produce digestive juices?



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

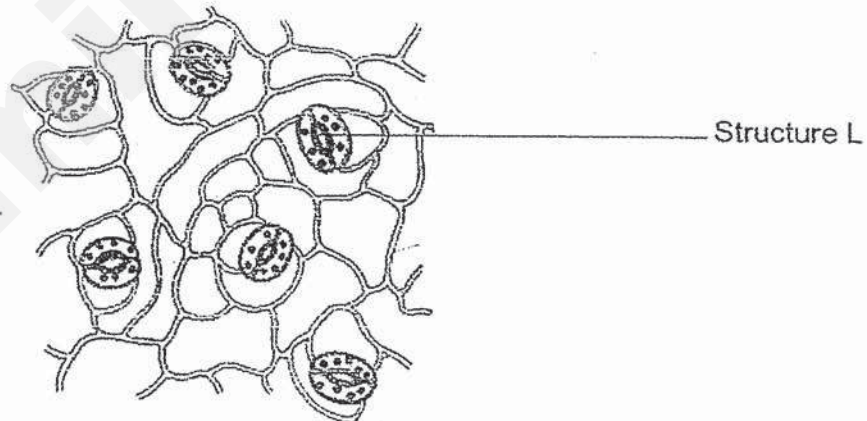
- 20 Which of the following human body systems have to work together in order for the digested food to be transported to all parts of our body?
- (1) Skeletal and Muscular Systems
 - (2) Digestive and Skeletal Systems
 - (3) Digestive and Circulatory Systems
 - (4) Respiratory and Circulatory Systems
- 21 Which two statements are the functions of the large intestine in the digestive system?
- A Breaks down digested food
 - B Absorbs water from digested food
 - C Absorbs water from undigested food
 - D Pushes undigested food to the anus
- (1) A and C
 - (2) B and D
 - (3) B and C
 - (4) C and D
- 22 Which of the following statements is true?
- (1) All plants grow in water.
 - (2) Only green plants bear flowers.
 - (3) All plants reproduce by spores.
 - (4) Plants respond to changes in different ways.

- 23 Francis observed the following plant in the garden.



Which one of the following is true when Part X is being removed?

- (1) The plant is still kept upright.
 - (2) The plant will still continue to survive.
 - (3) The plant will still stay firmly in the ground.
 - (4) The plant will not absorb water and mineral salts from the ground.
- 24 Look at the diagram below carefully.



The above Structure L was found on plants. What could Structure L be?

- (1) Fruit
- (2) Flower
- (3) Leaf vein
- (4) Tiny opening



PEI HWA PRESBYTERIAN PRIMARY SCHOOL
SEMESTRAL ASSESSMENT 2

PRIMARY 3
SCIENCE
(BOOKLET B)

25 OCT 2019

Name: _____ ()

Class: Responsibility _____

Parent's Signature

Total time for Booklets A and B: 1 h 30 min

INSTRUCTIONS TO CANDIDATES

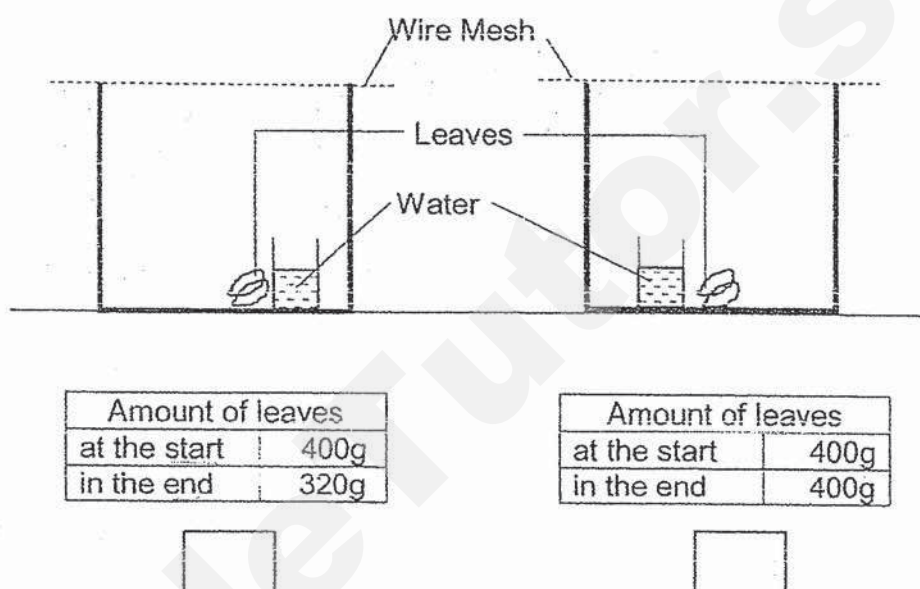
1. Write your Name, Class and Register No. in the spaces provided above.
2. DO NOT turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Write all your answers in this booklet.

Marks (Booklet A) :	48
Marks (Booklet B) :	32
Total Marks (Booklets A & B) :	80

This booklet consists of 11 printed pages, excluding the cover page.

Write your answers to the questions 25 to 33 in the spaces provided. The number of marks available is shown in brackets [] at the end of each question or part question.
(32 marks)

- 25 Zechariah carried out an experiment by placing 400g of leaves and 100 ml of water in each of the two large containers. He put wire mesh to cover both containers. The grasshopper was placed only in one of the containers. The amount of leaves left in each container was recorded after 15 days in the diagram below.



- (a) Put a tick (✓) in one of the boxes in the diagram above to show where the grasshopper can be found. [1]

Question 25 continues on page 16

He also took down the mass of the grasshopper over 15 days and recorded in the table below.

Day	Mass of grasshopper (g)
1	10
5	?
10	13
15	15

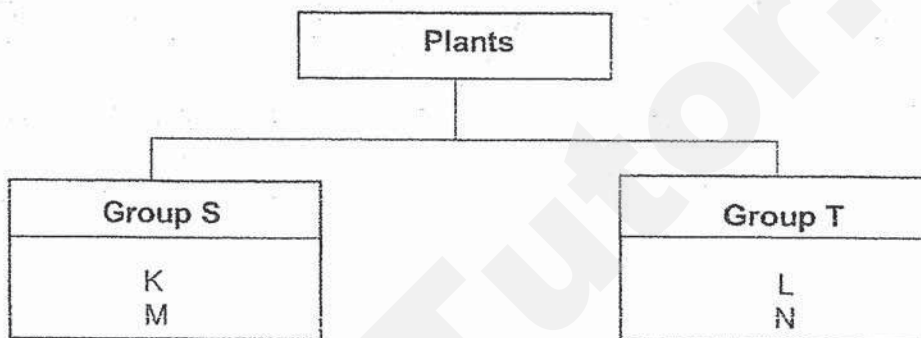
- (b) Based on the table above, which characteristic of living thing did the grasshopper show over 15 days? [1]

- (c) What was the possible mass of the grasshopper on Day 5? [1]

- 26 Yancey recorded the characteristics of plants (K, L, M and N) in the table below. A tick (✓) shows that it has the characteristic while a cross (X) shows that it does not have the characteristic.

Plant	Has flowers	Lives on land	Lives in water
K	✓	✓	X
L	X	✓	X
M	✓	X	✓
N	X	X	✓

Yancey made use of the information above to draw a classification chart as shown below.

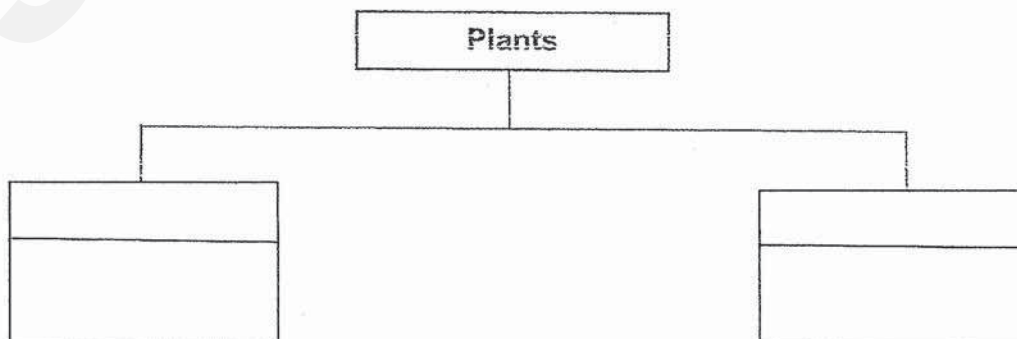


- (a) What should the sub-headings for Groups S and T be? [1]

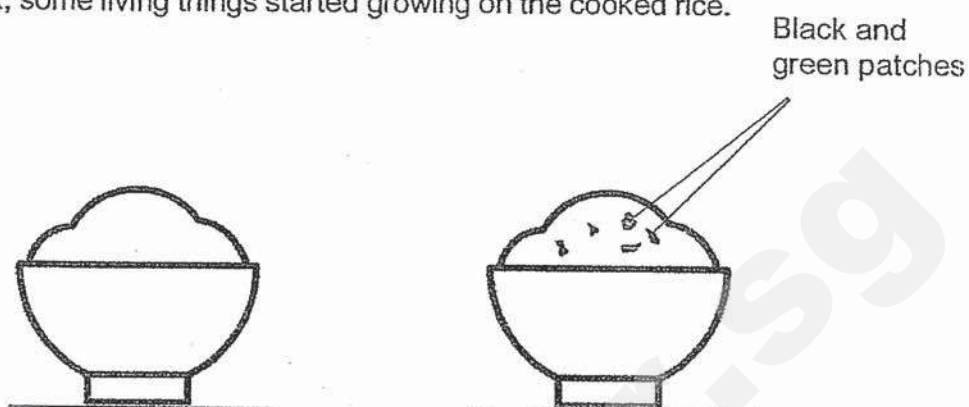
Group S: _____

Group T: _____

- (b) Based on the information collected by Yancey, classify the 4 plants, K, L, M and N in the classification chart below. Provide suitable sub-headings in the chart. [2]



- 27 David left a bowl of cooked rice on a table as shown in the diagram below. After one week, some living things started growing on the cooked rice.



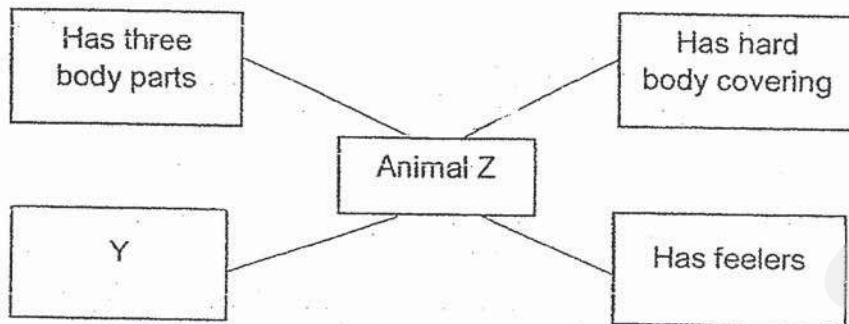
Bowl of cooked rice at the start

Bowl of cooked rice one week later

- (a) Based on the diagram above, what group of living things do the black and green patches belong to? [1]

- (b) One week later, David observed that the black and green patches have covered the whole bowl of cooked rice. Based on his observation, which characteristic of living things does this show? [1]

- 28 Kelly observed Animal Z and wrote some characteristics shown below.

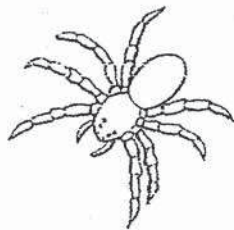


- (a) Which animal group could Animal Z belong to? [1]

- (b) What physical characteristics could Y represent? [1]

- (c) Give an example of Animal Z. [1]

- (d) Look at the diagram of Animal G below carefully.



Can Animal G be in the same group as Animal Z? Give a reason for your answer. [1]

29 Look at the pictures of the animals below carefully.



Goldfish



Whale



Dolphin

- (a) Based on your observation, write down one similar physical characteristic among the three animals. (Do not compare shape, size and colour) [1]

- (bi) State one difference between the goldfish and the dolphin, in terms of the way they reproduce. [1]

- (bii) State one difference between the goldfish and the whale, in terms of the way they breathe. [1]

- (c) What body covering does the goldfish have? [1]

- 30 Judy had 2 bags, X and Y, made of different materials. She wanted to know which bag was stronger. She put metal balls into Bag X until it was torn. She then repeated the experiment with Bag Y. Her results are shown in the table below.

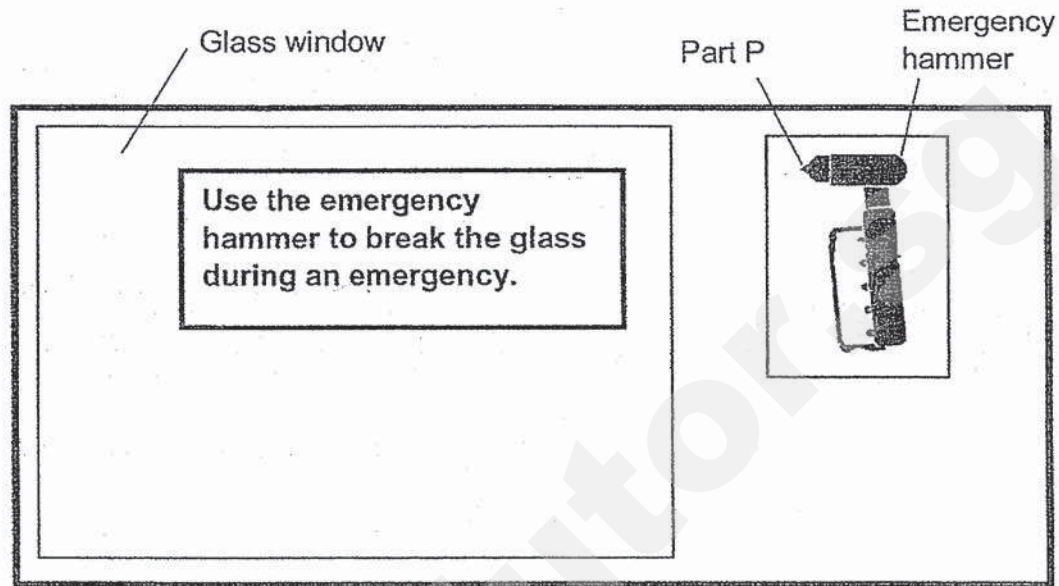
Number of metal balls	Bag X	Bag Y
1	Not torn	Not torn
2	Not torn	Not torn
3	Torn	Not torn
4	Torn	Not torn

- (a) What was the maximum number of metal balls that can be placed into Bag X before it was torn? [1]

- (b) What could Judy conclude about the strength of the two bags? [1]

Question 30 continues on page 22

Judy saw an emergency hammer made of metal in a public bus. It had a message attached on the glass window, next to the emergency hammer as shown below.



An inner section of a public bus

- (c) What material is Part P most likely made of so that it can be used to break the glass? Circle your answer. [1]

Metal

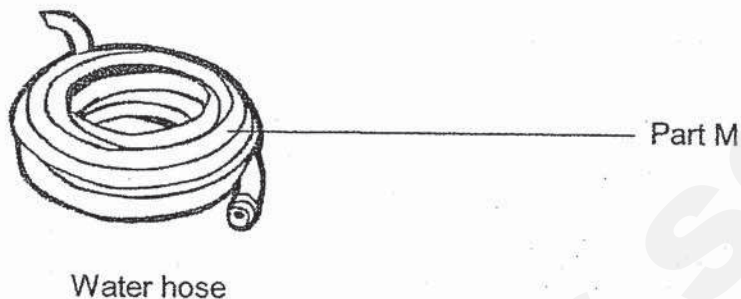
Glass

Ceramic

Cloth

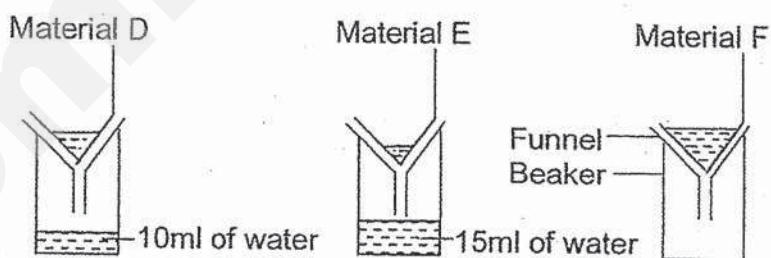
- (d) What is the property of the material chosen in (c) that makes Part P suitable to break the glass? [1]

- 31 The diagram below shows a water hose. The water hose can be rolled up easily after it has been used to water the plants.



- (a) Which material is suitable to make Part M? [1]
- _____
- (b) Can Part M be made of wood? Give a reason for your answer. [1]
- _____

Sam set up an experiment with 3 identical beakers and funnels. He put same size Materials D, E and F in each funnel. Then, he poured 20 ml of water into each funnel. The diagrams below show the amount of water in each set up after 20 ml of water was poured in.



- (c) Based on the experiment above, which material (D, E or F) is most suitable to make an ice cube tray? [1]
- _____
- (d) Give a reason for your answer in (c). [1]
- _____

- 32 (a) Read the statements carefully. Put a tick (✓) in the correct boxes. [2]

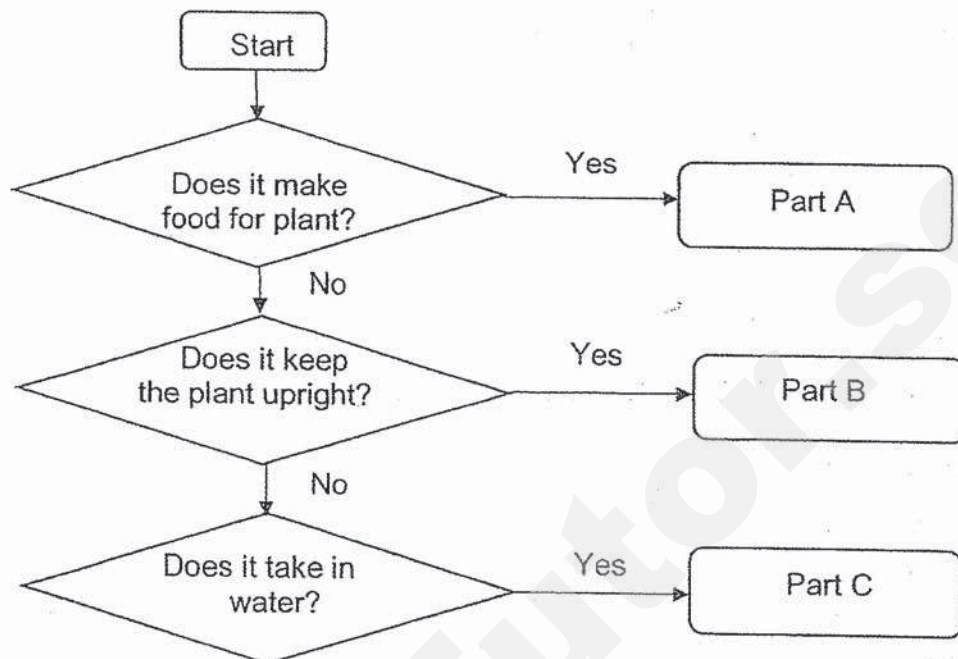
Statements about human digestive system	True	False
i) Saliva in mouth does not digest food at all.		
ii) The gullet is the tube that connects the mouth and the stomach.		
iii) Digestive juice is present in the stomach.		
iv) The digestion ends in the large intestine.		

- (b) Fill in the blanks with suitable words. [2]

Digested food is absorbed into the (i) _____

and (ii) _____ is absorbed into the large intestine.

- 33 The flow chart below describes the main functions of 3 plant parts.



- (a) What could A, B and C represent?

[3]

A: _____

B: _____

C: _____

- (b) Why is it important for Part B to keep the plant upright?

[1]

--End of Paper--

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ANSWER KEY

YEAR : 2019
 LEVEL : PRIMARY 3
 SCHOOL : PEI HWA PRESBYTERIAN PRIMARY SCHOOL
 SUBJECT : SCIENCE
 TERM : SA2

BOOKLET A

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

BOOKLET B

Q25a)

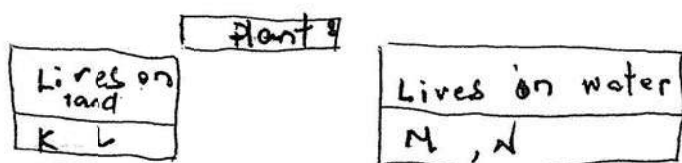
Amount of leaves
 at the start 40.0g
 in the end 32.0g

- b) The grasshopper showed that living thing grow.
- c) The possible mass of the grasshopper on Day 5 is 12g.

Q26a) Group S: Flowering

Group T: Non-Flowering

b)



Q27a) The black and green patches belong to fungi group.

b) This shows that living things reproduce.

Q28a) Animal Z belongs to the insect animal group.

b) Y could represent that Animal Z has 3 pairs of legs.

c) Ant

d) Spider cannot be in the same group as Animal Z. Animal G has more than six legs and has less than three body parts.

Q29a) All three animals have a tail/eyes/fins.

bi) The goldfish reproduce by laying eggs but the dolphin reproduces by giving birth to their young alive.

bii) The goldfish breathe through gills but the whale breathes through lungs.

c) The goldfish have scales as its body covering.

Q30a) The maximum number of metal balls that can be placed into Bag X before it was torn is 2.

b) Judy could conclude that Bag Y is stronger than Bag X.

c) Metal

d) The property of the material chosen is (c) is strength so that the hammer will not break when you use it to break the glass.

Q31a) Rubber

b) Part M cannot be made out of wood. Wood is not flexible so it cannot be rolled up after use.

(c) Material F

d) Material F is waterproof as the water on it does not flow into the beaker.

Q32a) False

ii) True

iii) True

iv) False

bi) Walls of the small intestine

ii) The water of the undigested food

Q33a) A = leaves B = Stem C = Roots

b) It is important for part B to keep the plant upright so that the leaves can absorb enough sunlight to make sufficient food for the plant to survive.



3
END

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RED SWASTIKA SCHOOL

SCIENCE 2019 SEMESTRAL EXAMINATION 2 PRIMARY 3

Name : _____ ()

Class : Primary 3/ _____

Date : 29 October 2019

BOOKLET A

Total time for Booklets A & B: 1h 30 min

Booklet A: 15 questions (30 marks)

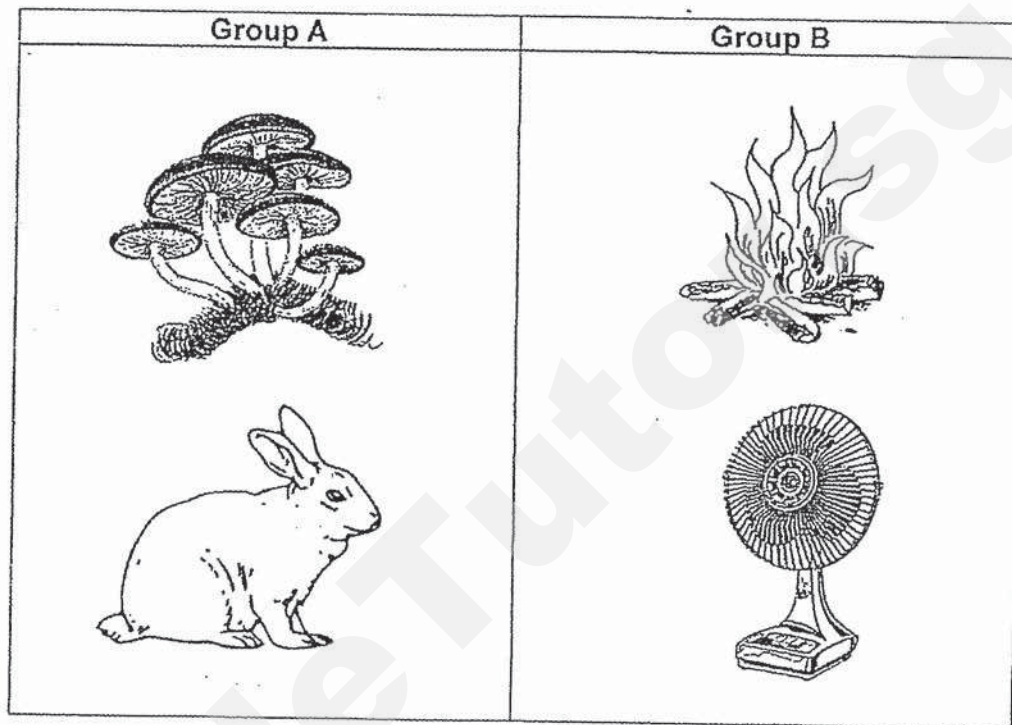
Note:

1. Do not open the booklet until you are told to do so.
2. Read carefully the instructions given at the beginning of each part of the booklet.
3. Do not waste time. If the question is too difficult for you, go on to the next question.
4. Check your answers thoroughly and make sure you attempt every question.
5. In this booklet, you should have the following:
 - a. Page 1 to Page 9
 - b. Questions 1 to 15

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For Questions 1 to 15, choose the most suitable answer and shade its number in the OAS provided.

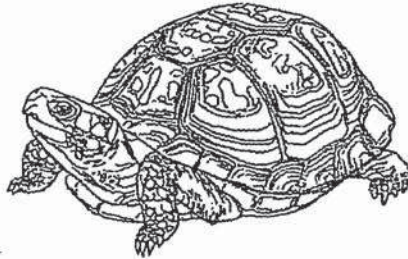
1. Study the two groups shown below.



Which of the following statements is correct?

- (1) Group A can respond to changes.
- (2) Group B needs air, food and water.
- (3) Both Group A and Group B can grow
- (4) Both Group A and Group B can reproduce.

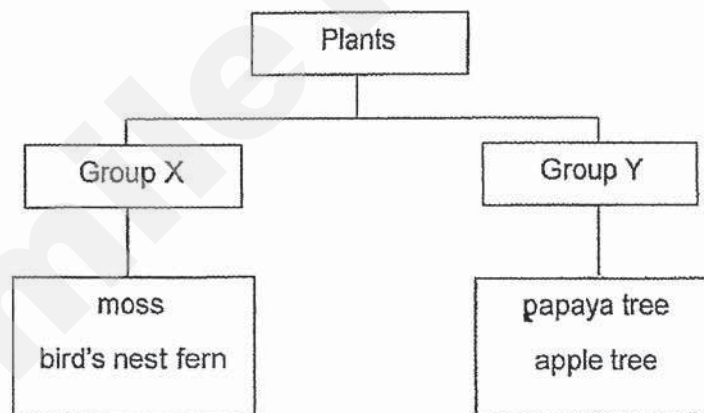
2. When the tortoise is touched, it hides inside its shell.



Which characteristic of living things is shown by the tortoise?

- (1) Living things can grow.
- (2) Living things can reproduce.
- (3) Living things can respond to changes.
- (4) Living things need air, food and water.

3. Jane classified the following plants into two groups as shown below.



Which of the following are possible headings for Groups X and Y?

	Group X	Group Y
(1)	Have only one seed	Have many seeds
(2)	Do not have fruits	Have fruits
(3)	Cannot make food	Can make food
(4)	Grow on land	Grow in water

4. The table below shows the characteristics of two groups of living things, A and B. A tick (✓) indicates that a characteristic is observed and a cross (X) indicates that it is not observed.

Characteristics	A	B
able to make food	✓	X
has spores	✓	✓
has flowers	X	X

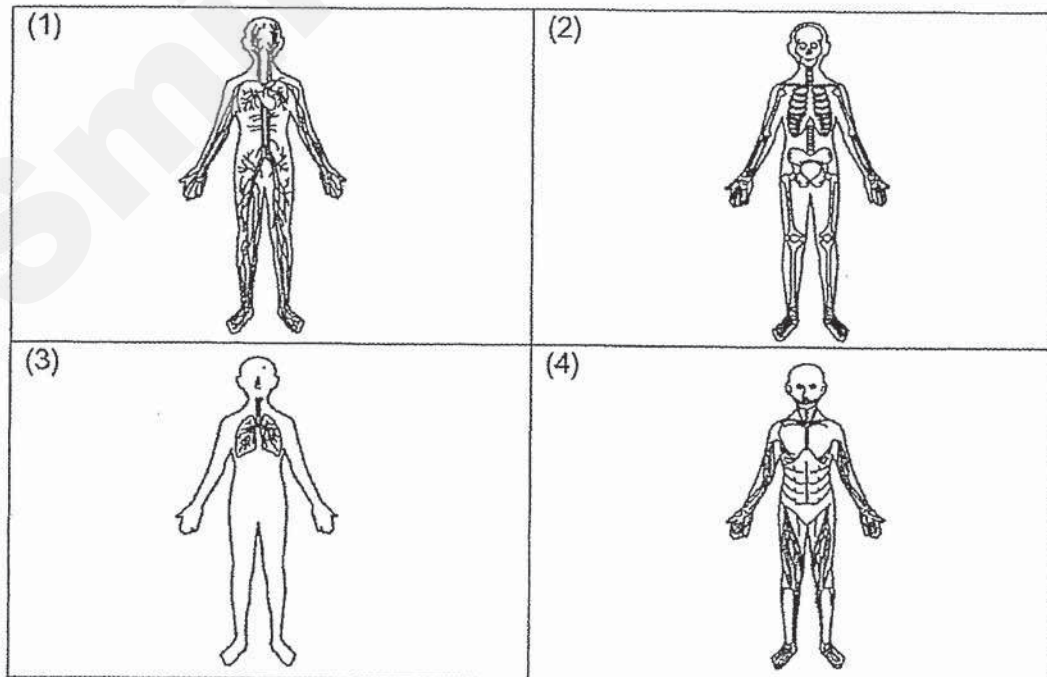
Which of the following correctly represents A and B?

	A	B
(1)	flowering plant	fungi
(2)	fungi	non-flowering plant
(3)	non-flowering plant	flowering plant
(4)	non-flowering plant	fungi

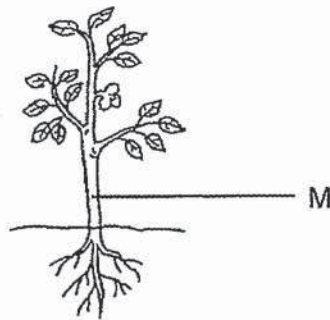
5. How do our teeth help in the digestion of food?

- (1) They help to soften the food.
- (2) They help us to swallow our food.
- (3) They produce digestive juices.
- (4) They cut food into smaller pieces.

6. Which of the following shows the human respiratory system?

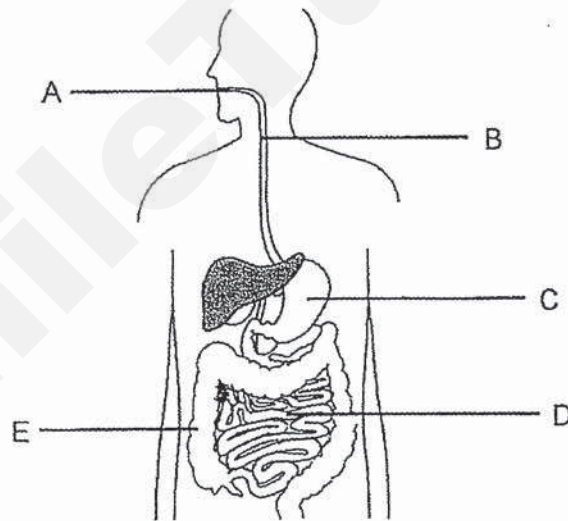


7. The diagram below shows a plant.



The function of part M is to _____.

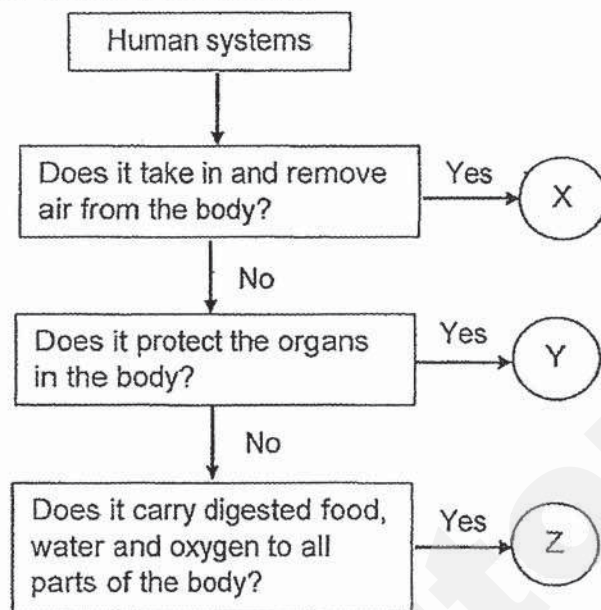
- (1) support the plant
 - (2) make food for the plant
 - (3) hold the plant firmly to the ground
 - (4) absorb water and minerals for the plant
8. The diagram below shows the human digestive system.



Which parts of the digestive system produce digestive juices?

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

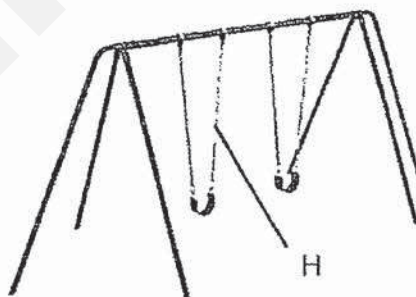
9. Study the flow chart below carefully.



Which systems do X, Y and Z represent?

	X	Y	Z
(1)	circulatory	muscular	digestive
(2)	digestive	skeletal	circulatory
(3)	respiratory	muscular	digestive
(4)	respiratory	skeletal	circulatory

10. The diagram below shows a swing at a playground.



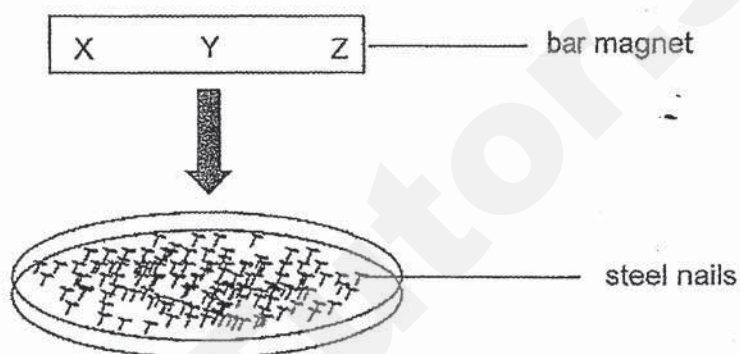
Which of the following describes the most important property in choosing the material to make part H?

- (1) H must be shiny.
- (2) H must be strong.
- (3) H must be able to float on water.
- (4) H must allow light to pass through.

11. Which of the following is a magnetic material?

- (1) iron
- (2) plastic
- (3) rubber
- (4) glass

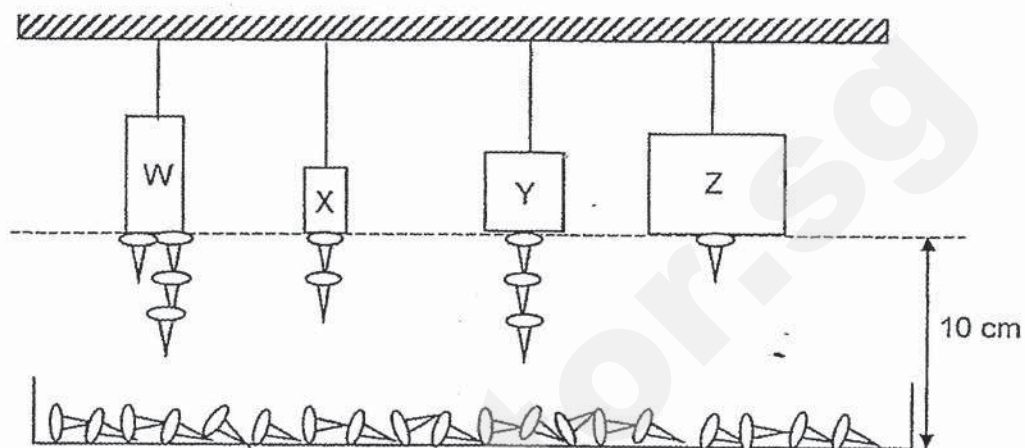
12. A bar magnet was lowered into a tray of steel nails as shown.



After a while, the bar magnet was lifted. Which of the following shows the most likely number of steel nails which were attracted to parts X, Y and Z?

	X	Y	Z
(1)	1	5	5
(2)	4	4	4
(3)	4	1	5
(4)	5	4	2

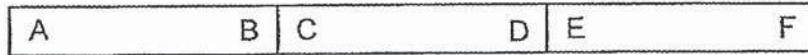
13. Jamal set up an experiment as shown below. He hung four magnets, W, X, Y and Z, at an equal distance from a tray of nails and observed the number of nails each magnet attracted.



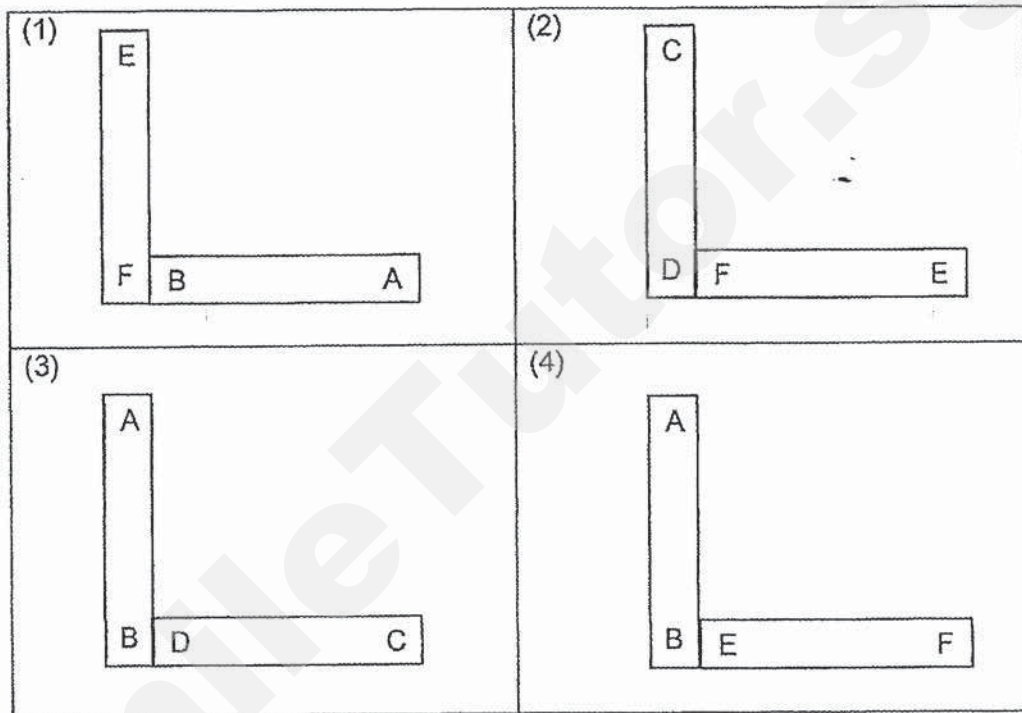
Arrange the magnetic strength of the four magnets in order, from the strongest to the weakest.

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

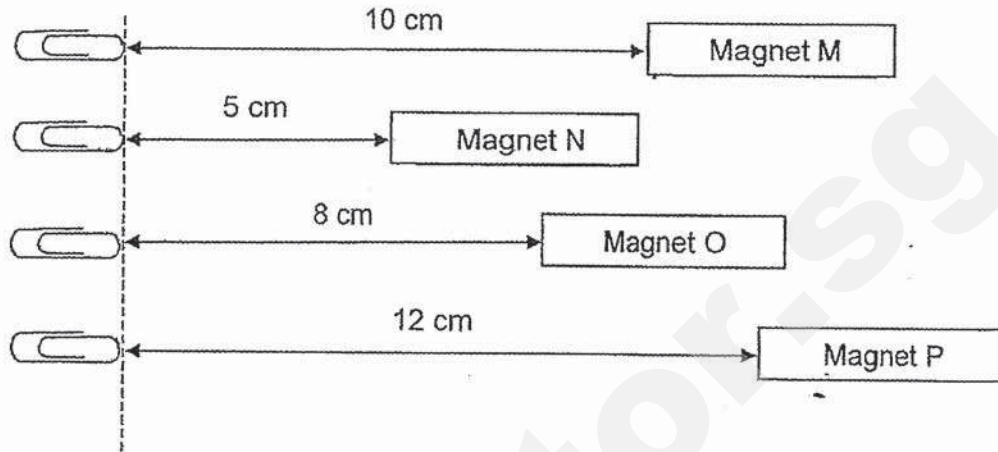
14. Three bar magnets are arranged as shown below.



Iris formed a new arrangement using only two of the magnets above. Which of the following is a possible new arrangement?



15. Devi wanted to test the magnetic strength of four different magnets, M, N, O and P. She measured the greatest distance at which they were able to attract a paper clip.



Based on the results above, which statement is correct about the magnetic strength of the magnets?

- (1) Magnet M is as strong as Magnet P.
- (2) Magnet N is weaker than Magnet O.
- (3) Magnet O is stronger than Magnet M.
- (4) Magnet P is the weakest magnet.

END OF BOOKLET A



RED SWASTIKA SCHOOL

SCIENCE 2019 SEMESTRAL EXAMINATION 2 PRIMARY 3

Name : _____ ()

Class : Primary 3/ _____

Date : 29 October 2019

BOOKLET B

6 Questions
20 Marks

In this booklet, you should have the following:

- Page 10 to Page 16
- Questions 16 to 21

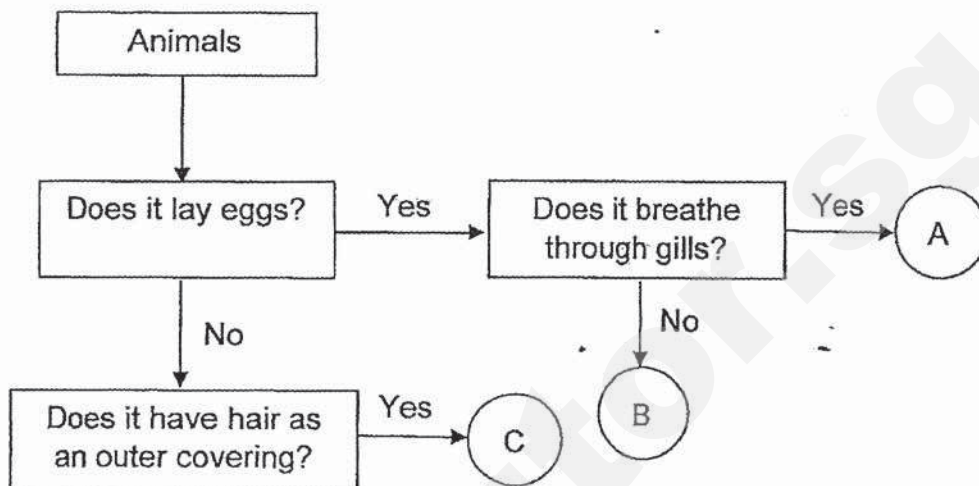
MARKS

	OBTAINED	POSSIBLE
BOOKLET A		30
BOOKLET B		20
TOTAL		50

Parent's Signature : _____

Answer all questions in the space provided.

16. Study the flow chart below carefully.

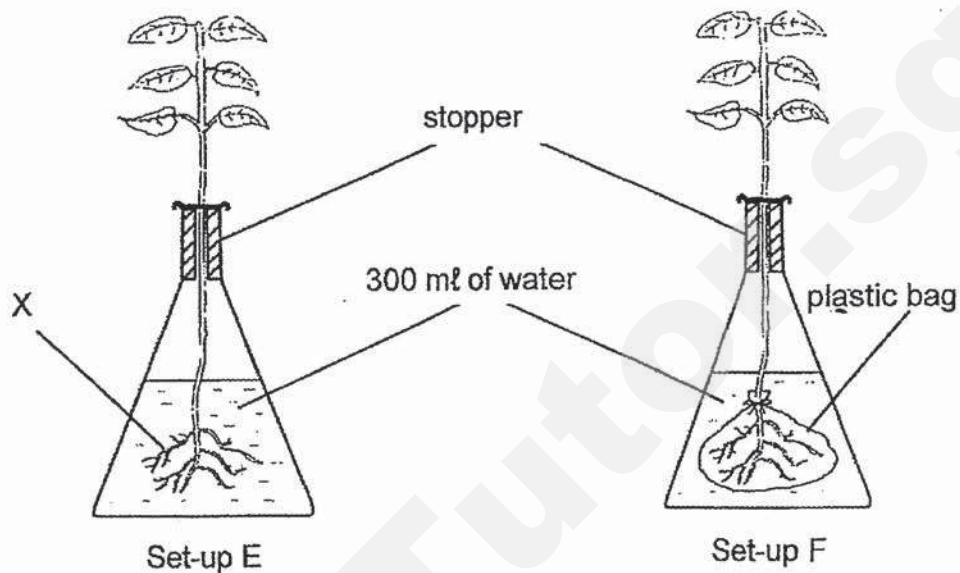


(a) Based on the flow chart, state the two characteristics of Animal A. (2m)

(b) Which animal, A, B or C, could be a chicken? (1m)

(c) Which group of animals can animal C be classified under? (1m)

17. Jane conducted an experiment with the set-ups below. She placed two similar plants into flasks containing 300 ml of water. She wrapped the roots of one plant with a plastic bag. Both set-ups were placed in a room with light.

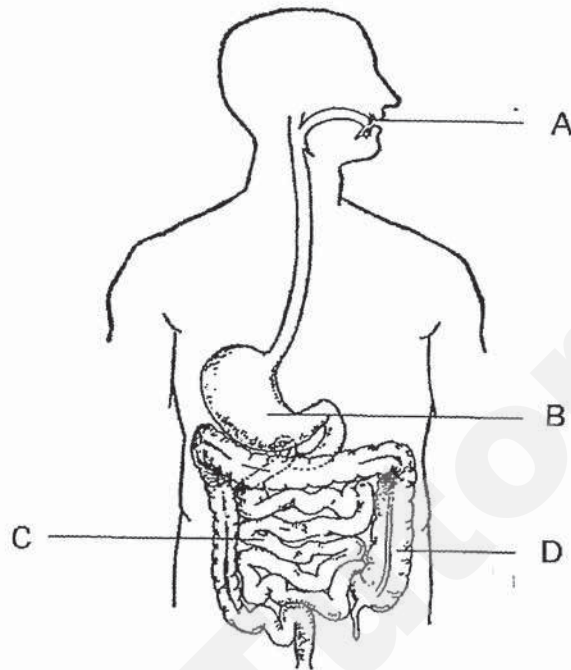


- (a) What is part X of the plant? (1m)
- _____
- (b) After a day, Jane measured the amount of water left in the containers. Complete the table by filling in the blanks with E and F. (1m)

Set-up	Volume of water left in container (ml)
	300
	260

- (c) In which set-up, E or F, will the plant survive? Explain your answer. (1m)
- _____
- _____

18. The diagram below shows the human digestive system.



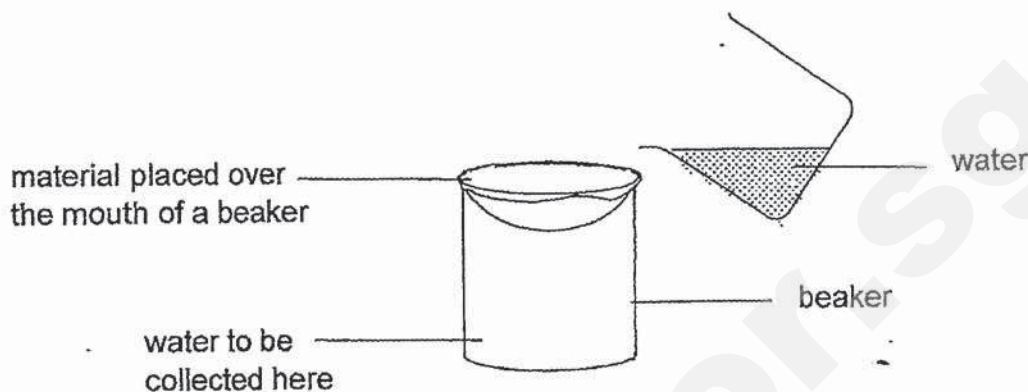
(a) In which part, A, B, C or D, does digestion first begins? (1m)

(b) In which part, A, B, C or D, is water removed from the undigested food? (1m)

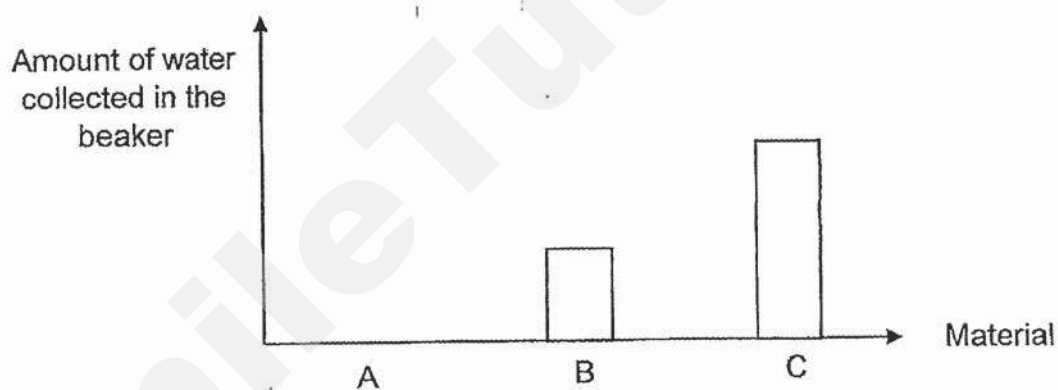
(c) Put a tick (✓) in the correct boxes for the statements below. (1m)

Statement	True	False
Food is fully digested in part B.		
Digested food passes through the walls of part C and the blood carries it to different parts of the body.		

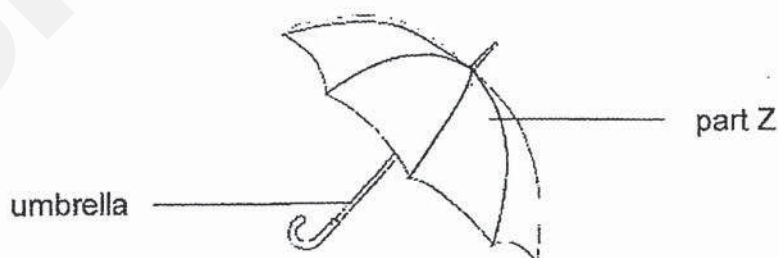
19. Shufen wanted to see how much water could be absorbed by materials A, B and C. She placed each material over the mouth of a beaker and poured water over each material. She then observed the volume of water collected in the beaker.



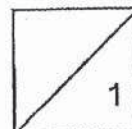
The graph below shows the volume of water collected in the beaker each time water was poured over materials A, B and C.



Shufen wanted to make part Z of the umbrella below.

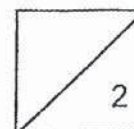


- (a) Based on the graph above, which material, A, B or C, is most suitable to make part Z? (1m)

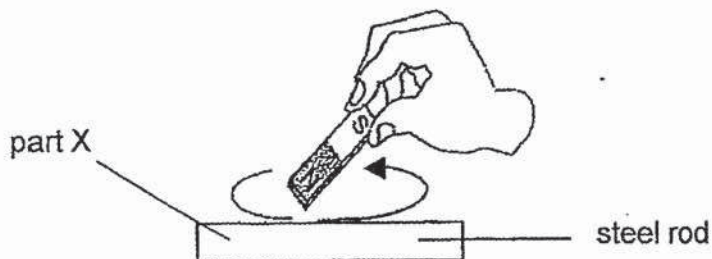


19. (b) Give a reason for your answer in part (a). (1m)

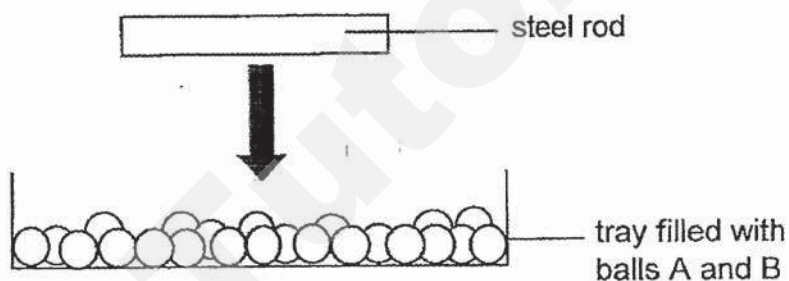
(c) Give an example of a material for material A. (1m)



20. Ryan used a magnet to stroke a steel rod as shown below.



He then placed the steel rod over a tray which was filled with two types of balls, A and B. All the balls weigh the same.



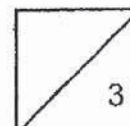
Ryan then recorded his observations in the table below.

Ball	Number of balls attracted to the steel rod
A	4
B	0

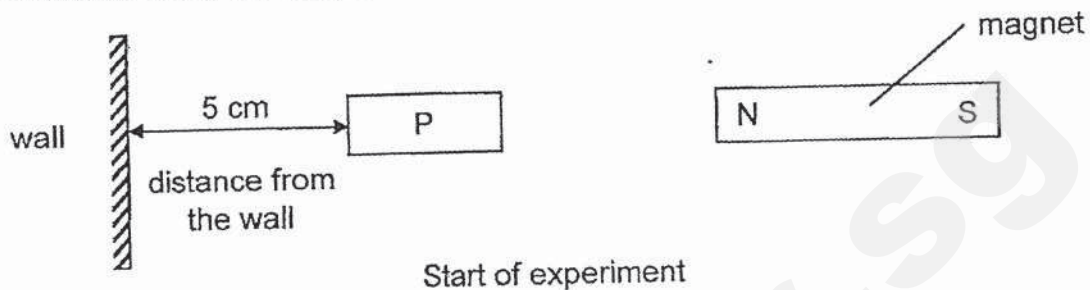
(a) Give an example of a material that ball B may be made of. (1m)

(b) By using the stroke method, what can Ryan do to the steel rod to increase the number of ball A attracted to it? (1m)

(c) Identify the pole at part X of the steel rod. (1m)



21. Jill had three objects, P, Q and R, which were all of the same size and shape. Object P was first placed 5 cm away from a wall. Jill then placed a magnet near P and observed how the distance from the wall changed.



She did the same for objects Q and R. She recorded her observations in the table below.

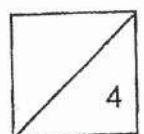
Object	Distance from the wall (cm) after a magnet was placed near the object
P	9
Q	5
R	3

- (a) Based on the table, which object, P, Q or R, is most likely a magnet? (1m)

- (b) Explain your answer for part (a). (2m)

- (c) Based on the table, which object, P, Q or R, is not magnetic? (1m)

**END OF BOOKLET B.
PLEASE CHECK YOUR WORK.**



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ANSWER KEY

YEAR : 2019
LEVEL : PRIMARY 3
SCHOOL : RED SWASTIKA SCHOOL
SUBJECT : SCIENCE
TERM : SA2

SECTION A

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

SECTION B

Q16a) Animal A lay eggs and breathe through gills.

Q16b) B

Q16c) Mammal

Q17a) Roots

Q17b)

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Set-up	Volume of water left in container (ml)
F	300
E	260

Q17c) E because the roots of E are not wrapped up in a plastic bag so the roots of E will absorb more water than F.

Q18a) A

Q18b) D

Q18c)

Statement	True	False
Food is fully digested in part B		✓
Digested food passes through the walls of part C and the blood carries it to different part of the body.	✓	

Q19a) A

Q19b) Because A does not absorb water.

Q19c) Plastic

Q20a) Copper

Q20b) Stroke more times to increase the number of ball A.

Q20c) North

Q21a) R

Q21b) The distance decrease because R repelled the magnet.

Q21c) Q

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2

END

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**RAFFLES GIRLS' PRIMARY SCHOOL
P3 SCIENCE**

SEMESTRAL ASSESSMENT (2)

Name: _____ Index No: _____ Class: P3 _____

30 October 2019

SCIENCE

ATT: 1 h 30 min

Section A	48
Section B	32
Your score out of 80 marks	
Parent's signature	


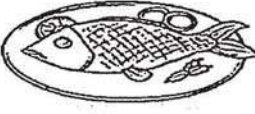


SECTION A (24 x 2 marks)

For each question from 1 to 24, four options are given.

One of them is the correct answer. Make your choice (1, 2, 3 or 4).

Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet (OAS) provided.

1. Observe the things in the table shown below. The pictures are not drawn to scale.

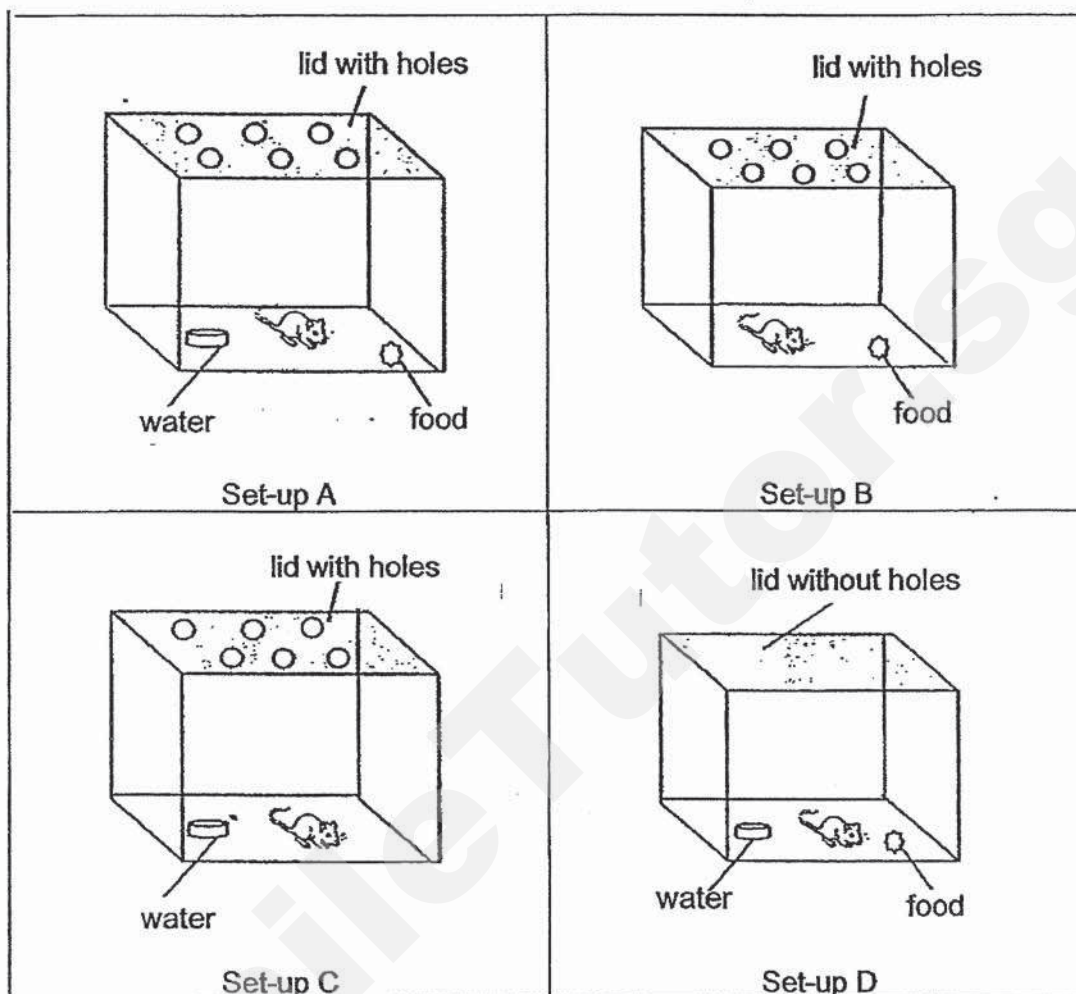
Non- Living Things	Living Things
 Doughnut	 Steamed fish
 Dried leaf	 Hamster

Which one of the following items is grouped wrongly?

- (1) Hamster
- (2) Doughnut
- (3) Dried Leaf
- (4) Steamed Fish

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2. Sally wants to find out if living things need food to survive.



To ensure a fair test, which two set-ups should she use for her experiment?

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

3. Each pupil made a statement as shown below.

Andy: Amphibians can live both on land and in water.

Benny: All birds can fly as they have a pair of wings.

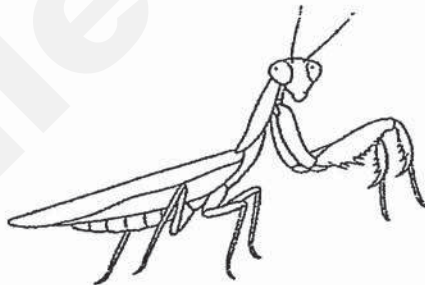
Cindy: All fish have gills that allow them to breath in water.

Danny: Mammals have body covering of hair or fur.

Who has made an incorrect statement?

- (1) Andy
- (2) Benny
- (3) Cindy
- (4) Danny

4. Observe animal Q in the picture below.



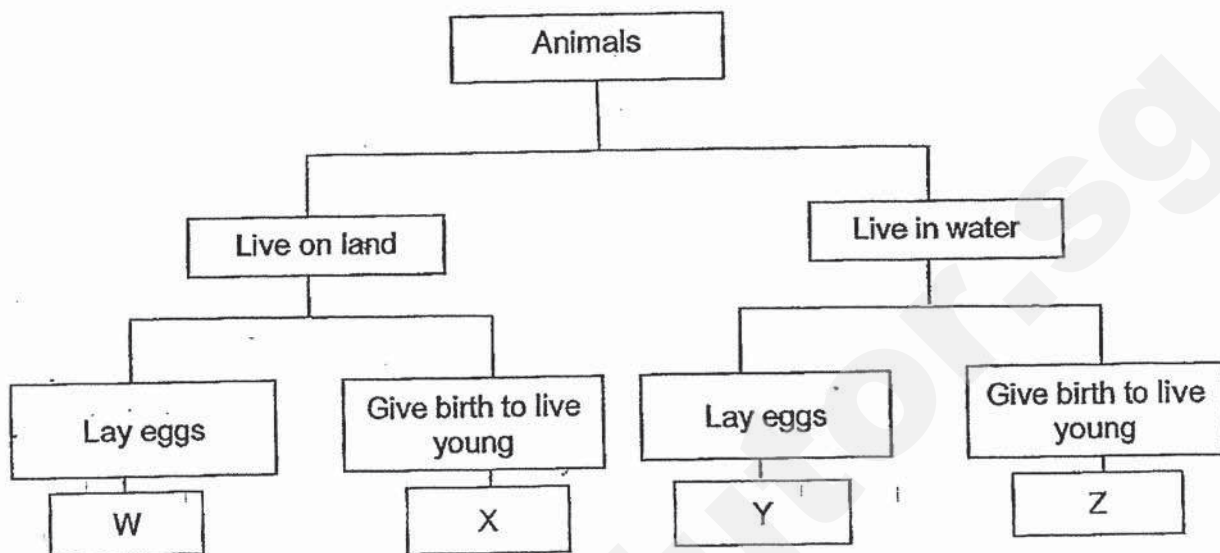
Animal Q

Which animal group does animal Q belong to?

- (1) Fish
- (2) Insect
- (3) Reptile
- (4) Amphibian

5. Study the classification chart below.

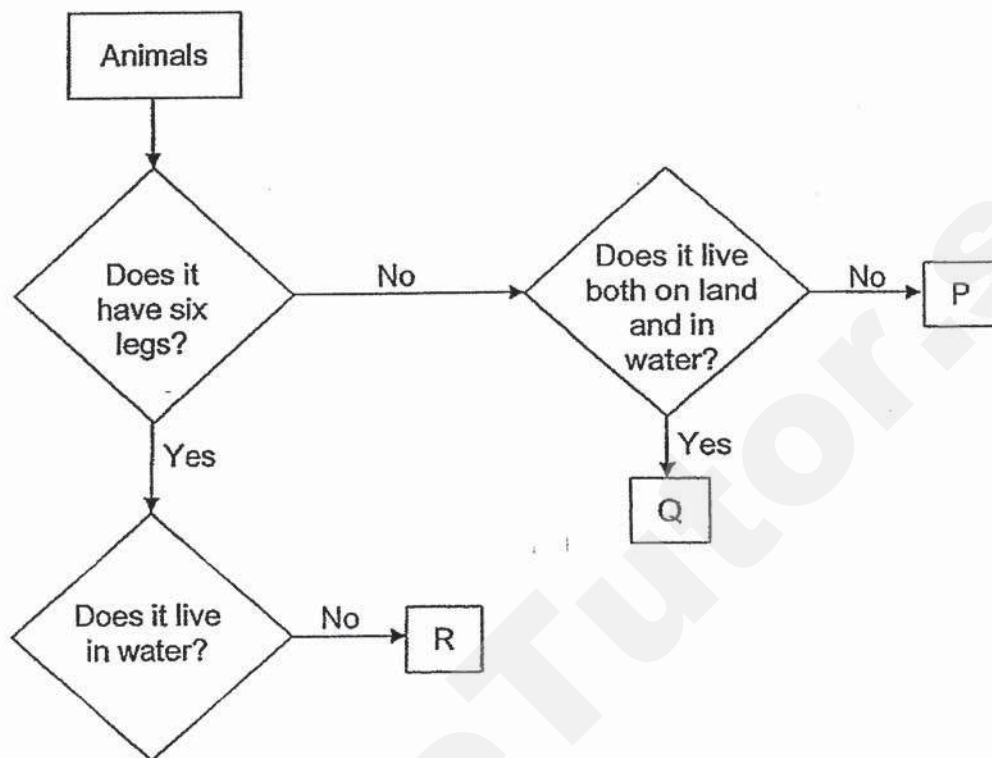
Which of the following best represent the animal shown below?



Rabbit

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

6. Four children make statements about animals P, Q and R based on the flow chart below.



Alice: Both animals P and Q have six legs,

Betty: Both animal P and R do not live in water.

Carol: Only animal Q lives both on land and in water.

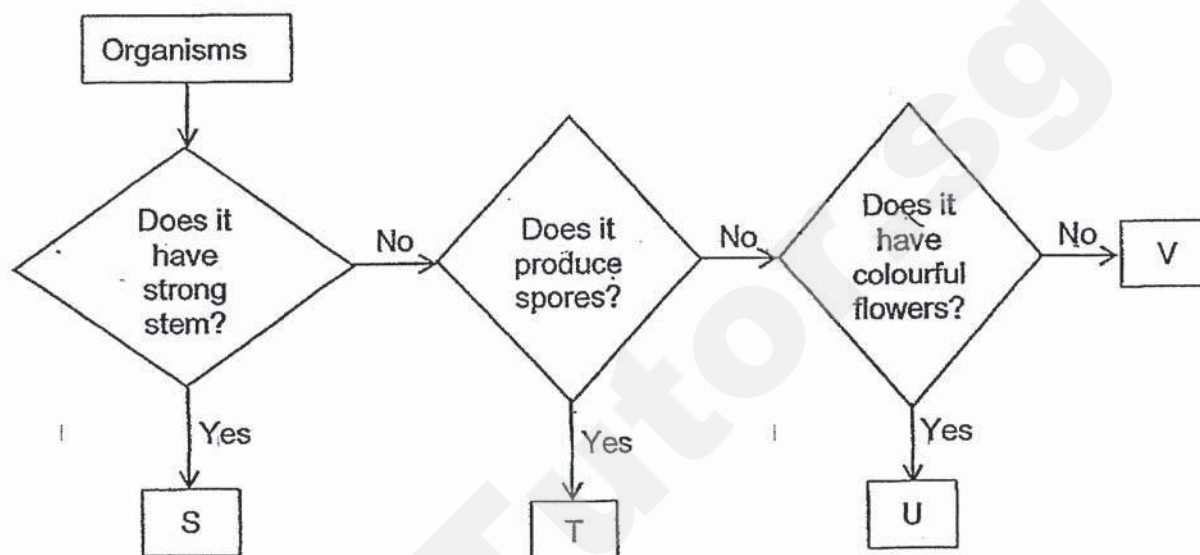
Devi: animal R has six legs but animal Q does not have six legs.

Which of the children's statements are correct?

- (1) Alice and Betty only
- (2) Carol and Devi only
- (3) Alice, Carol and Devi only
- (4) Betty, Carol and Devi only

7. The following are the characteristics of organism A:

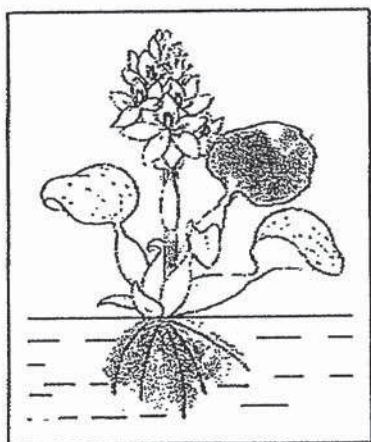
- It has weak stem.
- It produces seeds.
- It has colourful flowers.



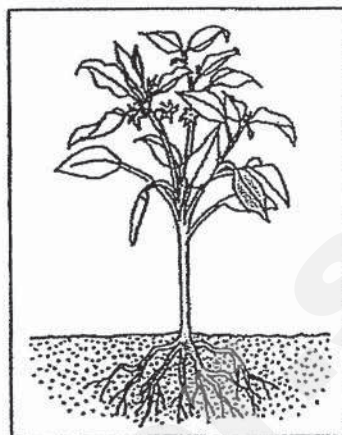
Which one of the following best represents organism A?

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

8. Observe plant P and Q carefully.



Plant P



Plant Q

Based on your observations, which of the following statements about both plants are correct?

- A Both Plants P and Q live on land.
 - B Both Plants P and Q are flowering plants.
 - C Both Plants P and Q have roots, stem and leaves.
- (1) A and B only
(2) A and C only
(3) B and C only
(4) A, B and C

9. Which of the following would fungi most likely be found growing?

- A Rotting log
- B Metal cup in the kitchen
- C Damp bread on the table
- D Plastic bottle in the fridge

(1) A and B only

(2) A and C only

(3) B and C only

(4) B and D only

10. Which of the following statements on the life cycle of the butterfly is / are correct?

- A It has wings at the adult stage.
- B It does not eat when it is at the pupa stage.
- C The young of a butterfly does not resemble its adult.

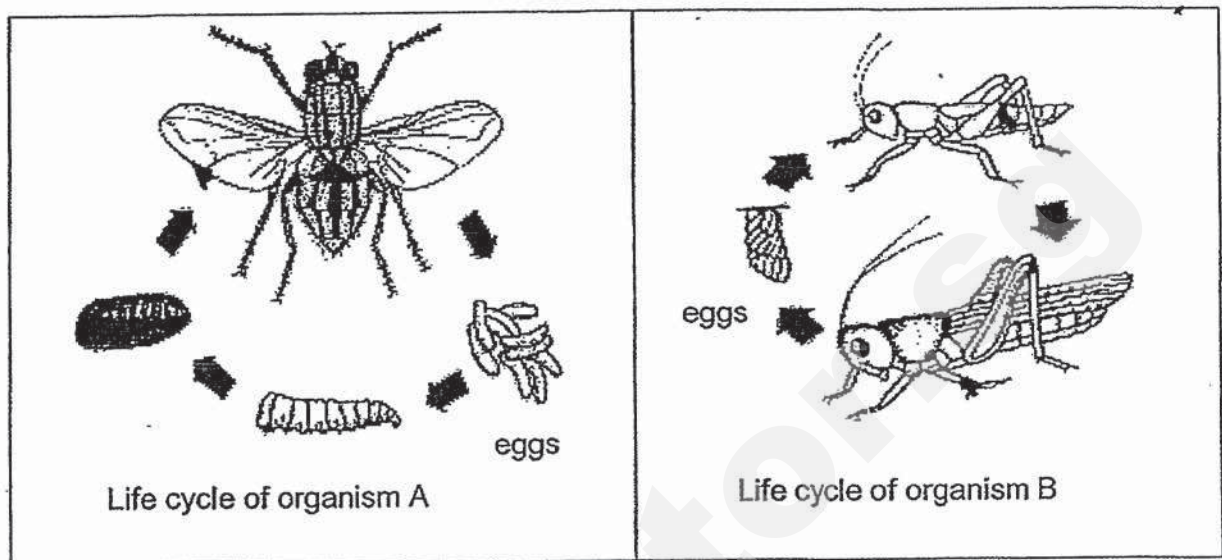
(1) A only

(2) C only

(3) A and C only

(4) A, B and C

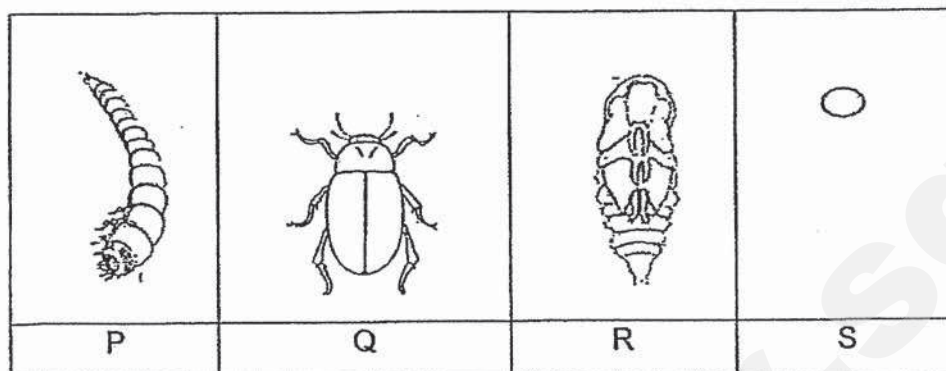
11. The diagrams below show the life cycles of organism A and B.



Which of the following statements of the two life cycles above is / are correct?

- A Both have young that resemble the adults.
 - B Both have the pupa stage in their life cycles.
 - C Both have different number of stages in their life cycles.
- (1) A only
(2) C only
(3) A and B only
(4) B and C only

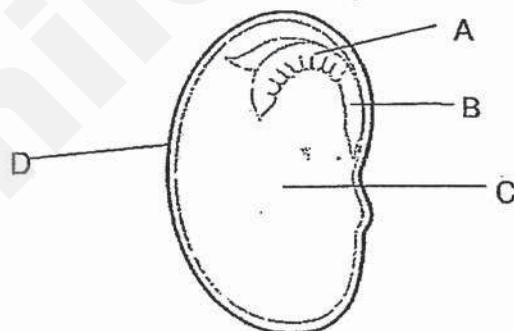
12. The following pictures show the different stages of the life cycle of a mealworm beetle.



Which of the following is correct?

	Stage	Name of stage	Characteristic
(1)	P	Larva	It does not eat.
(2)	R	Pupa	It does not eat.
(3)	Q	Pupa	It has wings.
(4)	S	Adult	It cannot move.

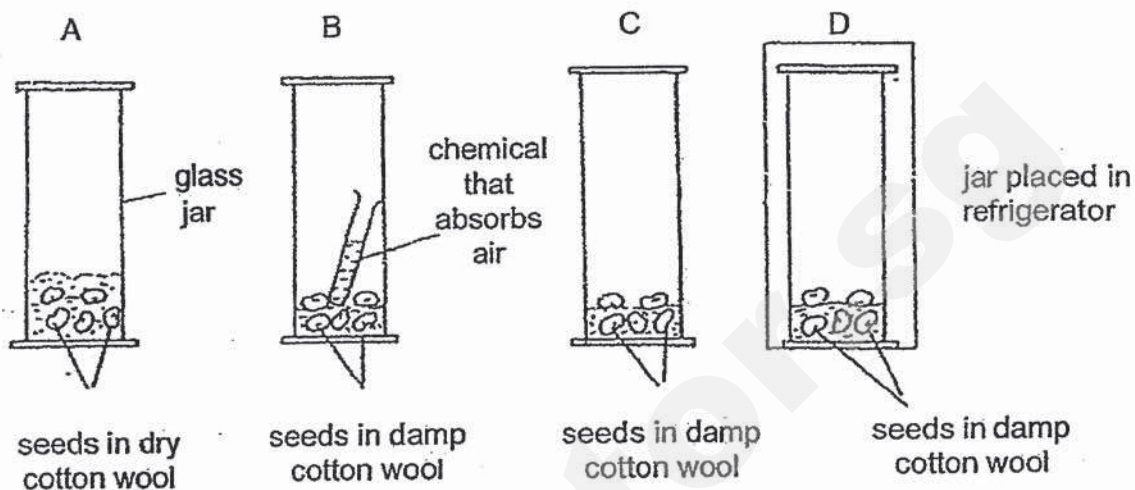
13. The diagram below shows a different parts of a seed.



Which one of the following parts protects the seed?

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

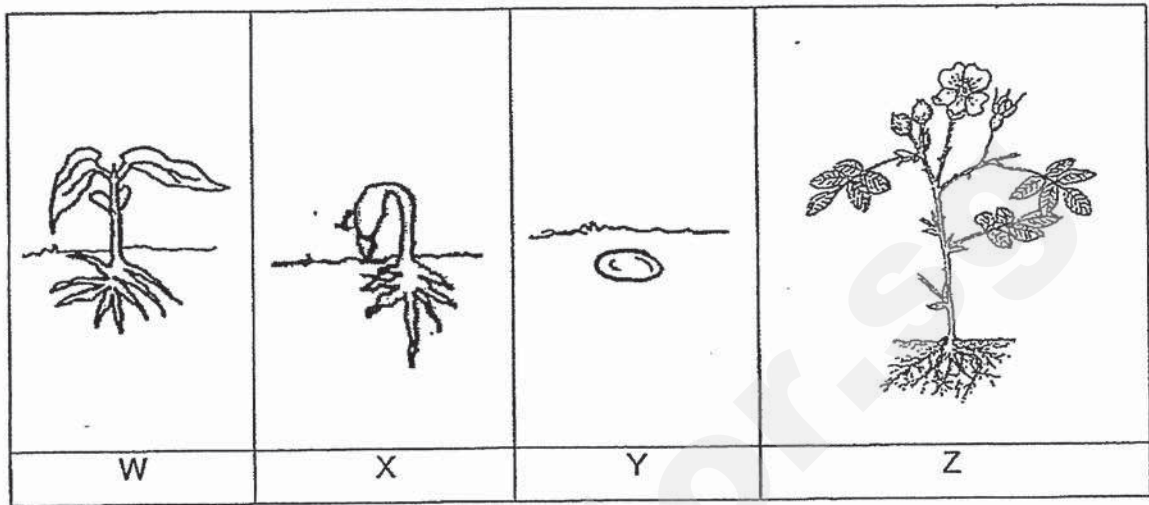
14. Clara placed set-ups A, B and C in her room and left set-up D in the refrigerator.



In which of the following set-up will the seeds germinate after a few days?

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

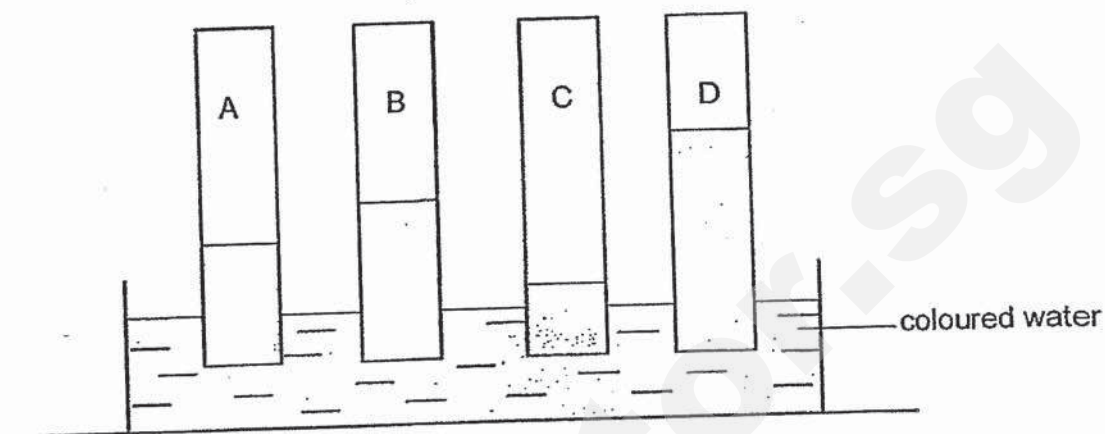
15. The following pictures show the different stages in the life cycle of a plant.



At which stage of the life cycle will the plant be able to produce seeds?

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

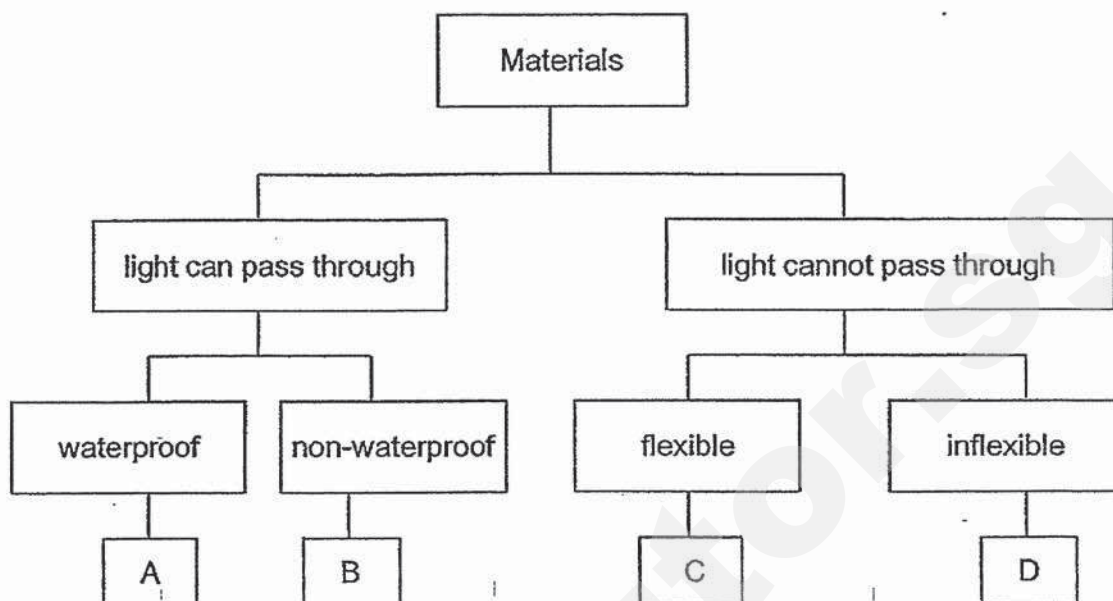
16. Four strips of different materials, A, B, C and D, of identical size were placed onto a tray of coloured water. The diagram below shows the observations after five minutes.



Based on the above observations, which material is most suitable to be used for wiping away water on the table?

- (1) A
 - (2) B
 - (3) C
 - (4) D
17. Shawna is given a piece of material. What should she do to find out if the material allows most light to pass through?
- (1) Bend it.
 - (2) Shine a torch at it.
 - (3) Put it in a dark room.
 - (4) Put it in a bucket of water.

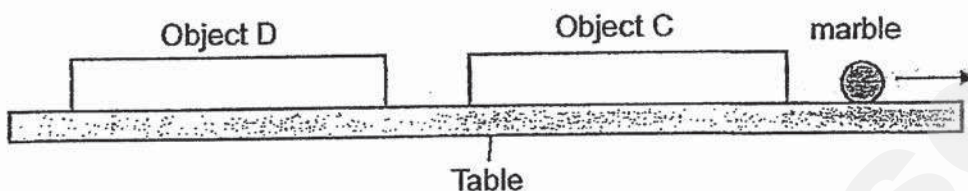
18. Study the classification table below.



Based on the information provided, which of the following materials is the most suitable to make the window and tyre?

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

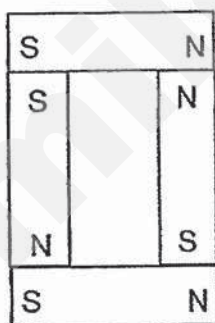
19. Kylie first placed object C and a marble on a table. When she pushed object D near object C, object C moved and hit the marble which rolled off the table.



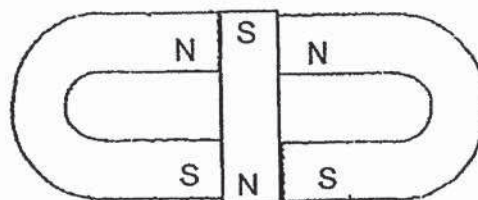
Based on the observation above, which of the following statements is correct?

- (1) Object D is a magnet and attracted Object C.
 - (2) Object C is a magnet and attracted Object D.
 - (3) Both Object C and Object D are magnets with their like poles facing each other.
 - (4) Both Object C and object D are magnets with their unlike poles facing each other.
20. Which of the following shows the correct interaction between the magnets?

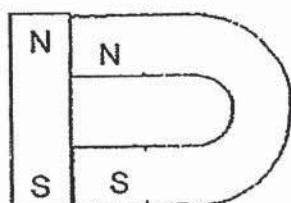
(1)



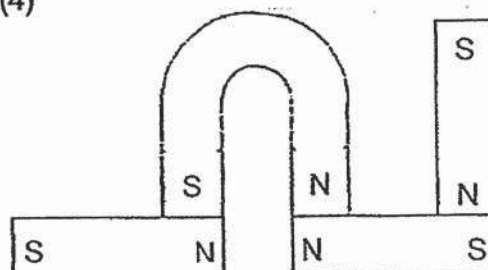
(3)



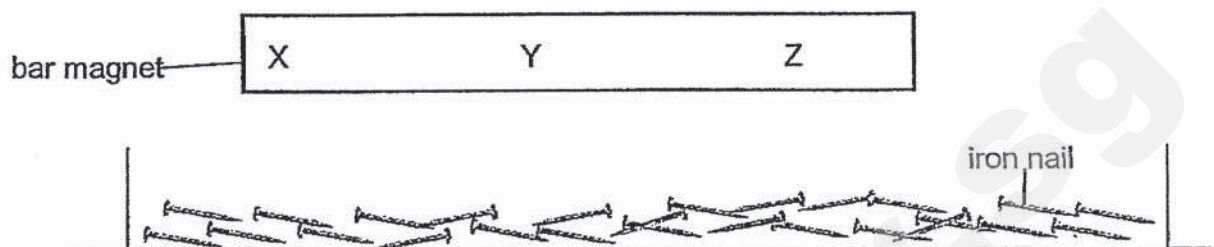
(2)



(4)



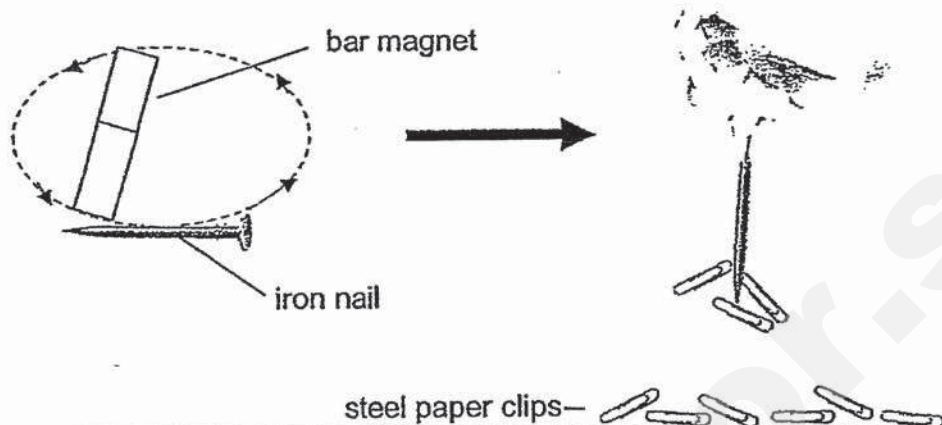
21. Sunita placed the bar magnet above a tray of the iron nails as shown in the diagram below, she observed the number of iron nails attracted to the different parts of magnet.



Which of the following most likely shows the correct number of iron nails attracted to part X, Y and Z?

	Number of iron nails attracted on the bar magnet		
	X	Y	Z
(1)	9	4	1
(2)	1	5	9
(3)	7	9	3
(4)	9	2	10

22. Zach repeatedly stroked an iron nail using the same pole of a magnet. He then held the iron nail above some steel paper clips after stroking.



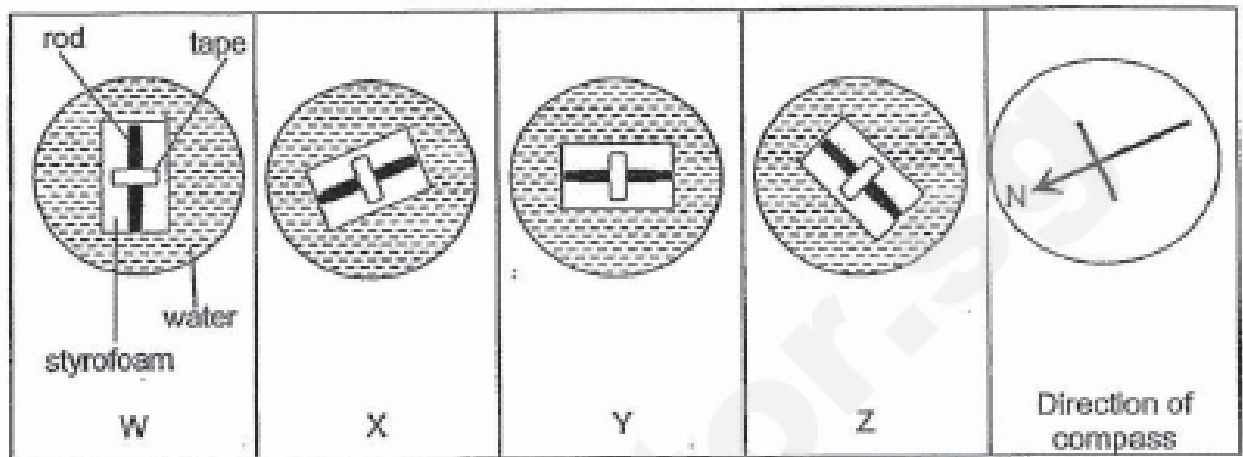
Zach repeated the same experiment a few times with different number of strokes each time. He then recorded his findings as shown in the table below.

Number of strokes	4	8	12	16	20	24	28
Number of steel paper clips attracted by the iron nail	0	4	8	13	17	17	17

What can Zach conclude from his experiment?

- (1) The strength of the bar magnet has been totally transferred to the iron nail.
- (2) The minimum number of strokes the iron nail needs to become a magnet is four.
- (3) The number of steel paper clips attracted to the iron nail increases by four each time.
- (4) A minimum number of twenty strokes on the iron nail is required for the magnetized nail to attract the most number of steel paper clips.

23. Natalia taped four different rods W, X, Y, and Z onto a piece of styrofoam each and put them into four different containers of water to allow them to float freely on the water.



Based on the observations above, which of the following rods is a magnet?

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

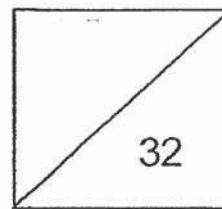
24. Darius placed both the N-pole and S-pole of a bar magnet near four objects, A, B, C and D, and observed the interactions between them. He recorded his observations in the table below.

Magnets	Observations			
	Objects			
	A	B	C	D
North-seeking pole of bar magnet	Attracted	No interaction	Repelled	Attracted
South-seeking pole of bar magnet	Attracted	No interaction	Attracted	Repelled

From the observations above, which one of the following is correct?

	Magnets	Magnetic objects	Non-magnetic objects
(1)	A and B	D	C
(2)	A and B	C	D
(3)	C and D	A	B
(4)	C and D	B	A

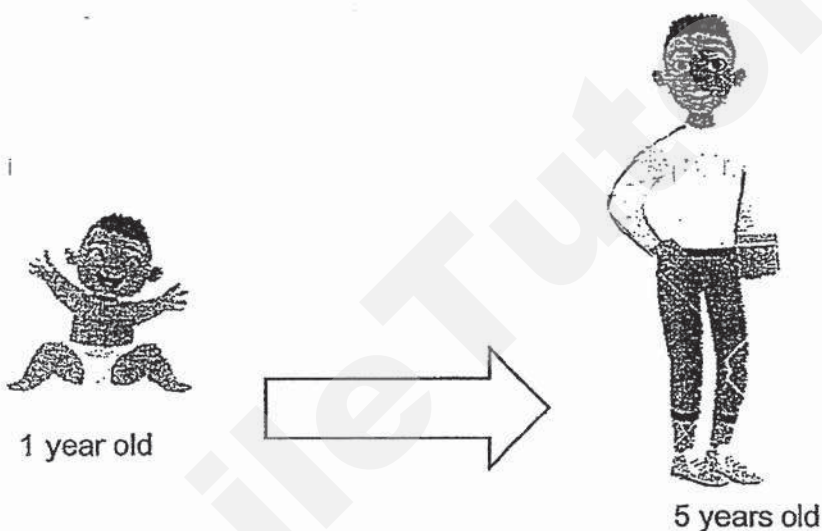
_____ ()
Class: P 3 ()



SECTION B (32 marks)

For questions 25 to 37, write your answers clearly in the spaces provided.
The number of marks available is shown in brackets [] at the end of each question or part question.

25. Observe the diagram below.

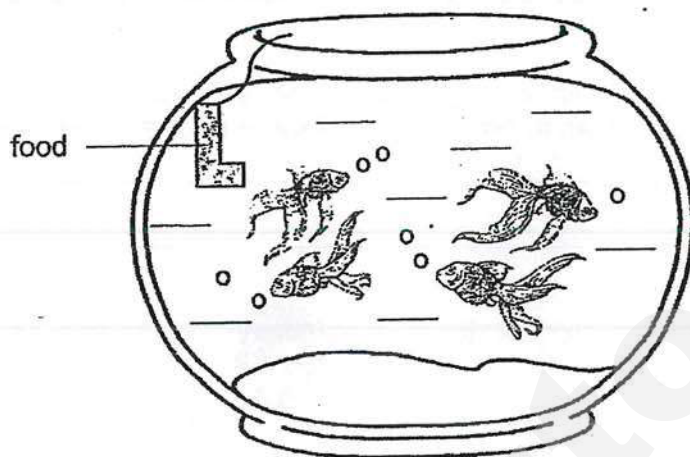


- (a) Based on your observation, name the characteristic of living thing shown in the diagram. [1]

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

Score	
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26. Betty kept some fishes in a fish tank without a lid. After a few weeks, the number of fishes in the tank increased even though no fish was added to the tank.



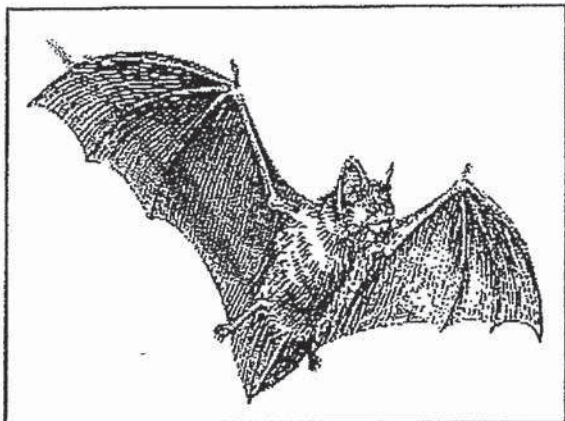
- (a) What could be the possible reason for an increase in the number of fishes? [1]

- (b) Betty covered the fish tank with an air-tight lid. What would happen to the fishes after a few days? Give a reason for your answer. [1]

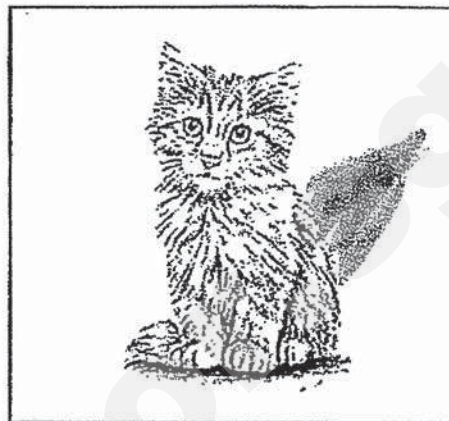
Score	2
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2019 P3 SCIENCE SA2

27. Study animals P and Q as shown in the diagrams below.



P



Q

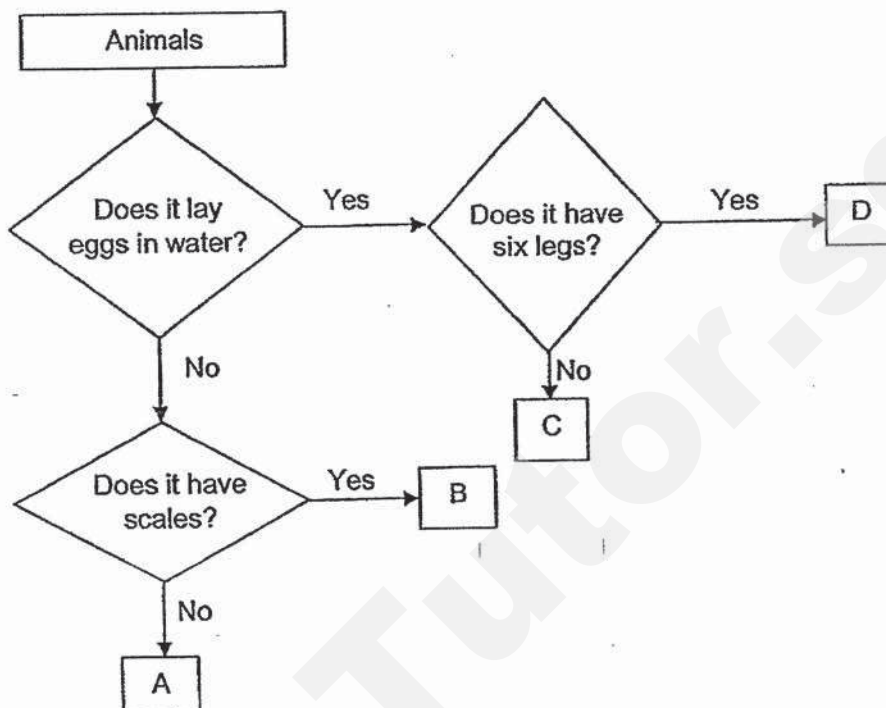
Write down one similarity and one difference between animals P and Q based on your observations only. [2]

[Do NOT compare body shapes, sizes and colours.]

Similarity	<hr/> <hr/> <hr/> <hr/>
Difference	<hr/> <hr/> <hr/> <hr/>

Score	<div style="border: 1px solid black; width: 100%; height: 100%; position: relative;"> <div style="position: absolute; top: 0; right: 0; width: 50%; height: 50%; transform: rotate(45deg); border: 1px solid black;"></div> </div>
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28. Study the flow chart as shown below.



Based on the information above, answer the following questions:

(a) State one difference between animals C and D. [1]

(b) State one similarity between animals A and B. [1]

(c) Which animals, A, B, C or D, best represent snake and mosquito respectively? [1]

(i) snake : _____

(ii) mosquito : _____

Score	<div style="border: 1px solid black; width: 50px; height: 50px; position: relative;"><div style="position: absolute; top: 0; right: 0; width: 100%; height: 100%; border-left: 1px solid black; border-top: 1px solid black; transform: rotate(45deg);"></div></div>
	3

29. (a) Read the following statements and put a tick (✓) in the right column. [1]

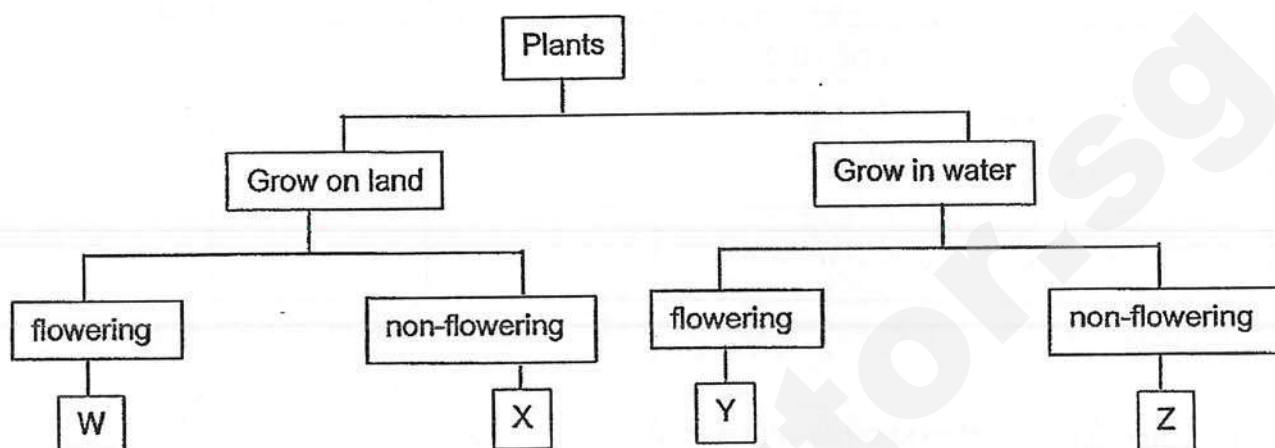
Statements	True	False
(a) Bacteria can be seen with the naked eyes.		
(b) Ferns are flowering plants.		
(c) Fungi cannot make its own food.		

- (b) The diagram below shows a mushroom.
Label and name the part where spores are found. [1]

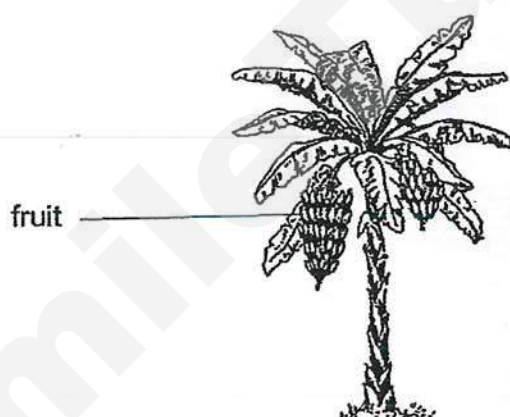


Score	2
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30. Karen classified plants as shown in the following diagram.



Karen found the plant shown below in her garden.



- (a) Based on the information above, which plant, W, X, Y or Z best represents the plant shown above? Give a reason for your answer. [1]

Continue on next page

Score	1
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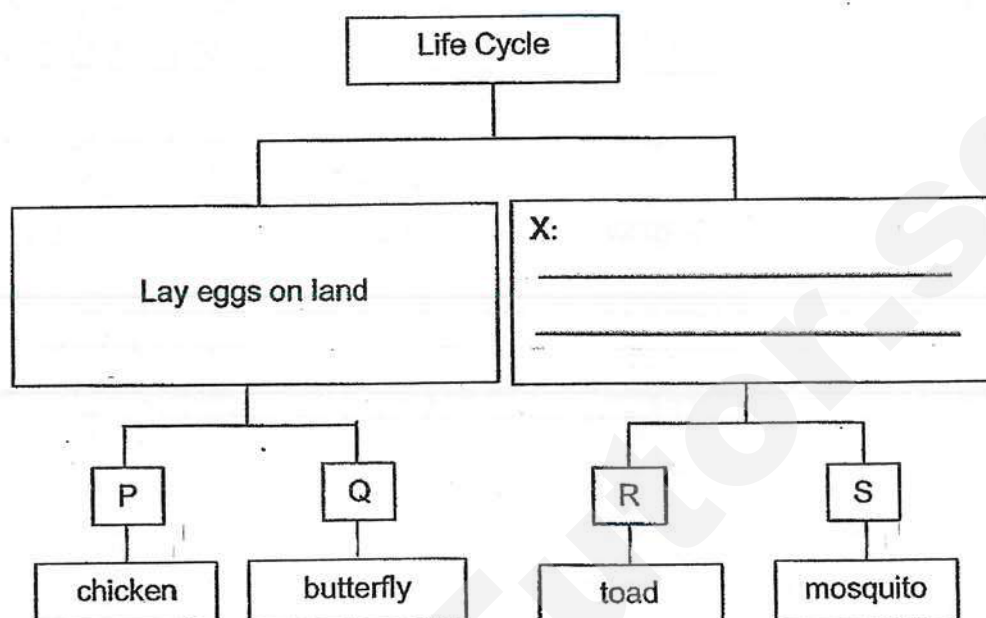
(b) Based on the information above,

(i) state a common characteristic of plants W and X. [1]

(ii) state a difference between plants X and Z. [1]

Score	<div style="border: 1px solid black; width: 100px; height: 100px; position: relative;"><div style="position: absolute; top: 0; right: 0; width: 50%; height: 50%; border-left: 1px solid black; border-bottom: 1px solid black; transform: rotate(45deg);"></div><div style="position: absolute; bottom: 10px; right: 10px; font-weight: bold;">2</div></div>
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31. Some animals are grouped as shown below.



- (a) In the diagram above, write a suitable sub-heading in the box marked X. [1]

- (b) The toad and mosquito are grouped according to the number of stages in their life cycles.

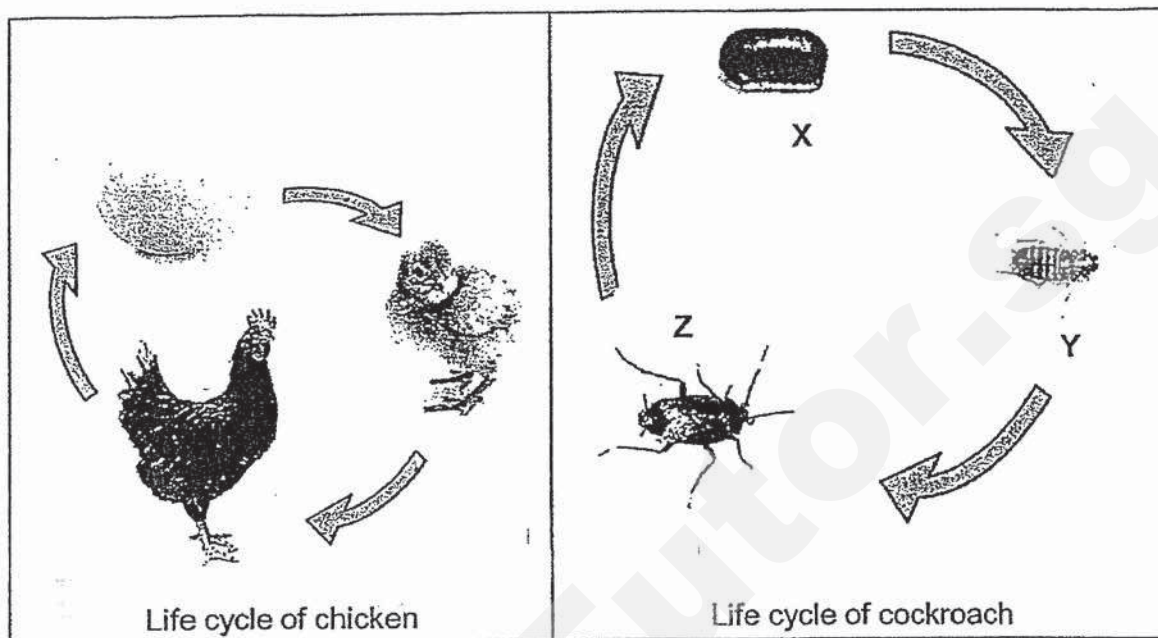
Write the number of stages in the life cycle of each animal below.

[1]

(i)	R	_____ stages
(ii)	S	_____ stages

Score	2
-------	---

32. The life cycles of chicken and cockroach are shown in the diagrams below.



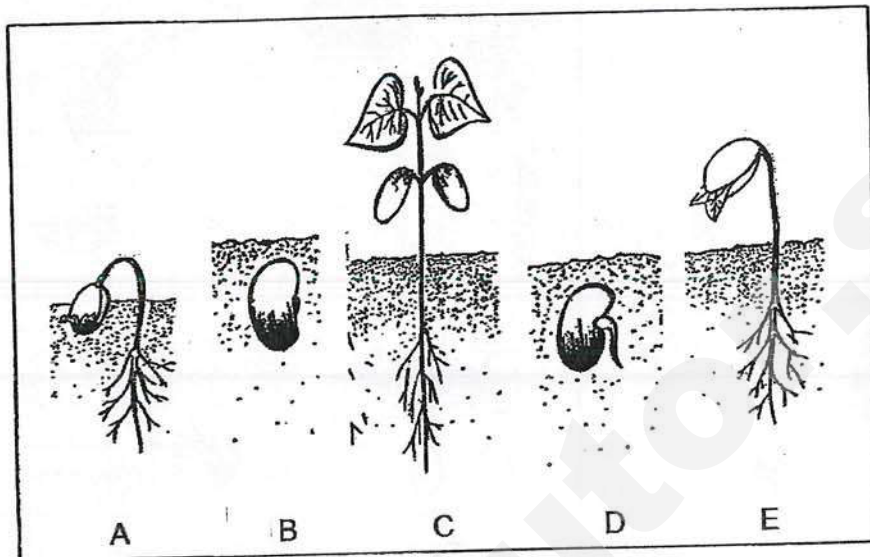
- (a) Based on the information above, state one similarity between the two life cycles shown above. [1]

- (b) Name the stage Y in the life cycle of cockroach. [1]

- (c) Name the stage, X, Y or Z, of the life cycle where it is easiest to get rid of the cockroach. Explain your answer. [1]

Score	3
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33. The diagram below shows the stages of the growth of a germinating seed.



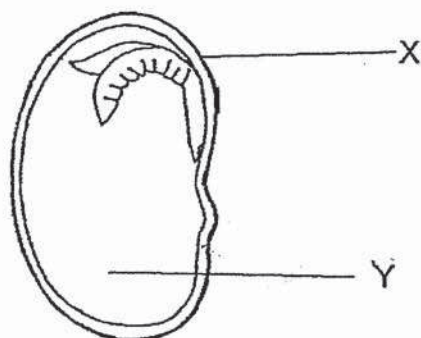
- (a) Arrange the stages, A, B, C, D and E, to show the correct order of the growth of a germinating seed. Fill in the boxes below. [1]

B				
---	--	--	--	--

- (b) Name the stage, A, B, C, D or E, which the seedling can make its own food. Give a reason for your answer. [1]

Score	2
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34. The diagram below shows a developing seed.



- (a) Name parts X and Y.

[1]

X: _____

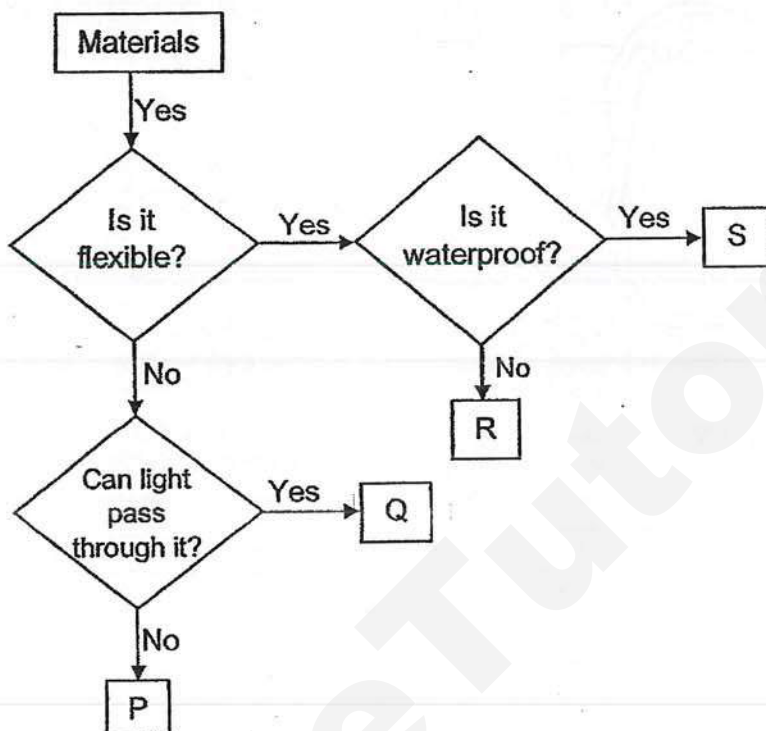
Y: _____

- (b) State the function of part Y.

[1]

Score	2
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35. The flow chart below shows how four materials, P, Q, R and S, are being grouped.



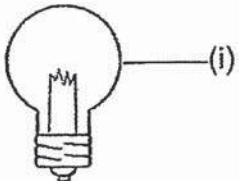
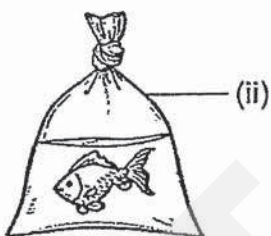
- (a) Based on the flowchart above, state a difference between materials P and R. [1]

Continue on next page

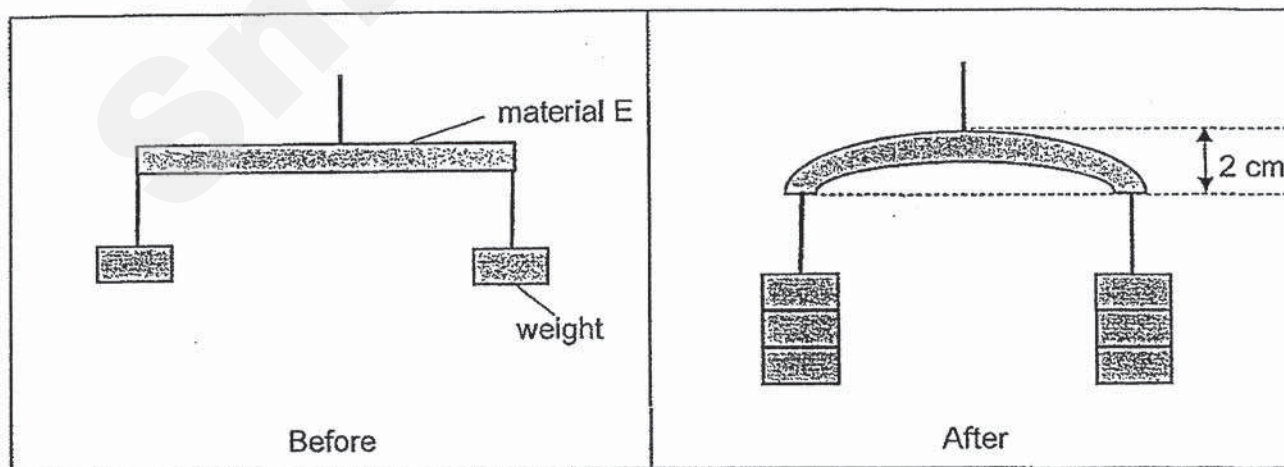
Score	1
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Continued from previous page

- (b) From the flow chart, which material, P, Q, R or S, is the most suitable for making the labelled parts of the objects below. Write your answers in the box provided. [1]

Object	Material
 Light bulb	
 Bag for holding a pet fish	

36. Daphne conducted an experiment to find out the flexibility of materials E, F, G and H. She hung some weights of equal mass on both ends of a plank made of material E as shown in the diagram below.



She added equal weights on both ends of the plank until it bent 2 cm.
The experiment was repeated using planks made of materials F, G and H.

Continue on next page

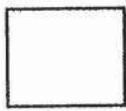
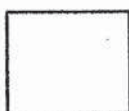
Score	1
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Continued from previous page

The results are shown in the table below.

Materials	Total number of weights added until plank bent 2cm
E	2
F	14
G	6
H	10

- (a) List the materials from the least flexible to the most flexible. [1]



least
flexible

most
flexible

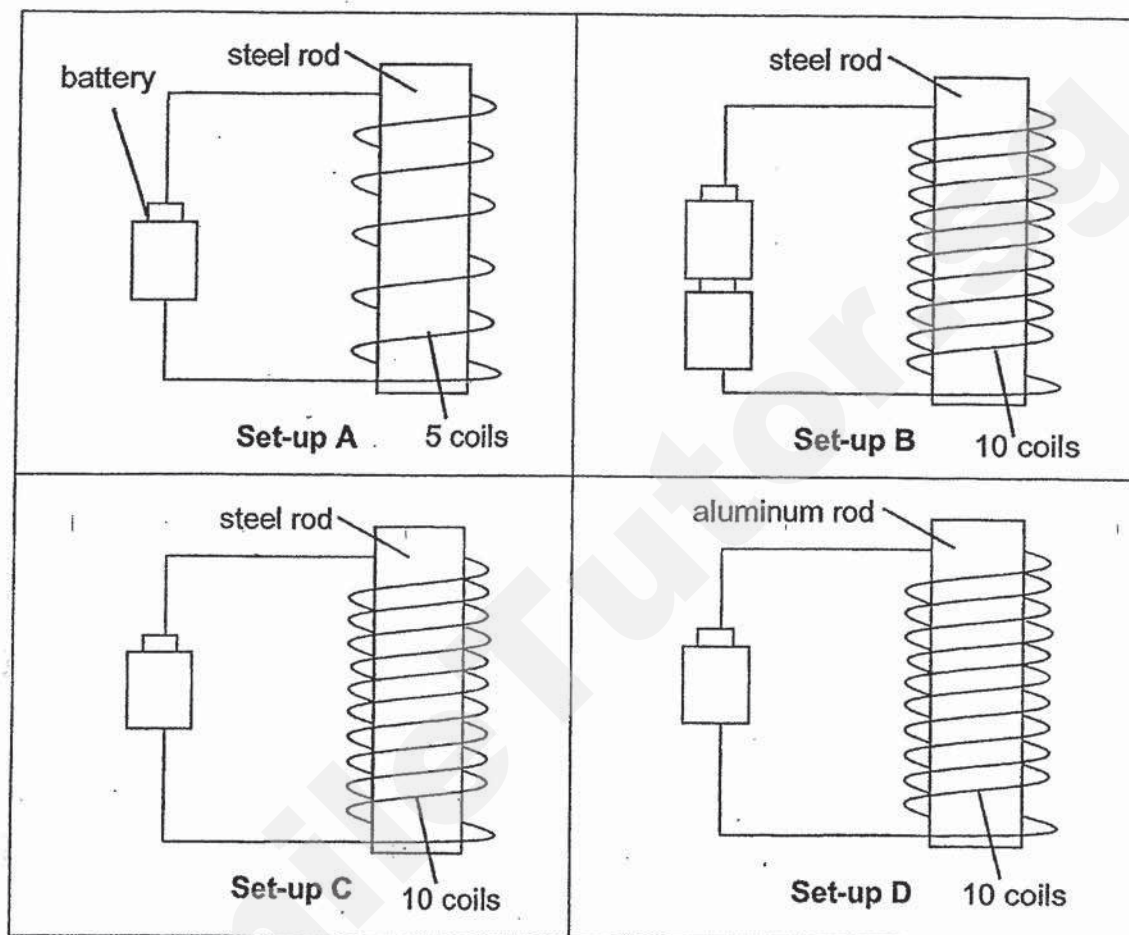
Isabel would like to use one of the four materials, E, F, G or H to make part X of the shoe below.



- (b) Which material E, F, G or H will be the most suitable for making part X? Give a reason for your answer. [2]

Score	3
-------	---

37. Kate used four identical-sized rods and prepared set-ups of electromagnets with wires coiled around rods. The set-ups A, B, C and D are as/ shown below.



Kate would like to find out if the number of coils on the rod would affect the strength of the electromagnet.

- (a) What variable should Kate change in her experiment? [1]

- (b) Which two set-ups should Kate use for her experiment? [1]

Continue on next page

Continued from previous page

(c) Kate tested set-ups A and D by putting the set-ups close to some steel paper clips. She recorded her observations in the table below.

(i) Write down the possible number of steel paper clips that the electromagnet in set-up D could attract. [1]

Set-up	Number of steel paper clips attracted
A	9
D	(i) _____

(ii) Give a reason for your answer in c (i) [1]

End of Paper

Score	2
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ANSWER KEY

YEAR : 2019
LEVEL : PRIMARY 3
SCHOOL : RAFFLES GIRL'S PRIMARY SCHOOL
SUBJECT : SCIENCE
TERM : SA2

BOOKLET A

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

BOOKLET B

Q25 (a) Living things grow.

(b) There is an increase in height.

Q26 (a) The fish reproduce.

(b) The fish will die when the lid is closed, there will be insufficient air. Fish is a living thing which needs air to survive.

Q27 Similarity : They both have wings.

Difference : Animal P has wings but Animal Q does not.

Q28 (a) Animal D has six legs but Animal C does not.

(b) They both do not lay eggs.

(c)(i) B

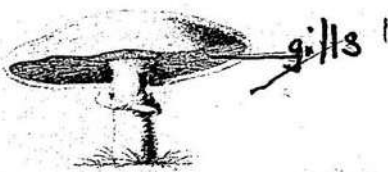
(ii) D

Q29 (a) False

(b) False

(c) True

(b)
(d)



Q30 (a)W. The plant shown above grows on land plant. It also bears fruits, like flowering plants.

(b)(i)They both grow on land .

(ii)X grows on land but Z grow in water.

Q31 (a)X : Lay eggs in water

(b)(i) 3 stages

(ii)4 stages

Q32 (a)They both have an egg stage.

(b)nymph

(c)X. At stage X, it is not able to move. Therefore, it is the easiest to get rid of.

Q33 (a)D A E C

(b)C. Only stage C has leaves. A plants needs leave to make its own food.

Q34 (a) X : seed coat

Y : seed leaf

(b)Y provides food for the developing seed.

Q35 (a)R is flexible but P is not.

(b)(i)Q

(ii)S

Q36 (a)F H G E

(b) Material E. It is the most flexible for making part X needs to be flexible so that it can be tied together. It requires the least number of weight added for the plank to bend 2 cm.

Q37 (a)The number of coils

(b)C and A

(c)(i)O

(ii)It could not ttract any steel paper clips as aluminium is a non-magnetic material thus it cannot be magnetised.

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**RIVER VALLEY PRIMARY SCHOOL
2019 SEMESTRAL ASSESSMENT 2 (SA2)
PRIMARY 3**

SCIENCE

(BOOKLET A)

Name : _____ ()

Date : 30/10/2019 (Wed)

Class : P3 _____

Time: 1 hour

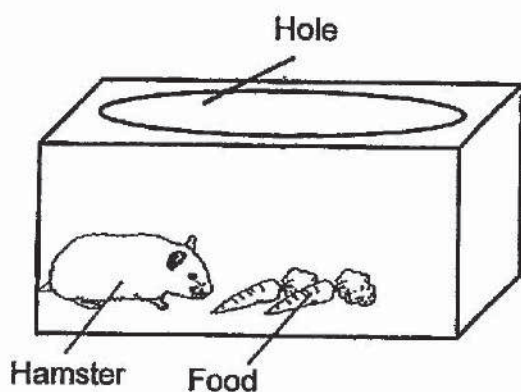
INSTRUCTIONS TO CANDIDATES

1. Write your name, index number and class in the space above.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. For Section A, shade your answers for questions 1 to 15 on the Optical Answer Sheet (OAS).
6. For Section B, write your answers for questions 16 to 23 in the space provided.
7. The total marks for Booklet A is 30 marks.

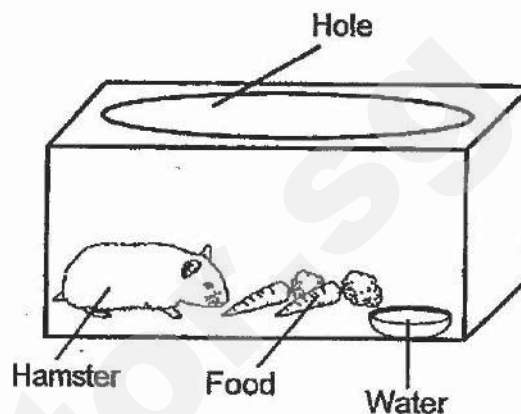
Section A: (30 marks)

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

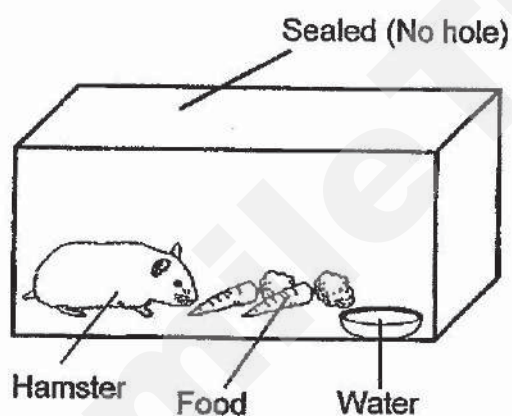
1. Mary wanted to keep a pet hamster.



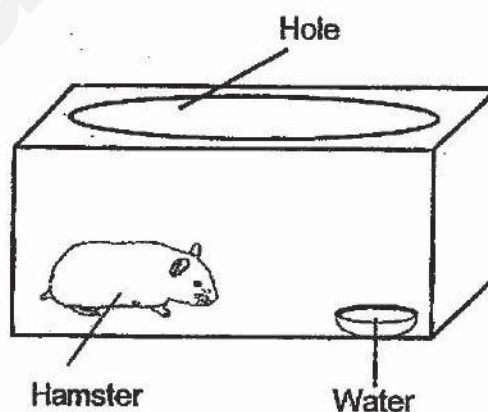
Set-up A



Set-up B



Set-up C



Set-up D

Which set-up, A, B, C or D, is the most suitable to keep her pet hamster?

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

()

2. John went for a walk in the park and saw two animals, Animal X and Animal Y.



Animal X



Animal Y

When Animal X saw Animal Y, it quickly ran away.

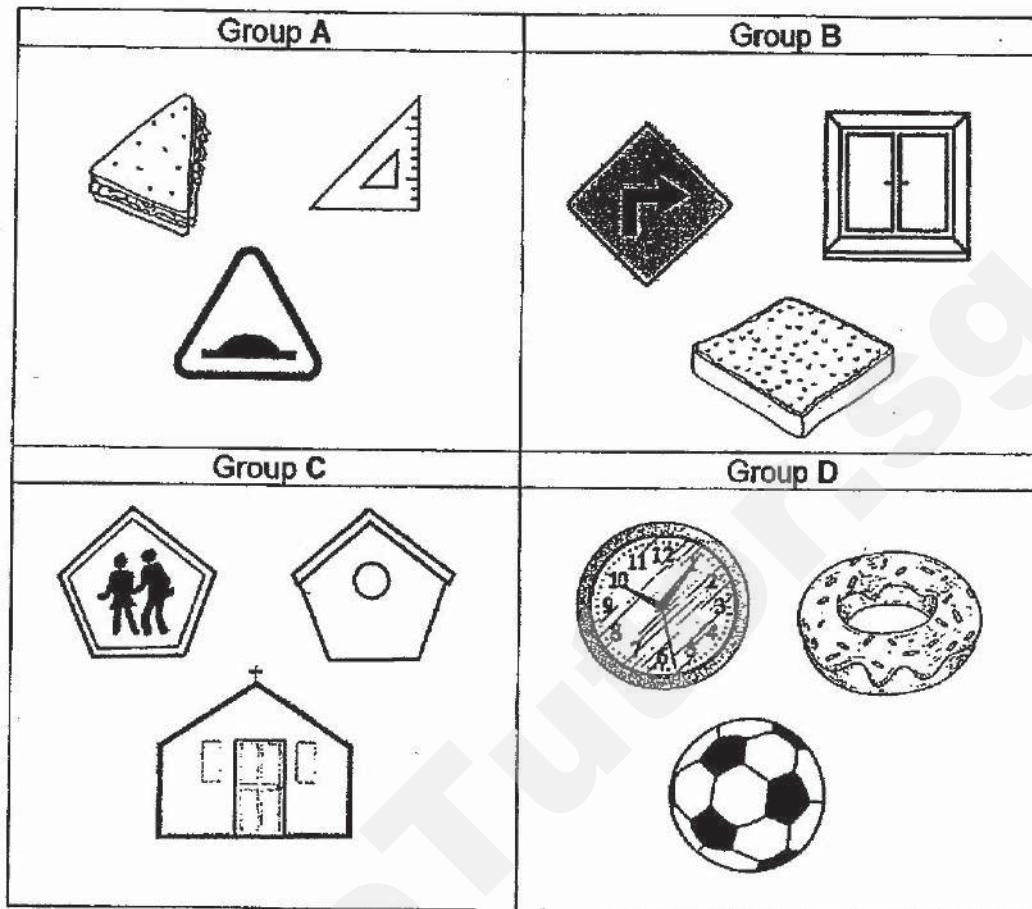
Based on the actions of Animals X and Y, which of the following characteristics of living things does Animal X show?

- A. Animal X can grow.
- B. Animal X can move on its own.
- C. Animal X responds to changes around it.

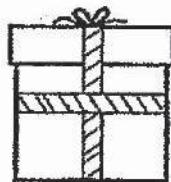
- (1) A and B only.
- (2) A and C only.
- (3) B and C only.
- (4) A, B and C.

()

3. Study the objects in Groups A, B, C and D carefully.



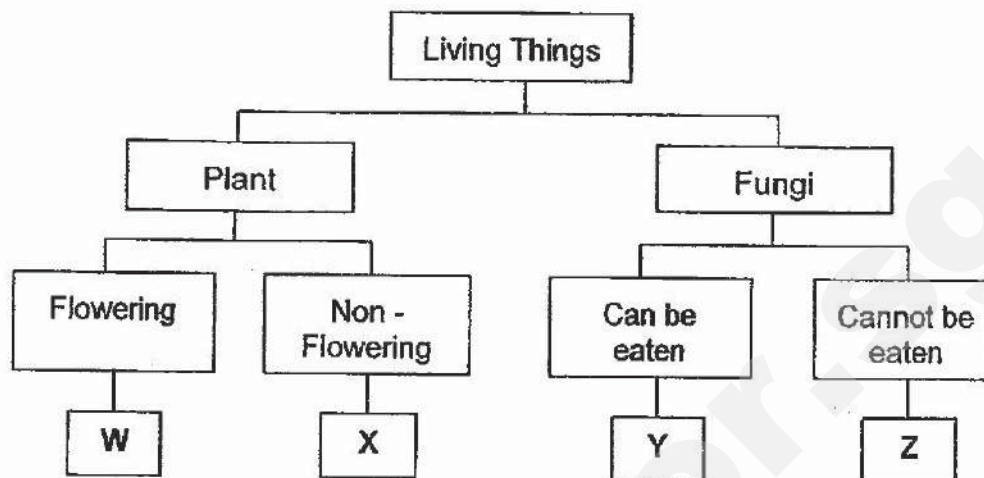
In which group, A, B, C or D, should the following object be placed?



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

()

4. Study the classification chart below.



Based on the classification chart, four pupils made the following statements.

Anne : Both **W** and **X** are plants.

Bala : Both **X** and **Y** are living things.

Caining : Both **W** and **Y** have flowers.

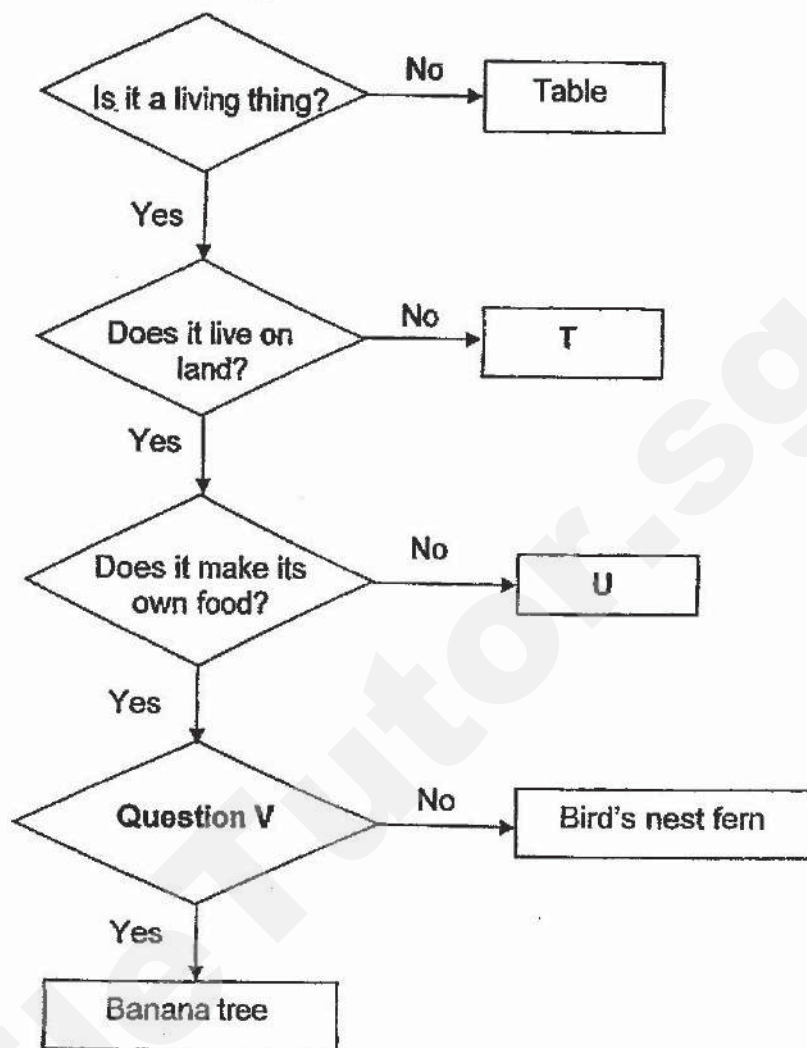
Dinesh : Both **X** and **Z** can be eaten.

Whose statements are true?

- (1) Anne and Bala only.
- (2) Anne and Caining only.
- (3) Anne, Bala and Caining only.
- (4) Anne, Bala and Dinesh only.

()

5. Study the flowchart below carefully.



Based on the flowchart above, what could T, U and Question V be?

	T	U	Question V
(1)	Reptile	Mushroom	Does it reproduce from spores?
(2)	Fish	Bread Mould	Does it reproduce from seeds?
(3)	Amphibian	Yeast	Does it reproduce from seeds?
(4)	Insect	Green bean plant	Does it reproduce from spores?

()

6. Study the classification table shown below. Which of the organisms have not been correctly classified?

Living Things		
Group P	Group Q	Group R
Dog	Mushroom	Tree
Bird	Mould	Fern
Butterfly	Yeast	Fish

- (1) Mould
(2) Yeast
(3) Fern
(4) Fish

()

7. The table below shows the characteristics of four animals - L, M, N and P.

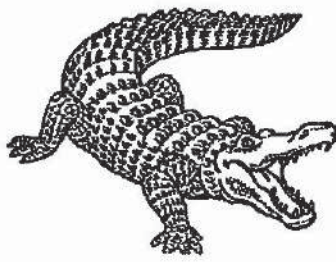
Animal	Lays eggs	Has scales	Lives on land	Feeds young with milk
L	✓	✓	✓	
M			✓	✓
N	✓	✓		
P	✓		✓	

Based on the above table, which one of the following statements is false?

- (1) Animal N could be fish.
(2) Animal M could be a mammal.
(3) Animals L and P could be reptiles.
(4) Animal P could be a bird or an insect.

()

8. Observe the two animals shown below.



Reptile



Amphibian

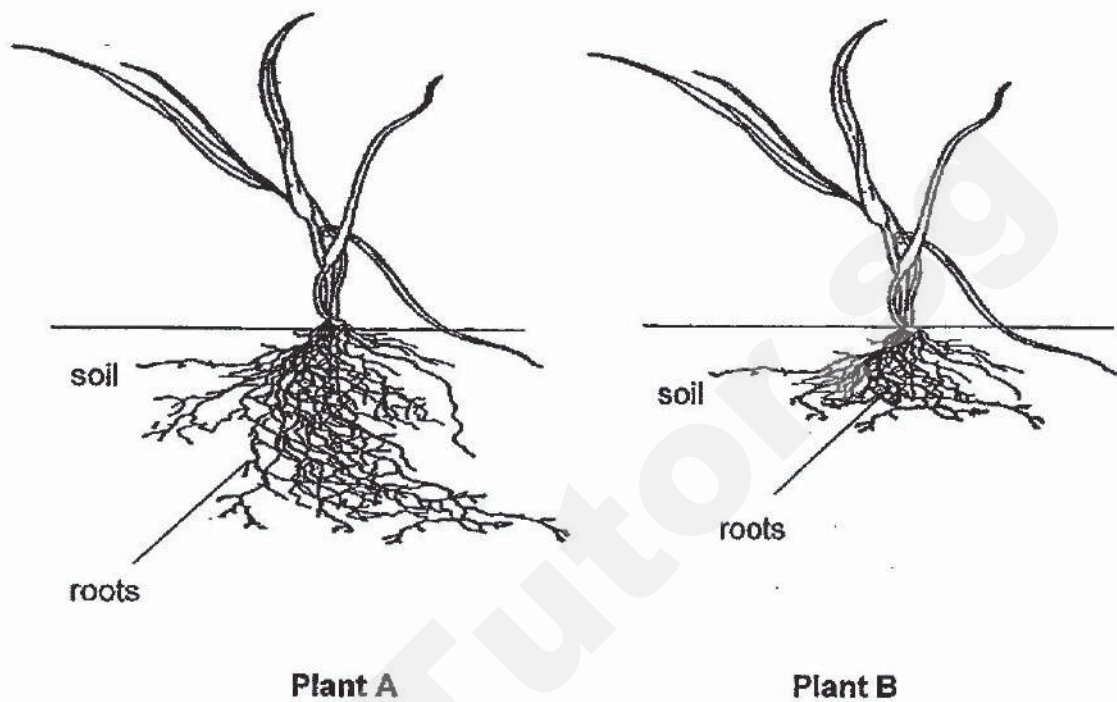
Which of the following statements about the two animals is/ are correct?

- A. Both animals have four legs.
- B. Both animals reproduce by laying eggs.
- C. Both animals have scales as their body covering.
- D. The reptile has scales while the amphibian has moist skin.

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

().

9. The diagram below shows two plants, Plant A and Plant B.

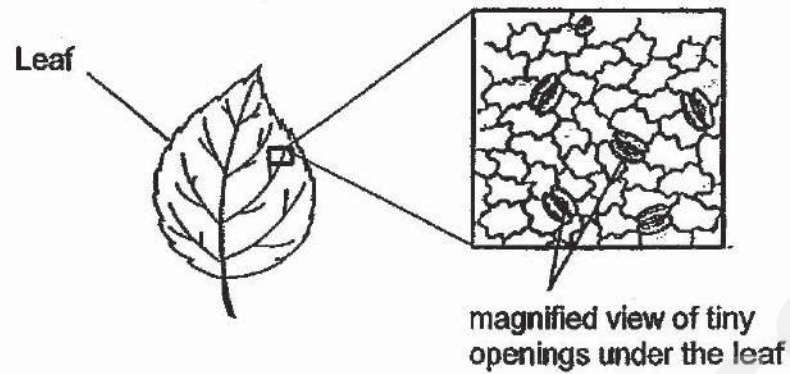


The roots of Plant A function better than that of Plant B because they can _____.

- A. absorb more water from the soil.
 - B. hold the plant more firmly to the ground.
 - C. trap more sunlight to make food for the plant.
 - D. transport more food to the other parts of the plant.
- (1) A only
(2) A and B only
(3) A and C only
(4) A, C and D only

()

10. The diagram below shows some tiny openings found under a leaf.



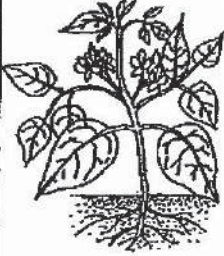




Which of the following statements is correct about the tiny openings found under the leaf?

- (1) They take in and give out air.
- (2) They provide support for the leaf.
- (3) They take in water and mineral salts.
- (4) They take in sunlight for making food.

()

11. Study the pictures below carefully.

A	B	C	D	E
				
The leaves appear.	The shoots appear.	The flowers appear.	The roots appear.	The fruits appear.

Based on the pictures above, which of the following shows the correct stages of growth in the life cycle of a flowering plant?

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

()

12. Jane observed three animals, A, B, and C over a period of time and recorded her observations in a table as shown below.

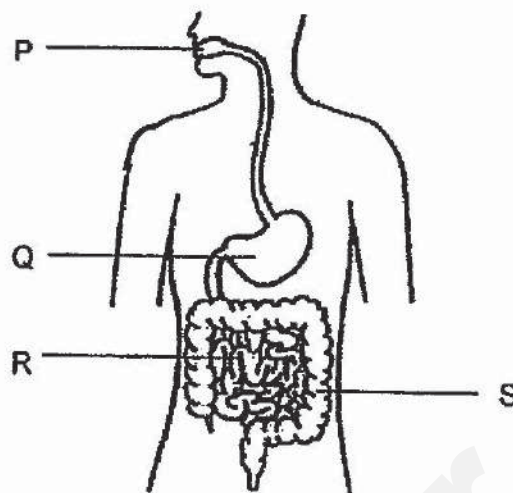
Observation	Animal A	Animal B	Animal C
Young resembles the adult		✓	
Adult and young live on land		✓	✓
Has 3 stages in its life cycle	✓	✓	
Moults several times at one stage in its life cycle		✓	✓

Based on her observations in the table above, which of the following most likely represent Animals A, B and C?

	Animal A	Animal B	Animal C
(1)	Frog	Grasshopper	Mosquito
(2)	Grasshopper	Cockroach	Beetle
(3)	Frog	Cockroach	Butterfly
(4)	Cockroach	Beetle	Butterfly

()

13. The diagram below shows the human digestive system.



At which of the following part/s (P, Q, R or S) does digestion occur?

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

()

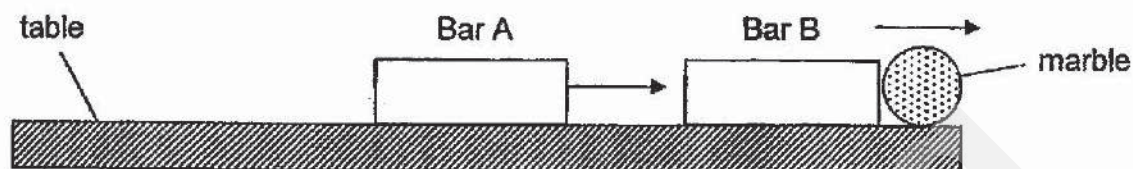
14. Michael wanted to make a temporary magnet. Which of the following objects can be turned into a temporary magnet?

- A. A plastic ruler
- B. A steel bar
- C. An iron rod

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

()

15. Look at the diagram below.



When Bar A is moved towards Bar B, Bar B moves and pushes the marble off the table. What could be the explanation for such an observation?

- (1) Bars A and B are magnets with like poles facing each other.
- (2) Bars A and B are magnets with unlike poles facing each other.
- (3) Bar A is a magnet while Bar B is made of a magnetic material.
- (4) Bar B is a magnet while Bar A is made of a magnetic material.

()

~End of Section A~

**RIVER VALLEY PRIMARY SCHOOL
2019 SEMESTRAL ASSESSMENT 2 (SA2)
PRIMARY 3**

**SCIENCE
(BOOKLET B)**

Name : _____ ()

Date : 30/10/2019 (Wed)

Class : P3 _____

Time : 1 hour

INSTRUCTIONS TO CANDIDATES

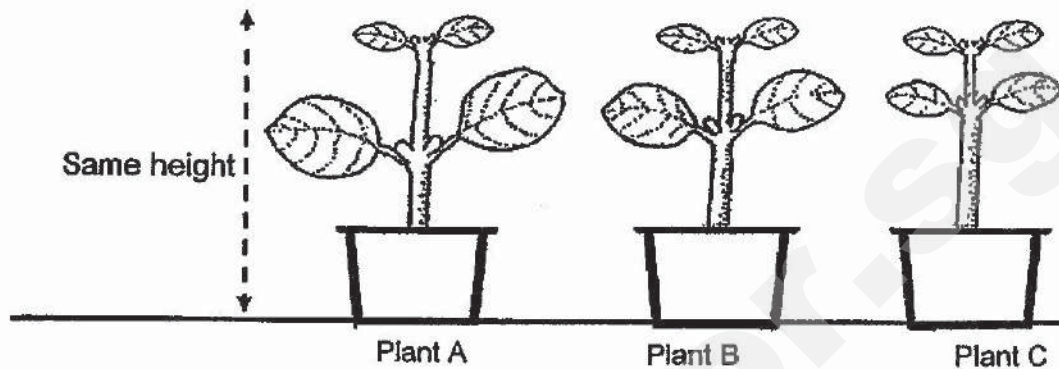
1. Write your name, index number and class in the space above.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. For Section A, shade your answers for questions 1 to 15 on the OAS.
6. For Section B, write your answers for questions 16 to 23 in the space provided.
7. The total marks for Booklet B is 20 marks.

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

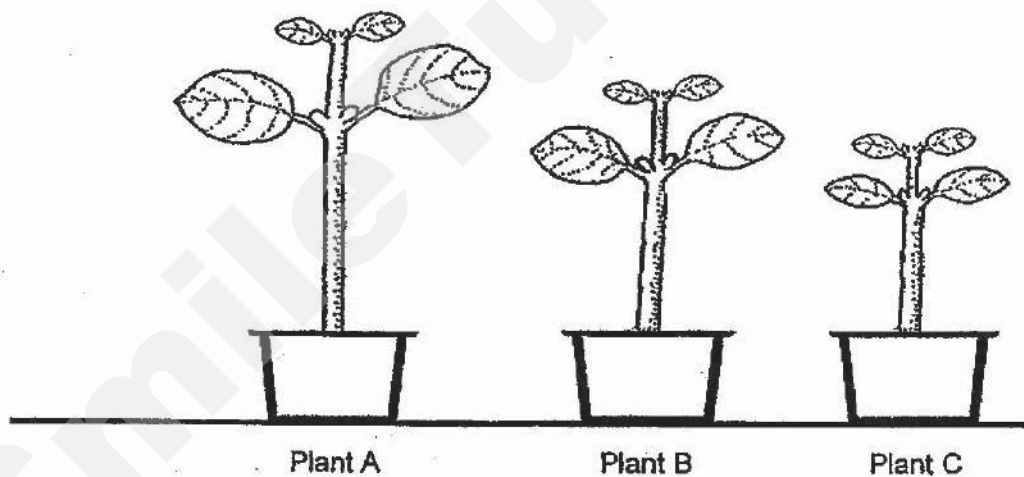
Section B (20 marks)

Write your answers to questions 16 to 23 in this booklet.

16. Sam wanted to find out if the size of leaves affects how fast a plant grows. He found three similar healthy plants with leaves of different sizes as shown below. He placed them in the same spot and watered them daily.



One week later, he checked his set-ups and noticed that the plants in the 3 set-ups grew to different heights as shown below.



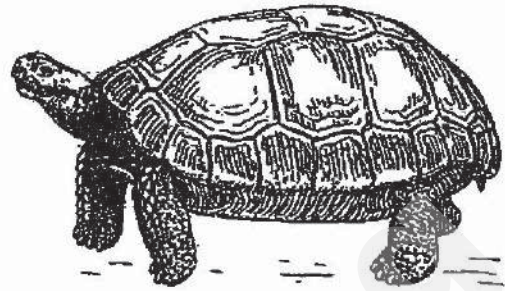
- a) After comparing the size of the leaves with the height of the plant, Sam concludes that when the leaves are _____, the height of the plant _____ (1m)
- b) Should Sam place the plants in a dark room or in the garden to ensure that they grow healthily? Explain your answer. (2m)

	3
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17. The pictures below show two animals, Animal X and Animal Y.



Animal X



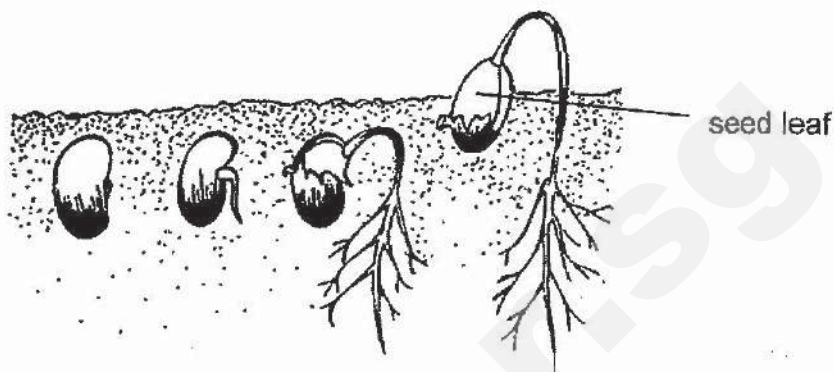
Animal Y

- a) State one similarity between how Animal X and Animal Y reproduce. (1m)

- b) In which animal group would you classify Animal X? Based on the picture, state two characteristics that Animal X has to support your answer. (2m)

	3
--	---

18. The students in Miss Loy's class observed how some seeds germinated as shown below.



Two students, A and B, observed the growth of the seeds and recorded the mass of the seed leaves in the tables below.

Student A				
Day	3	7	10	13
Average mass of the seed leaves (g)	4	5	8	11

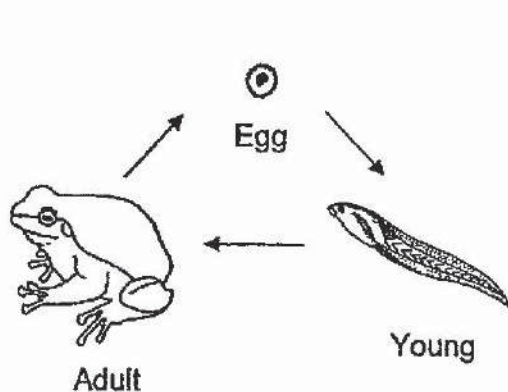
Student B				
Day	3	7	10	13
Average mass of the seed leaves (g)	4	3	2	1

- a) Which student, A or B, recorded the changes in the mass of the seed leaves correctly? (1m)

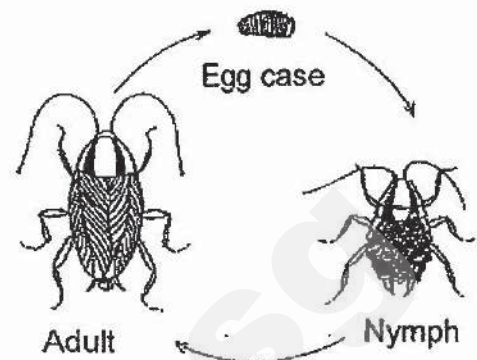
- b) Give a reason for your answer in (a). (1m)

	2
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19. The diagram below shows the life cycles of two animals.



Life cycle Animal X

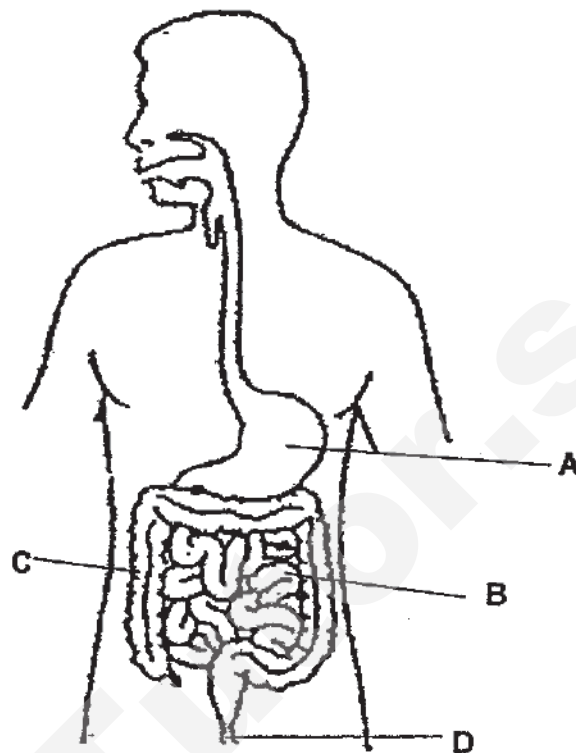


Life cycle of Animal Y

- a) **Based on the number of stages**, state one similarity between the life cycles of these two animals. (1m)
-
- b (i) **Based on the appearance of the young and the adult**, state one difference between the two animals. (1m)
-
- (ii) **Based on where the young lives**, state one difference between the two animals. (1m)
-

	3
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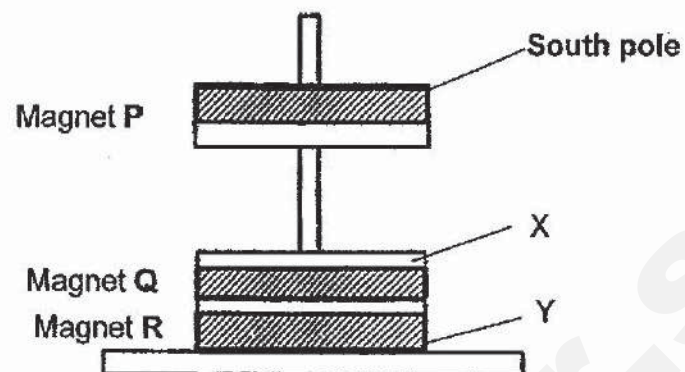
20. The diagram below shows parts of the human digestive system.



- a) Name the part labelled C and state its function. (1m)
- _____
- b) What will happen to the food if the part labelled B is not functioning properly? (1m)
- _____

	2
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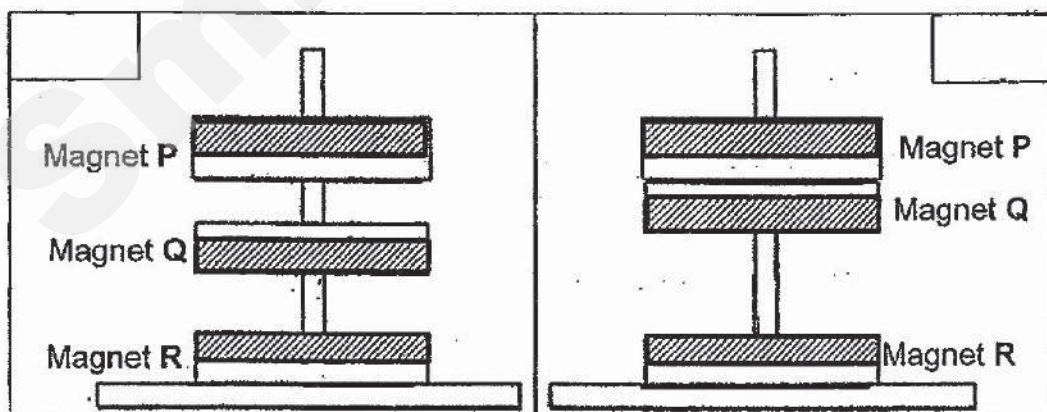
21. In an experiment, three ring magnets P, Q and R, are placed in the positions shown in the diagram below.



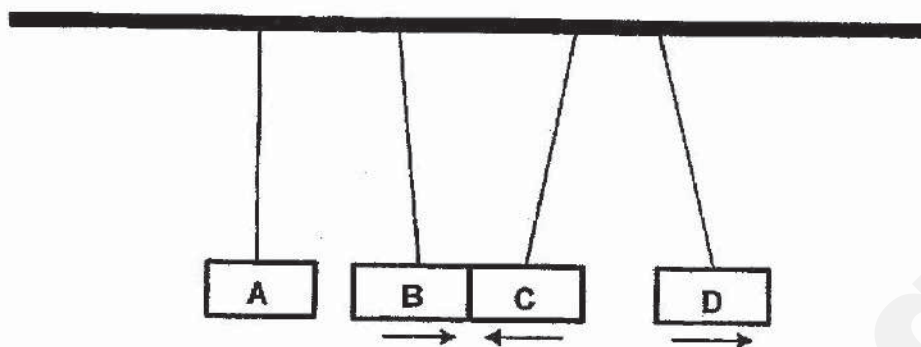
- a) State the poles of the parts labelled X and Y of magnets Q and R respectively as shown in the diagram above. (1m)

X: _____ Y: _____

- b) Put a tick (✓) in the diagram below that correctly shows what will happen when magnet R is reversed. (1m)



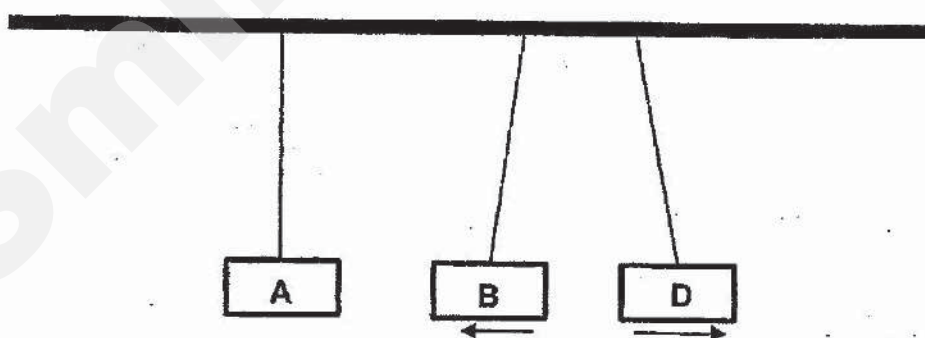
22. Four objects of unknown material are hung on strings as shown below.



- a) Based on the observations above, what can be concluded about the four objects? Put only one tick (✓) in the correct boxes for object A, B, C and D in the table below. (2m)

Object	Magnet	Magnetic	Not able to tell
A			
B			
C			
D			

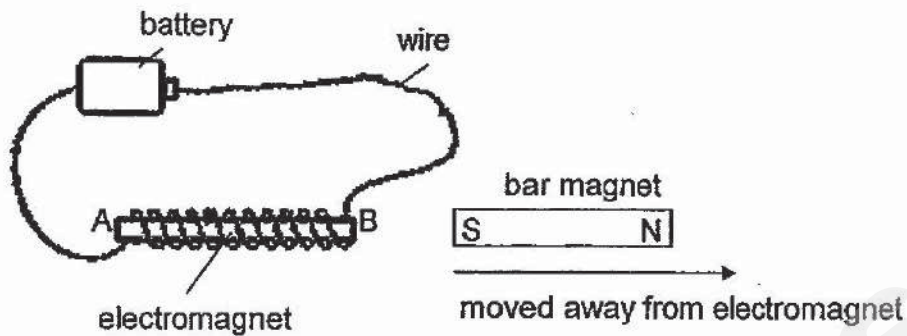
- b) If object C was removed and object D was moved nearer to object B, it was observed that object B moved away from object D.



What can you conclude about object B? Explain your answer. (1m)

	3
--	---

23. The experiment below shows what happened when the South pole of a bar magnet was brought close to an electromagnet.



- a) State the pole of the part labelled B of the electromagnet. (1m)

The diagram below shows a train that is lifted off the track with the help of electromagnets placed below the train.



- b) Based on the experiment above, explain how the electromagnets help to lift the train off the track. (1m)

	2
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~End of Paper~

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SCHOOL : RIVER VALLEY PRIMARY SCHOOL

LEVEL : PRIMARY 3

SUBJECT : SCIENCE

TERM : 2019 SA2

BOOKLET A

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

BOOKLET B

Q16)	a) bigger , grow b) Sam should place the plants in the garden. The plants need sunlight to make food.
Q17)	a) Both animal X and Y lay eggs. b) Animal X is an insect because it has six legs.
Q18)	a) B b) As the seed leaves provide food for the seedling , the seed leaves will decrease in mass as food.
Q19)	a) Both animals X and Y have three stages in their life cycle. bi) The young of animal Y resembles its adult but the young of animal X does not resemble its adult . ii) The young of animal Y lives on land but the young of animal X lives in water.
Q20)	a) Large intestine. b) The food will not be completely digested and will not be absorbed into the bloodstream.

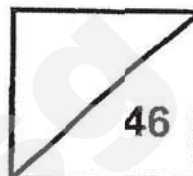
Q21)	<p>a) X : North pole Y : South pole</p> <p>b)</p> <div data-bbox="384 421 1241 887"> </div>
Q22)	<p>a) A / Not able to tell B / Not able to tell C / Magnet D / Magnet</p> <p>b) Object B is a magnet. Object B repel object D.</p>
Q23)	<p>a) South pole.</p> <p>b) The like poles of the electromagnets are facing each other, so they repel.</p>

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Rosyth School
End-Of-Year Examination 2019
SCIENCE
Primary 3

**Total
Marks:**



Name: _____

Class: Primary 3 _____

Register No. _____

Date: 30 October 2019

Total time for Booklets A and B: 1 h 30 min

Parent's Signature: _____

BOOKLET A

Instructions to Pupils:

1. Do not open the booklets until you are told to do so.
2. Follow all instructions carefully.
3. Answer all questions.
4. This paper consists of 2 booklets, Booklet A and Booklet B.
5. For questions 1 to 23 in Booklet A, shade the correct ovals on the Optical Answer Sheet (OAS) provided using a 2B pencil.

* This booklet consists of **14** printed pages (including cover page).

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For each question from 1 to 23, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). **Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.** (46 marks)

1. Which one of the following is a characteristic of mammals?

- (1) They lay eggs.
- (2) They have four legs.
- (3) They have hair on their body.
- (4) Their body is made up of three parts.

2. The table below shows the height of two things, P and Q, over two years respectively.

Thing	Height (cm)	
	Year 1	Year 2
P	120	120
Q	100	120

Based on the results, which one of the following statements is definitely correct?

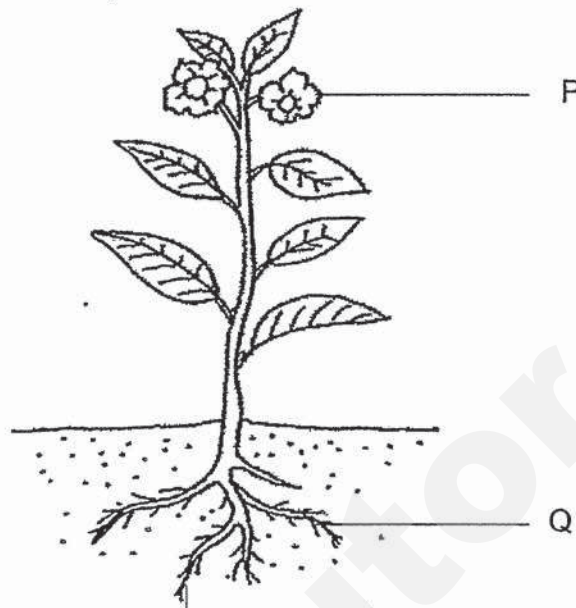
- (1) P is a living thing.
- (2) Q is a living thing.
- (3) Both P and Q are living things.
- (4) Both P and Q are non-living things.

3. Karen studied three animals. She tried to identify which of the animals are amphibians.

Which one of the following questions will help to confirm that the animals are amphibians?

- (1) How many legs do they have?
- (2) Do they reproduce by laying eggs?
- (3) Can they live on land and in water?
- (4) Do they breathe through their lungs?

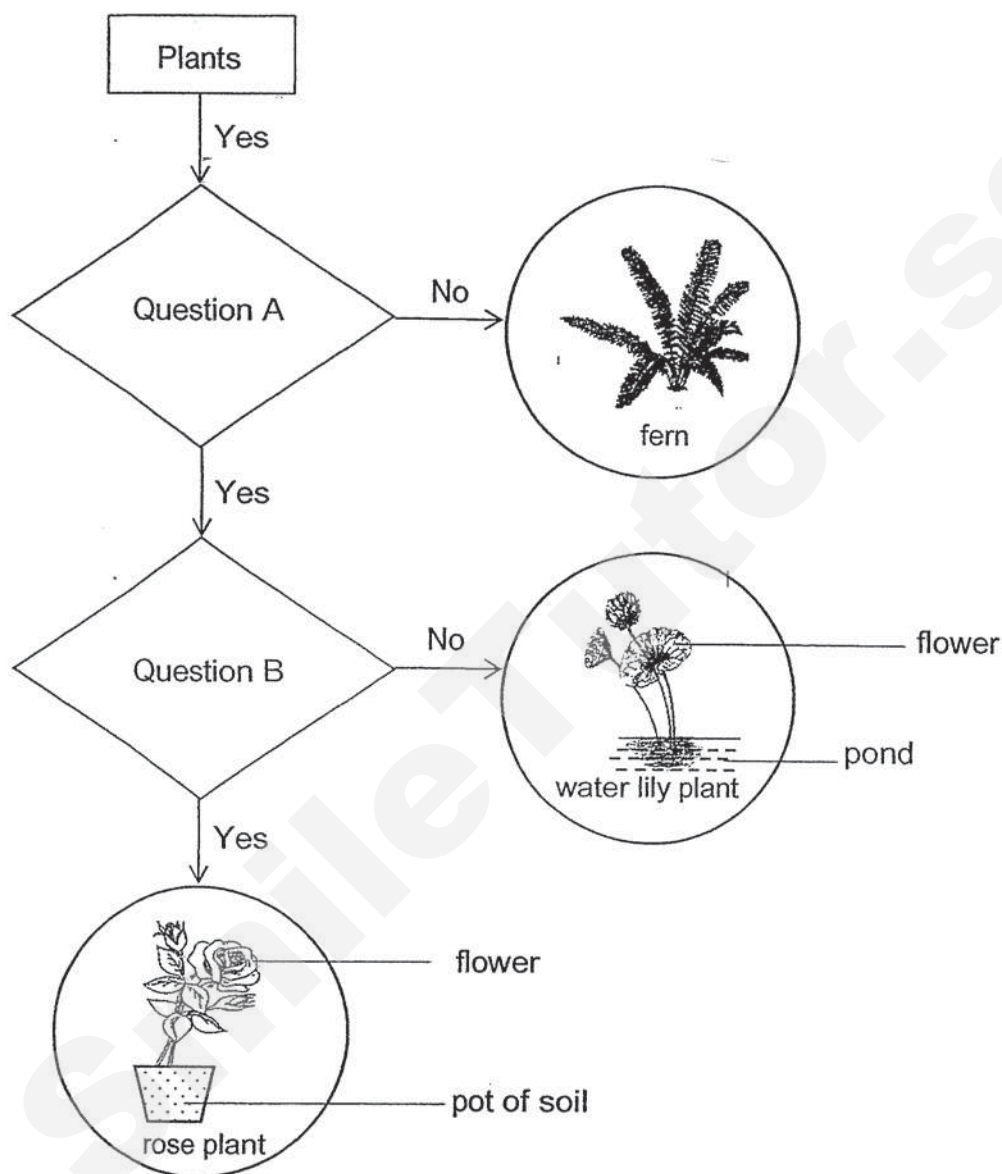
4. The diagram below shows a plant found in the garden.



Which one of the following represents parts, P and Q?

	P	Q
(1)	leaf	stem
(2)	flower	root
(3)	leaf	fruit
(4)	flower	stem

5. Study the classification diagram.



What are the two questions, A and B?

	Question A	Question B
(1)	Does it reproduce by spores?	Does it grow in water?
(2)	Does it reproduce by seeds?	Does it grow on land?
(3)	Does it bear flowers?	Does it reproduce by spores?
(4)	Does it bear fruits?	Does it reproduce by seeds?

6. Max wrote the following characteristics of living thing X on his Science worksheet.

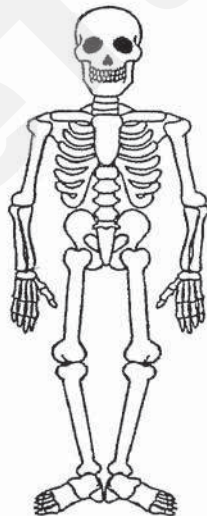
living thing X

- Does not make its own food
- Feeds on living and dead things
- Can only be seen using a microscope

Which one of the following could living thing X be?

- (1) fish
- (2) fern
- (3) bacteria
- (4) mushroom

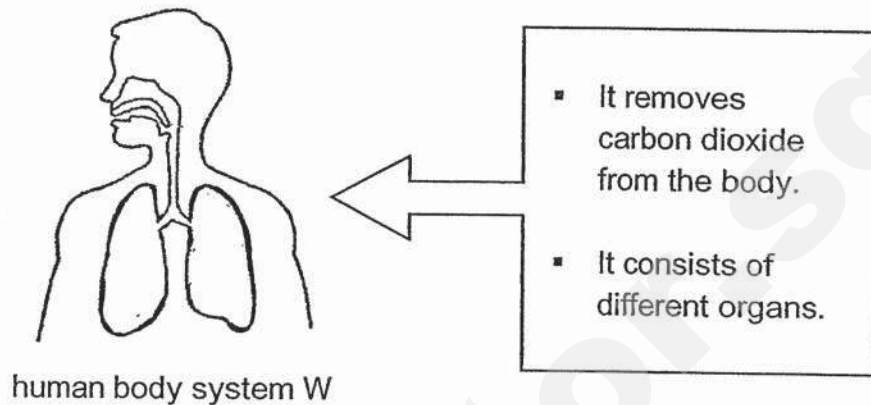
7. Study the human body system below.



The function of the human body system is to _____.

- (1) remove carbon dioxide from the body
- (2) protect the delicate organs in the body
- (3) break down food into simple substances
- (4) carry waste materials away from the different parts of the body

8. Tom saw a picture of human body system W as shown below. He read the information about the body system W carefully and noticed that one information was missing.



Which one of the following information was missing about human body system W?

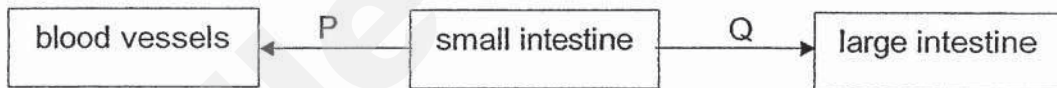
- (1) It supports the body.
 - (2) It takes in oxygen into the body.
 - (3) It breaks down food into simple substance.
 - (4) It carries food and water to all parts of the body.
9. In which one of the following organs is digestion completed in the human body?
- (1) mouth
 - (2) stomach
 - (3) small intestine
 - (4) large intestine

10. The table below shows the changes in the amount of digested food when it leaves organs, X, Y and Z, in the human digestive system. The organs are in the correct order as in human digestive system.

Organ	X	Y	Z
Change in the amount of digested food	No change	Decrease	Decrease

Which organ of the digestive system is X?

- (1) gullet
 - (2) mouth
 - (3) stomach
 - (4) large intestine
11. Study the diagram below. P and Q represent the substances that leave the small intestine to the different parts of the body.



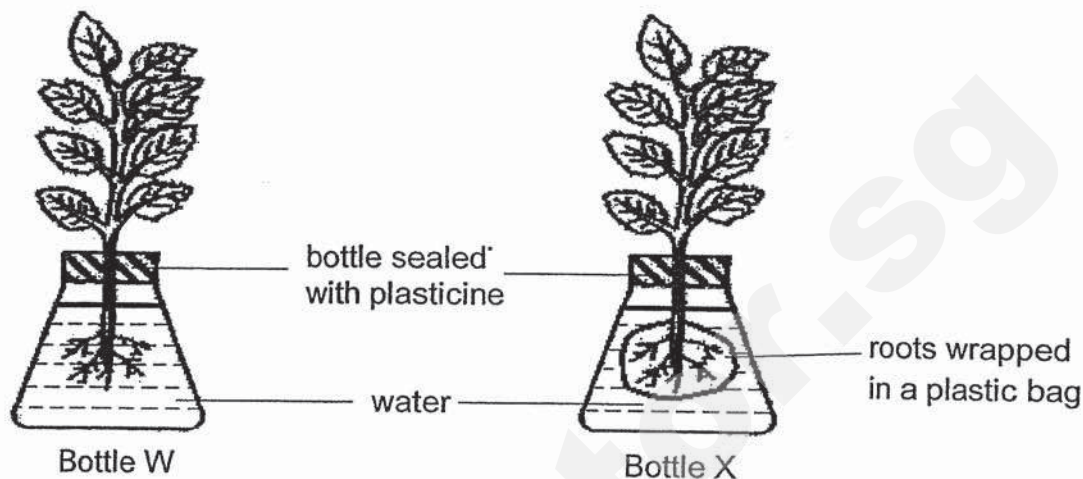
Which one of the following represents P and Q?

	P	Q
(1)	undigested food	water
(2)	water	digested food
(3)	digested food	water
(4)	digested food	undigested food

12. Which part of a plant helps to hold the plant firmly to the ground?

- (1) root
- (2) leaf
- (3) stem
- (4) flower

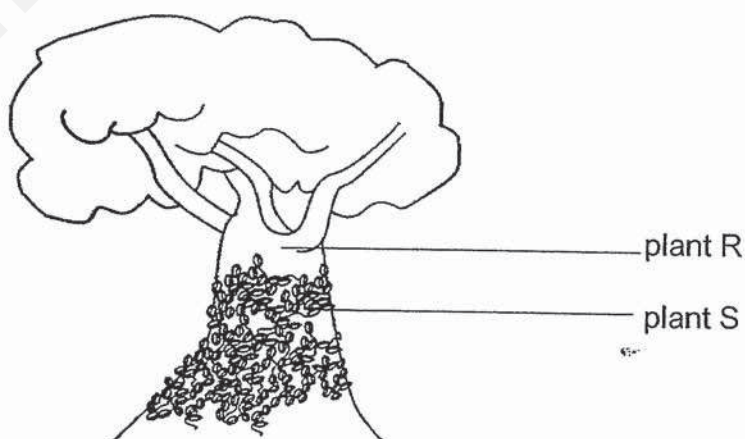
13. Sarah carried out an experiment on two similar plants as shown below. She observed the water level in both bottles daily.



Which one of the following shows the water level of the two bottles after a week?

	Bottle W	Bottle X
(1)	decreased	remained the same
(2)	increased	decreased
(3)	decreased	decreased
(4)	remained the same	remained the same

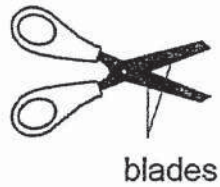
14. The diagram below shows plant S growing on the trunk of plant R.



Which one of the following statements is true?

- (1) Both plants make food.
- (2) Plant S reproduces by spores.
- (3) Plant S depends on plant R for air.
- (4) Plant S depends on plant R for food and support.

15. The picture below shows a pair of scissors.



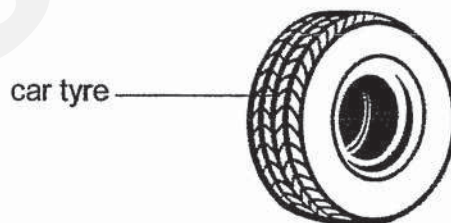
Which one of the materials is most suitable to make the blades of the scissors?

- (1) glass
- (2) wood
- (3) fabric
- (4) metal

16. The following table shows the characteristics of four different materials.

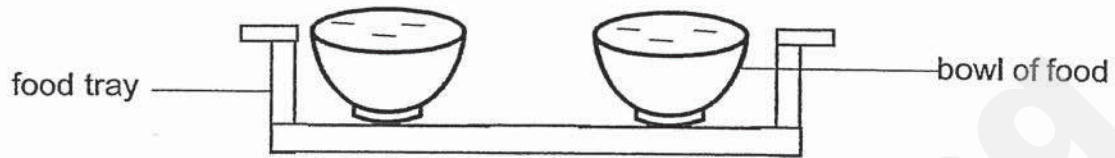
Material	Waterproof	Flexible	Breaks easily when dropped
A		✓	
B	✓	✓	✓
C			✓
D	✓	✓	

Which material is the most suitable to make a car tyre as shown in the picture below?



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

17. Study the diagram below.



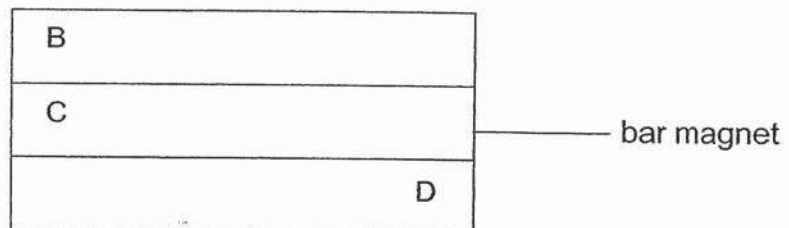
The food tray must be _____.

- (1) strong and flexible
- (2) strong and not flexible
- (3) flexible and not strong
- (4) not strong and not flexible

18. Which one of the following is a magnetic material?

- (1) gold
- (2) steel
- (3) wood
- (4) copper

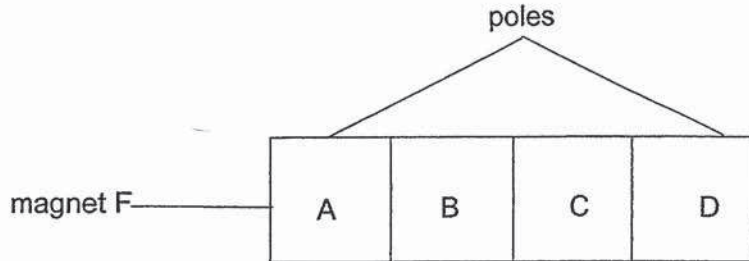
19. Study the three identical bar magnets as shown below. They are attracted to one another.



B is the North pole of one of the magnets. What are the poles represented by C and D?

	C	D
(1)	south pole	south pole
(2)	north pole	south pole
(3)	south pole	north pole
(4)	north pole	north pole

20. The diagram below shows magnet F divided into four parts, A, B, C and D. A and D are the poles of magnet F.



Which one of the following tables is likely to show the number of paper clips attracted by each part correctly?

(1)

Part of magnet	A	B	C	D
Number of paper clips attracted	13	7	14	10

(2)

Part of magnet	A	B	C	D
Number of paper clips attracted	12	3	4	14

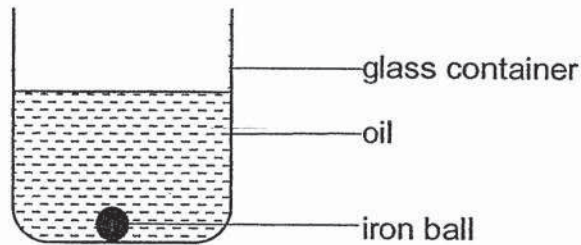
(3)

Part of magnet	A	B	C	D
Number of paper clips attracted	6	3	12	16

(4)

Part of magnet	A	B	C	D
Number of paper clips attracted	15	7	14	8

21. Mary wants to remove an iron ball from a glass container of oil as shown below. She knows that magnetism can pass through the glass container and oil.

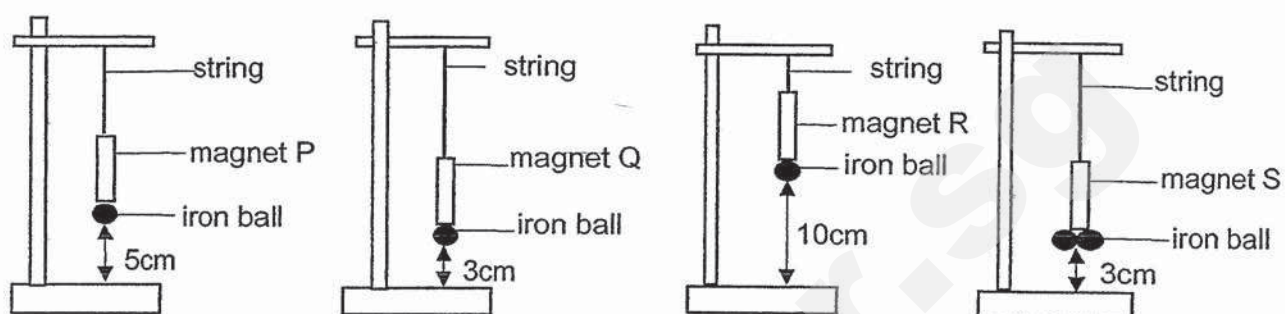


Order of steps	Statement
A	Remove the iron ball from the side of the glass container.
B	Place the magnet on the glass container near the iron ball.
C	Move the magnet to the top of the container when the iron ball is attracted to the magnet.

Which one of the following is the correct order of steps to remove the iron ball from the glass container?

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

22. Peter wanted to compare the magnetic strength of four magnets P, Q, R and S. He set up the experiment below and observed the number of iron ball and the distance at which the iron ball(s) were attracted by each magnet.

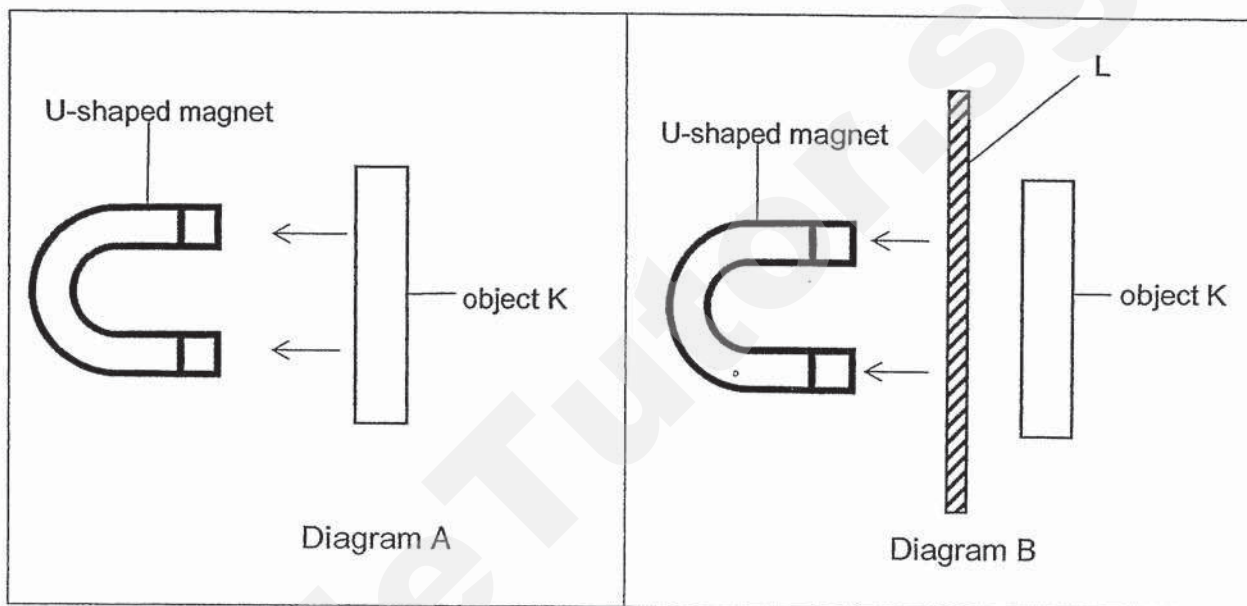


From the result of his experiment, which one of the magnets has the weakest magnetic strength?

- (1) P
- (2) Q
- (3) R
- (4) S

23. Jason made some observations when he put object K near a U-shaped magnet. When he first did this, object K was pulled towards the U-shaped magnet as shown in Diagram A.

When Jason placed a sheet of L between object K and the U-shaped magnet, object K remained at rest as shown in Diagram B. The sheet of L was pulled towards the U-shaped magnet.



Based on Jason's observations, which one of following most correctly states the property of object K and the sheet of L?

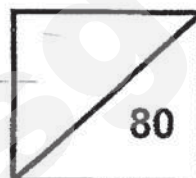
	Object K	Sheet of L
(1)	magnetic	non-magnetic
(2)	non-magnetic	magnetic
(3)	magnetic	magnetic
(4)	non-magnetic	non-magnetic

(Go on to Booklet B)



Rosyth School
End-Of-Year Examination 2019
SCIENCE
Primary 3

Total
Marks:



Name: _____

Class: Primary 3 _____

Register No. _____

Date: 30 October 2019

Total time for Booklets A and B: 1 h 30 min

Parent's Signature: _____

BOOKLET B

Instructions to Pupils:

1. For questions 24 to 34 give your answers in the spaces given in this booklet.

	Maximum	Marks Obtained
Booklet A	46 marks	
Booklet B	34 marks	
Total	80 marks	

* This booklet consists of **10** printed pages (including cover page).

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For questions 24 to 34, write your answers in this booklet.

(34 marks)

24. Kayla classified some things into container A and B respectively. Then she placed some food and water in both containers.

After a week, Kayla recorded her observations in the table below.

Container A	Container B
▪ Grew bigger in size	▪ Did not grow at all
▪ Not much food and water left	▪ Food and water remained the same

- (a) What are the suitable headings for container A and B? Fill in the blanks using the words, "**Living Things**" and "**Non-living Things**".

[1]

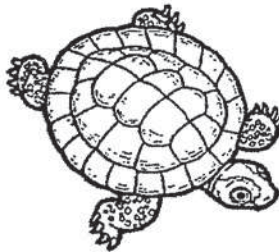
Container A: _____

Container B: _____

- (b) Kayla found a thing in the garden. The thing moved away when she touched it. In which container, A or B, should she put the thing? Explain why.

[2]

25. Study the two animals, P and Q, shown below.



animal P



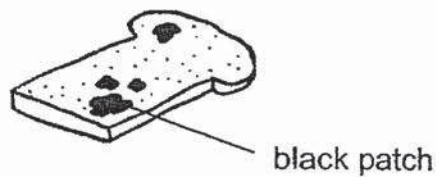
animal Q

- (a) State one similarity between animal P and Q based on their reproduction. [1]

- (b) Based on the pictures above, state one difference between animal P and Q.
(Do not compare their size and shape.) [1]

- (c) Which animal group does animal Q belong to? [1]

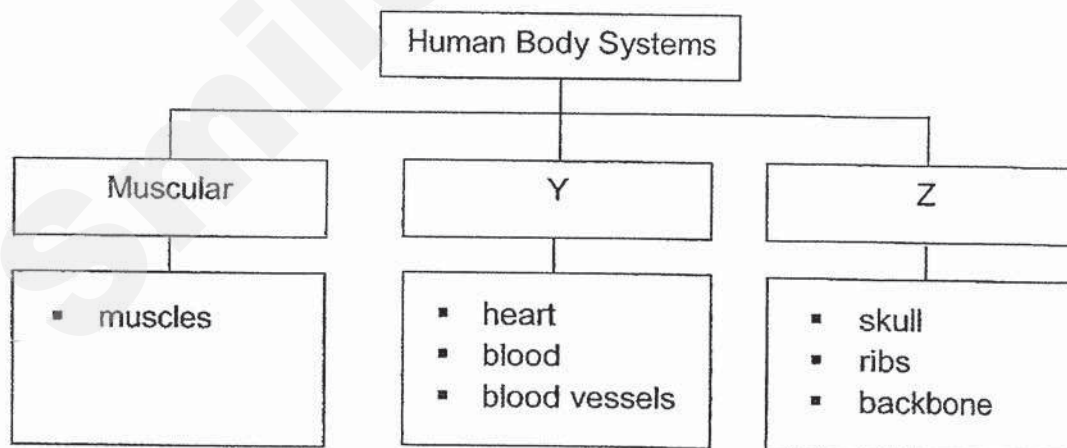
26. A slice of bread was placed on a table for two weeks. Some black patches were grown on the bread as shown below.



Read the following statements and put a tick (✓) next to each statement to show if it is true or false about the black patches on the bread. [2]

	Statement	True	False
(a)	They are mould.		
(b)	They reproduce by seeds.		
(c)	They feed on the bread.		
(d)	They make their own food.		

27. Study the classification chart below.



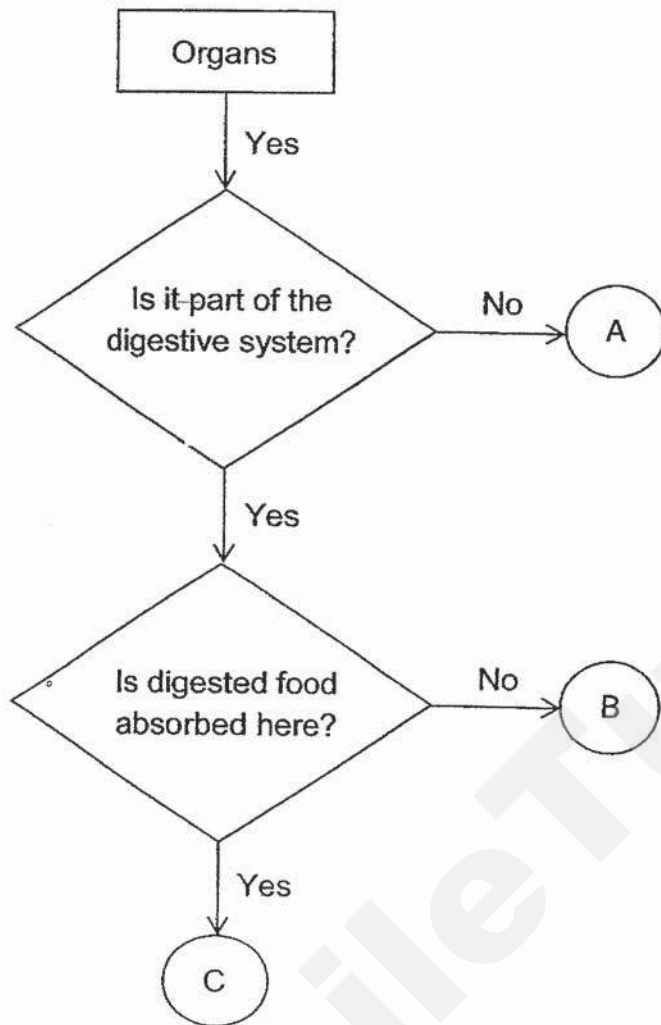
Write down the suitable headings for Y and Z.

[2]

Y: _____

Z: _____

28. Study the flowchart below carefully.



- (a) Using the information in the flowchart, identify the organs by writing the letters, A, B or C in the correct boxes below. You can use the letter more than once.

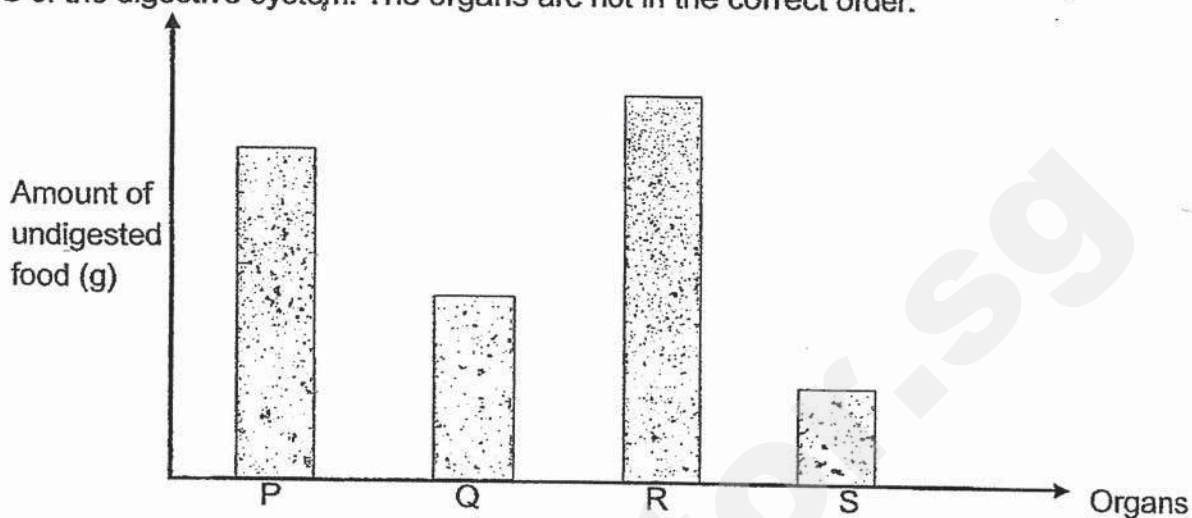
[2]

Organ	Part
lungs	
small intestine	
large intestine	
heart	

- (b) Using the information in the flowchart, state one similarity between Part B and Part C.

[1]

29. David took his lunch. The food passed through the organs in his digestive system. The graph below shows the amount of undigested food as it enters the organs P, Q, R and S of the digestive system. The organs are not in the correct order.



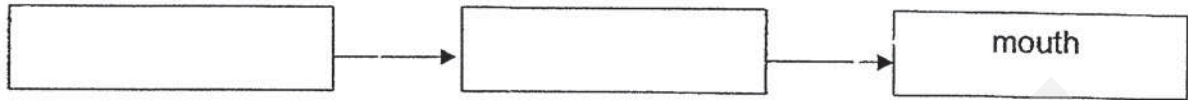
- (a) Which organ, P, Q, R or S of the digestive system is the mouth? Support your answer. [2]

- (b) Compare the amount of undigested food in Organ Q and Organ R. [1]

- (c) No digested food is found in Organ S after digestion is completed in Organ Q. Which part of the digestive system is Organ S? [1]

30. Leslie was not feeling well and vomited after lunch.

- (a) Identify the organs in the digestive system that the vomit had travelled before being thrown out of the mouth. [2]



- (b) What does the mouth produce to help in the digestion of the food? [1]

31. The diagram below shows a plant.

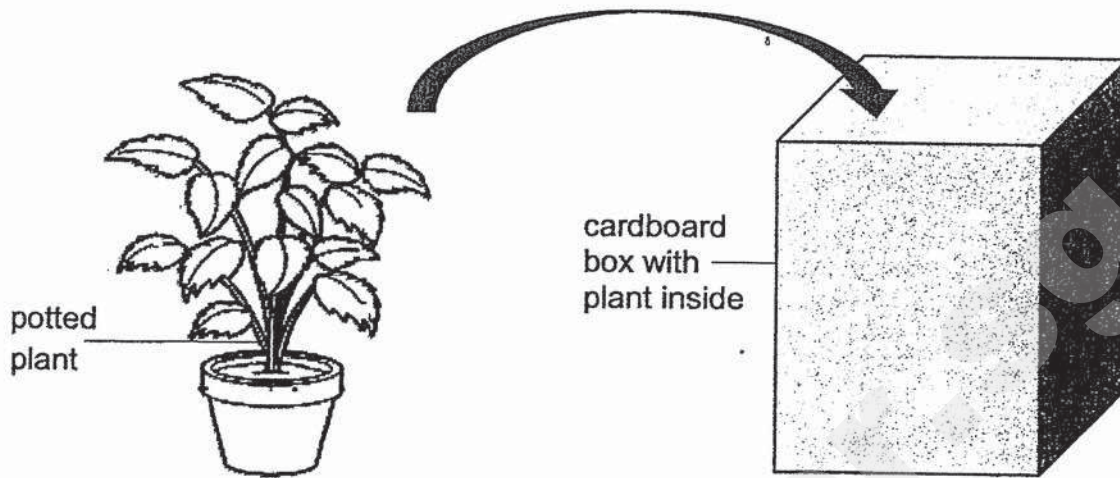


- (a) Which part of the plant is Z? [1]

- (b) Y is found inside Z. Y is protected by Z. Which part of the plant is Y? [1]

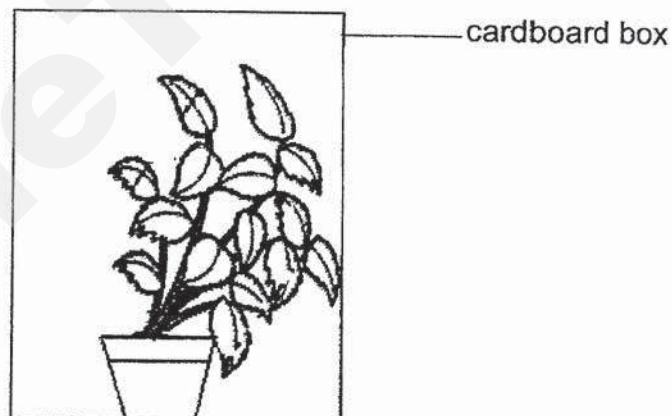
- (c) What is the function of Y? [1]

32. Terry took a healthy potted plant, watered it and left it in a sealed cardboard box as shown below.



Terry then poked a hole in the cardboard box. After a few days, he observed that the plant grew towards one side.

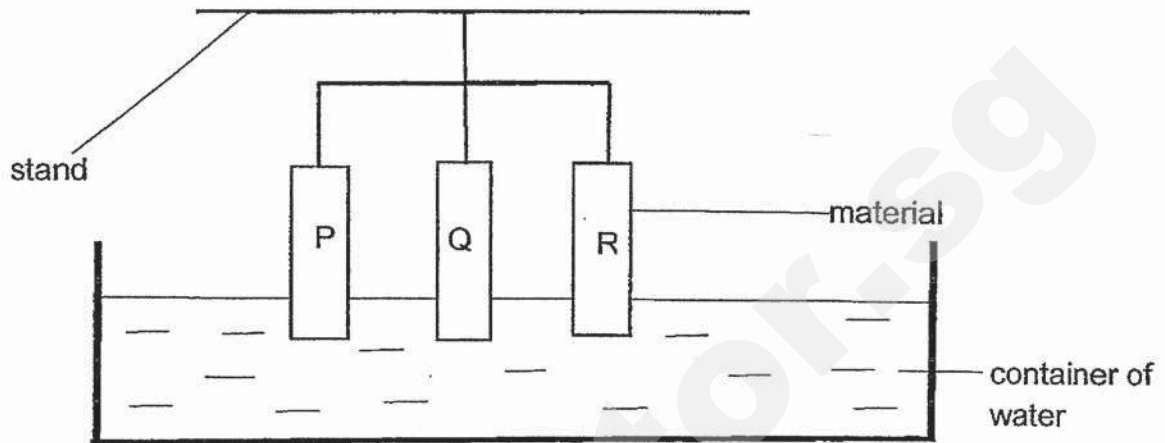
- (a) On the diagram below, draw a 'X' on the cardboard box to show the position of the hole made by Terry. [1]



- (b) Why did the plant grow to one side? [2]

- (c) Terry put another healthy plant, watered it and left it in the same cardboard box but this time, he covered the hole with a piece of clear glass. Would his observation be the same? Give a reason for your answer. [1]

33. Su Lin conducted an experiment to find out the amount of water that could be absorbed by three different materials P, Q and R. Each piece of material had a mass of 10 grams. She dipped each piece of material in the container of water as shown below.



She measured the mass of each piece of material after dipping it into the container of water for one minute. She then recorded the final mass of each material as shown in the table below.

Material	Final mass(g)
P	12
Q	14
R	10

- (a) Arrange the materials P, Q and R from the least absorbent to the most absorbent.

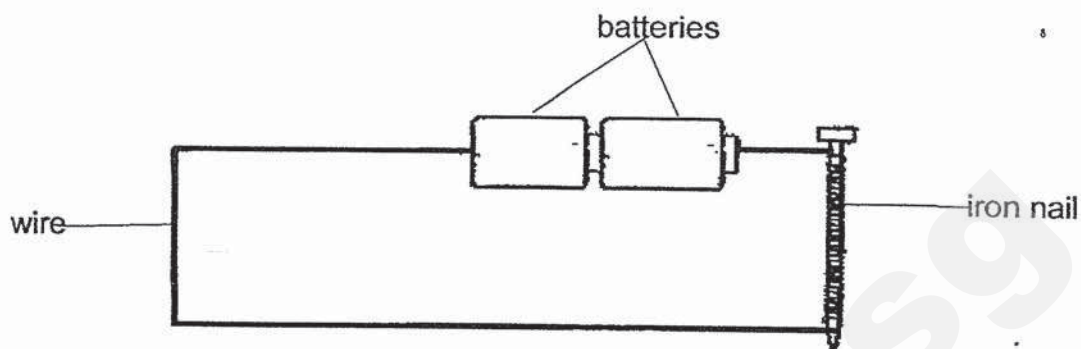
[1]

Least absorbent \longrightarrow Most absorbent

- (b) Which material, P or Q, is more suitable to make a bath towel? Explain why.

[2]

34. Samy made an electromagnet shown below using three different iron nails, W, X and Y.



He placed the iron nails in a box filled with paper clips. He wanted to test the strength of the magnetised iron nails. The results are shown in the table below.

Iron nail	Number of coils of wire around the nail	Number of paper clips attracted
W	3	1
X	10	5
Y	10	11

- (a) Which iron nail, W, X or Y, is the strongest electromagnet? Give a reason for your answer. [1]

- (b) Without changing the number of coils of wire around the nail, state the change Samy can make to increase the strength of the electromagnet. [1]

- (c) When Samy brought Object A close to iron nail X, he observed that iron nail X moved away from Object A.

Based on the above observation, put a tick in the box below to indicate whether his statements were 'true', 'false' or 'not possible to tell'. [2]

Statement	True	False	Not possible to tell
Object A is a magnet.			
Object A is a made of steel.			

End of Paper

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ANSWER KEY

YEAR : 2019
LEVEL : PRIMARY 3
SCHOOL : ROSYTH SCHOOL
SUBJECT : SCIENCE
TERM : EOY

SECTION A

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

SECTION B

Q24 (a) Container A : Living Things

Container B : Non-Living Thing

(b) A as A contains living things and ^{the} thing that she ^{touch} was a living thing as it responds to changes like ^{all} living things.

Q25 (a) They both lay eggs.

(b) Q has feathers but P has a hard shell.

(c) Birds

Q26 (a) True

(b) False

(c) True

(d) False

Q27 Y : Circulatory

Z: ^{Skeletal}

Q28 (a)

Organ	Part
lungs	A
Small intestine	C
Large intestine	B
heart	A

(b) They both parts of the digestive system.

Q29 (a) R as it has the most amount of undigested food as digesting starts in the mouth.

(b) R has more undigested food than Q.

(c) Large intestine

Q30 (a) stomach → gullet → mouth

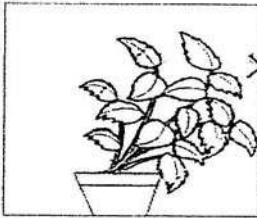
(b) It produces saliva to moisten the food so it is easier to digest.

Q31 (a) Fruit

(b) Seed.

(c) To grow into a new plant.

Q32



(b) - It grew on one side as that side had more sunlight so it grew to that side to get more sunlight to make food.

(c) - No as the plant will run out of air as there were no openings to let air in.
- Yes. Glass is transparent.

Q33 (a) R P Q

(b) Q as it is the most absorbent of the three and a towel must be very absorbent to absorb the water on the human's body.

Q34 (a) Y as it attracted the most number of paper clips.

(b) Add more batteries

(c)

True	False	Not possible to tell
✓		
		✓

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SINGAPORE CHINESE GIRLS' SCHOOL (PRIMARY)

SECOND SEMESTRAL ASSESSMENT 2019

NAME: _____ ()

DATE: 23 OCTOBER 2019

CLASS: PRIMARY 3 SY / C / G / SE / P

Parent's Signature:

SCIENCE

BOOKLET A

20 questions

40 marks

Total time for Booklets A & B: 1 h 25 min

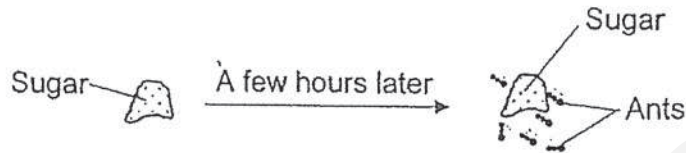
**DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.
FOLLOW ALL INSTRUCTIONS CAREFULLY.**

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Part I (40 marks)

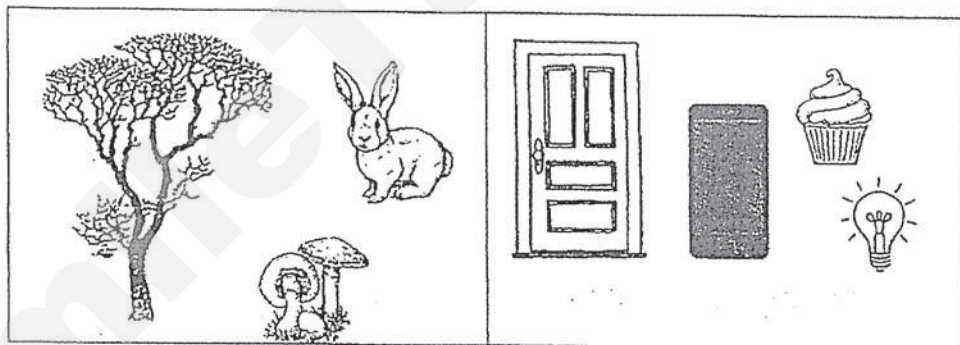
For each question from 1 to 30, four options are given.
One of them is the correct answer. Make your choice (1, 2, 3 or 4).
Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.

1. Sam left a spoonful of sugar on the kitchen table and observed what happened a few hours later as shown below.



Based on Sam's observation, which characteristic of living things do the ants show?

- (1) Living things can die.
 - (2) Living things can grow.
 - (3) Living things can reproduce.
 - (4) Living things respond to changes.
2. Study the two groups of things below carefully.



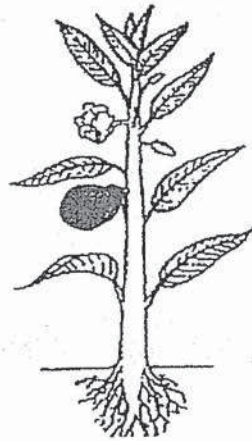
Group X

Group Y

How are the things in Group X different from the things in Group Y?

	Group X	Group Y
(1)	Alive	Not alive
(2)	Cannot grow	Can grow
(3)	Do not reproduce	Can reproduce
(4)	Need air, food and water	Need air and food only

3. Queenie covered only the leaves of the plant with oil.



She observed that the plant died after a week because the plant cannot _____.

- (1) stay upright
 - (2) produce fruits
 - (3) take in and give out gases
 - (4) take in water and mineral salts
4. Janelle recorded the height of her baby over a period of 9 months.

Month	Height of baby (cm)
January	50
February	55
March	58
April	61
May	64
June	68
July	71
August	73
September	75

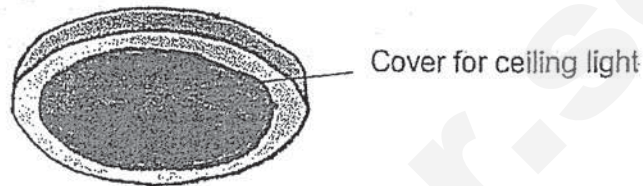
What characteristic of living things does the above table show?

- (1) Living things can die.
- (2) Living things can grow.
- (3) Living things reproduce.
- (4) Living things need air, food and water.

5. The table below shows the properties of Materials P, Q, R and S.

Material	Breakable	Heavy	Allow light to pass through
P	✓		
Q		✓	
R			✓
S	✓	✓	

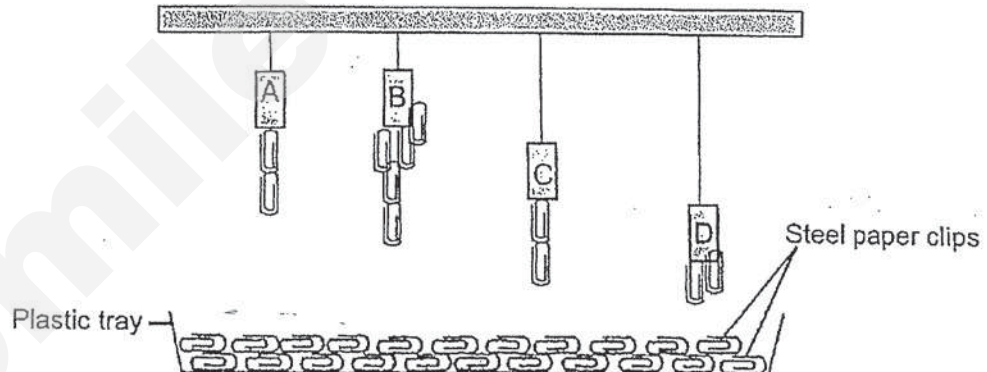
Eric wanted to choose a cover for his ceiling light as shown below.



Which material should Eric use to cover the ceiling light bulb?

- (1) P | | (3) R
(2) Q | | (4) S

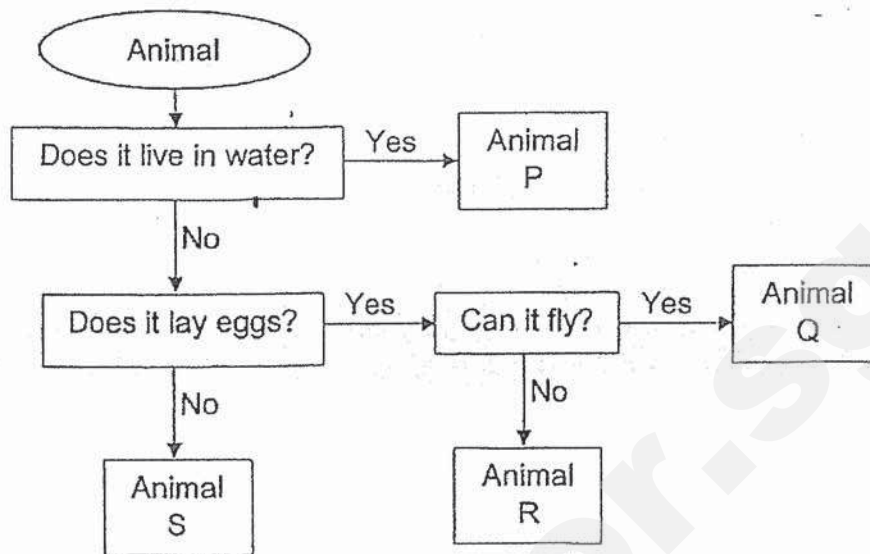
6. Four magnets, A, B, C and D were hung above a tray of identical steel clips as shown in the diagram below.



Based on the above observation, arrange the magnets in order of their magnetic strength, beginning with the strongest magnet.

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

7. Study the flowchart below.



Which one of the following correctly represents Animals, P, Q, R and S?

	P	Q	R	S
(1)	Whale	Parrot	Cobra	Goldfish
(2)	Goldfish	Cobra	Parrot	Elephant
(3)	Goldfish	Parrot	Cobra	Elephant
(4)	Whale	Cobra	Parrot	Goldfish

8. Which one of the following shows the correct path in which water will travel in a plant?

- (1) Stems → Leaves → Roots (3) Roots → Leaves → Stem
 (2) Leaves → Stem → Roots (4) Roots → Stem → Leaves

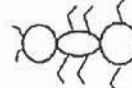
9. Which one of the following correctly shows the body of an insect?



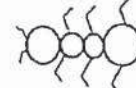
(1)



(2)

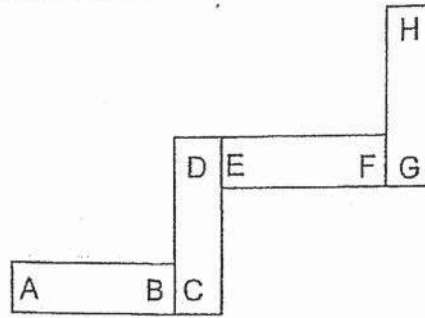


(3)



(4)

10. The diagram below shows the arrangement of four bar magnets.



Which one of the following arrangements is possible among the 4 magnets?

- (1)

A	B	H	G
---	---	---	---

 (3)

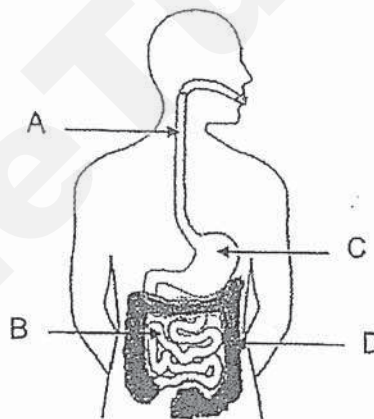
C	D	F	E
---	---	---	---
- (2)

B	A	E	F
---	---	---	---

 (4)

C	D	G	H
---	---	---	---

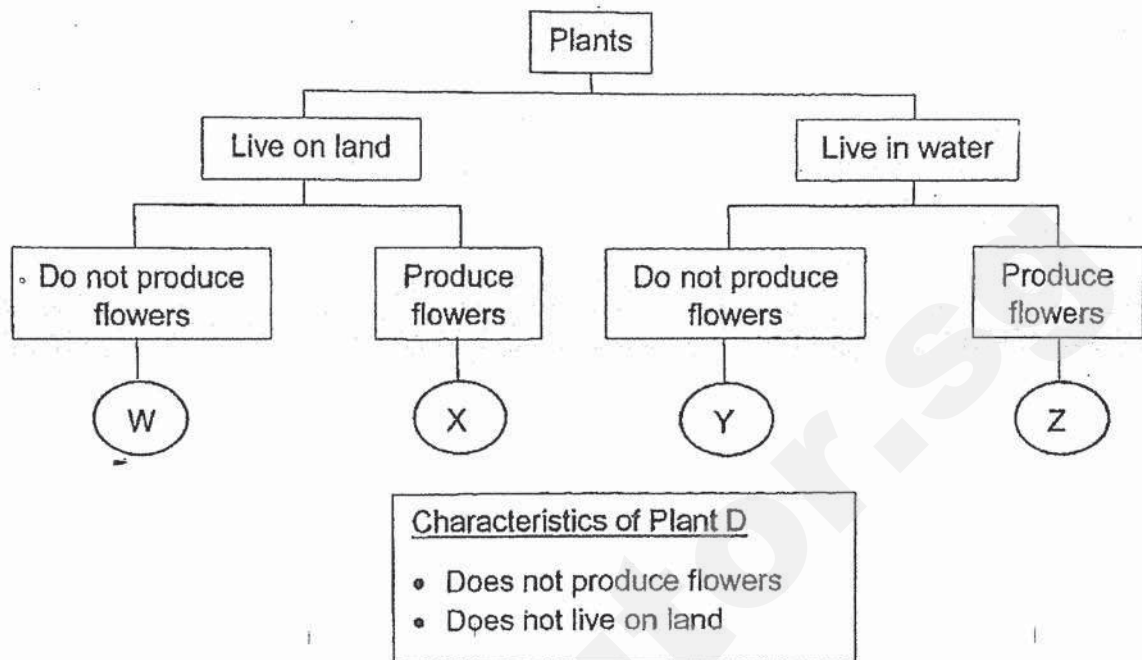
11. The diagram below shows a human digestive system



Which part A, B, C or D produces digestive juices?

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

12. Study the classification chart below.



Based on the information in the table above, which group does Plant D belong to?

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

13. The following statements describe what happens when food enters our body. However, they are not in the correct order.

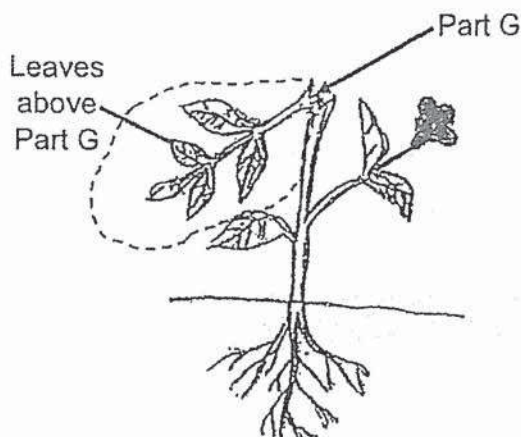
- A: Food is completely digested and goes into the bloodstream.
B: Food goes into the stomach.
C: Waste is removed through the anus.
D: Food enters the mouth.

Which one of the following shows the correct order?

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

14. The plant as shown below is left in an open garden.

Part G was broken and the leaves above Part G died a few days later.



What could have caused the leaves above Part G to die?

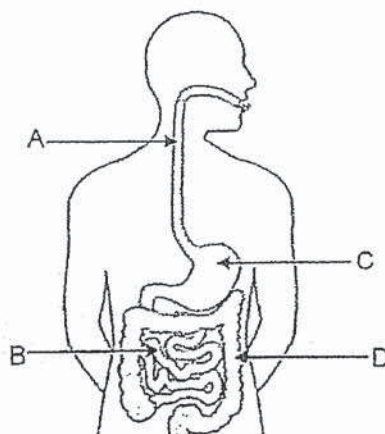
- (1) They could not be held up!
 - (2) They could not produce flowers.
 - (3) They did not have water to make food.
 - (4) They did not receive sunlight to make food.
15. The table below shows how some of the organs are classified for the human body systems.

Skeletal system	Digestive system	Respiratory system
Heart	Anus	Nose
Skull	Stomach	Diaphragm
Ribcage	Mouth	Gullet

Which of the above organs are classified wrongly?

- (1) Heart and Gullet
- (2) Skull and Mouth
- (3) Ribcage and Nose
- (4) Anus and Diaphragm

16. The diagram below shows a human digestive system.

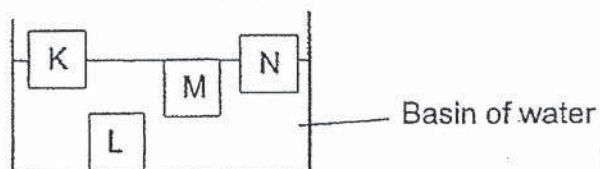


Which part is water removed from the undigested food?

- (1) A (3) C
(2) B (4) D
17. An anchor stays under water to help the ship remain at the same position in water.



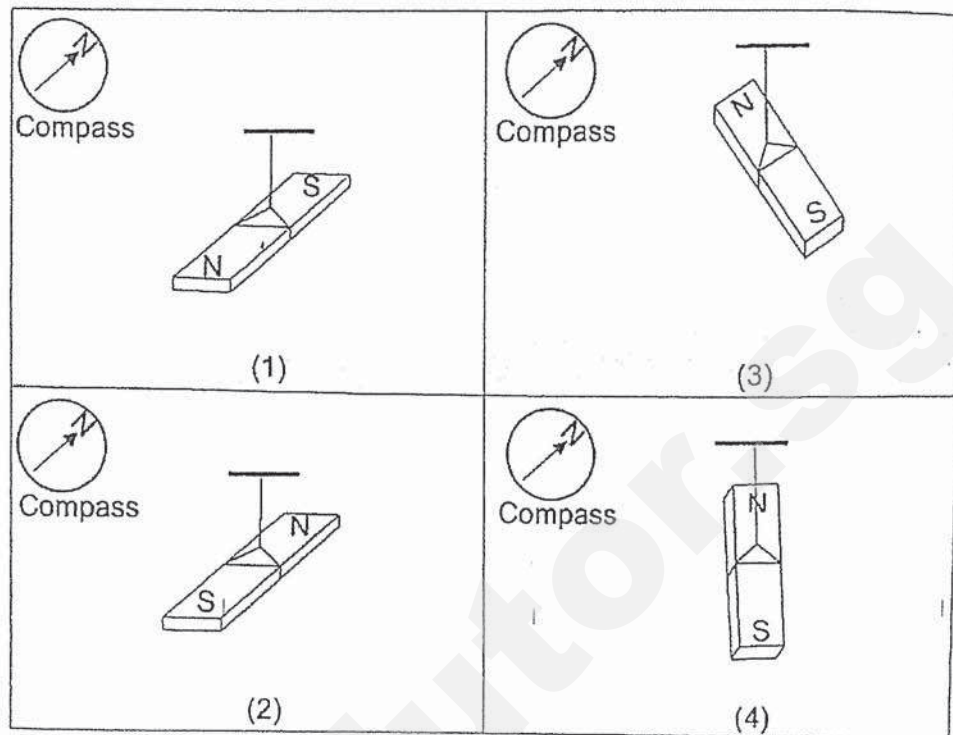
The diagram below shows materials K, L, M and N in a basin of water as shown below.



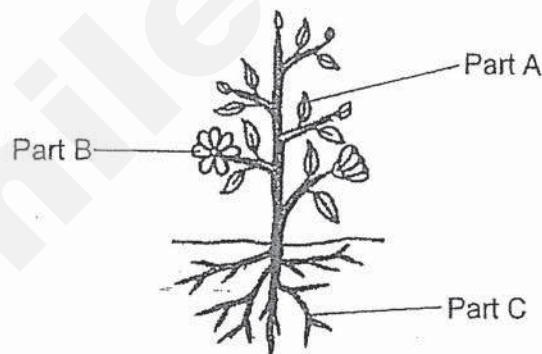
Which material, K, L, M or N is most suitable to make an anchor for the ship?

- (1) K (3) M
(2) L (4) N

18. Which one of the following correctly shows how a magnet will be resting when suspended freely?



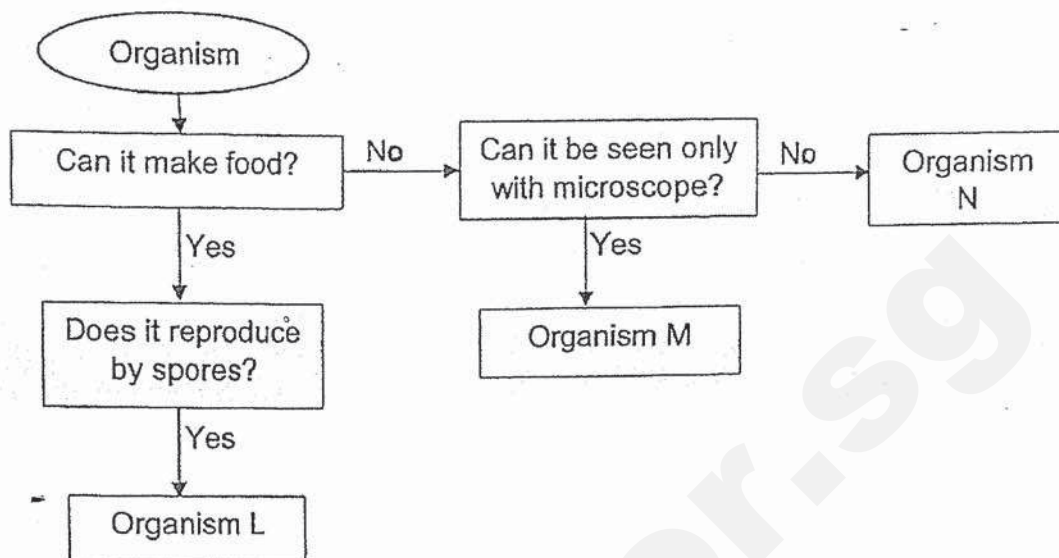
19. The diagram below shows a plant.



Which one of the following is true?

	Part of the plant that makes food	Part of the plant that produces fruit
(1)	A	B
(2)	A	C
(3)	B	C
(4)	C	A

20. Study the flowchart below.



Which one of the following correctly represents organisms L, M and N?

	L	M	N
(1)	Bacteria	Flowering plant	Non-flowering plant
(2)	Non-flowering plant	Fungi	Bacteria
(3)	Flowering plant	Fungi	Bacteria
(4)	Non-flowering plant	Bacteria	Fungi

End of Booklet A

SINGAPORE CHINESE GIRLS' SCHOOL (PRIMARY)

SECOND SEMESTRAL ASSESSMENT 2019

NAME: _____ ()

DATE: 23 OCTOBER 2019

CLASS: PRIMARY 3 SY / C / G / SE / P

Parent's Signature:

SCIENCE

BOOKLET B

	Total Actual Marks	Total Possible Marks
Booklet A		40
Booklet B		30
Total		70

9 questions

30 marks

Total time for Booklets A & B: 1 h 25 min

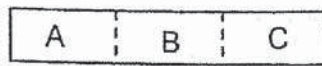
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Part II (30 marks)

Answer all the following questions.

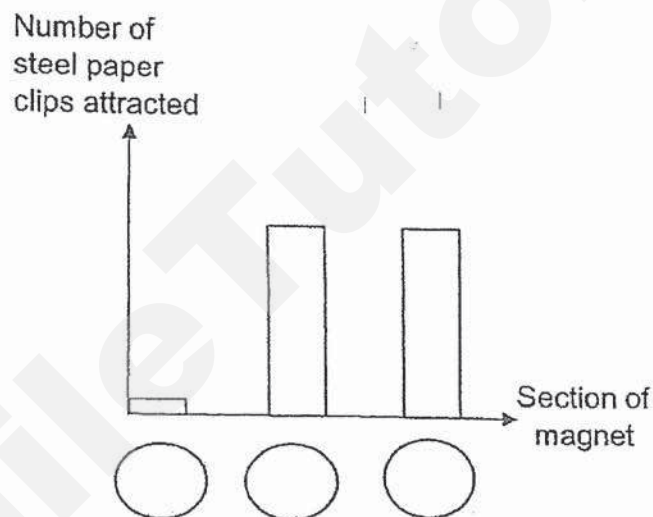
21. a) Kelly divided Magnet X into equal sections, A, B and C, as shown below.



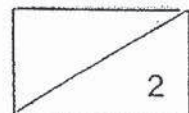
Magnet X

She recorded the number of steel paper clips attracted to different sections of Magnet X in the graph below.

- i) Fill in the correct sections A, B and C of the magnet in the below. (1m)



- ii) For this experiment, besides using steel paper clips, the paper clips can also be made of _____ . (1m)



(Go on to the next)

- b) Objects X and Y are hung on a balance as shown in Diagram 1.

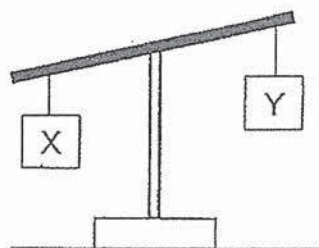


Diagram 1

Next, Object Z is placed near Object X and the result is shown in Diagram 2.

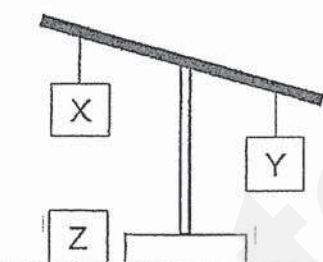
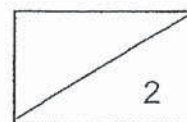


Diagram 2

Based on Diagrams 1 and 2, put a tick (✓) in the boxes for each of the statements. (2m)

	Statements	True	False	Not possible to tell
(i)	Object X is heavier than Object Y.			
(ii)	Object X and Z are definitely magnets.			
(iii)	Object Y is definitely a non-magnetic object.			
(iv)	Object Z will repel Object Y.			

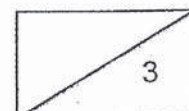


- 22 a) The table below shows only the functions of various human body systems. Using the helping words provided, fill in the boxes below with the correct human body system next to its function. (2m)

Digestive system	Respiratory system	Circulatory system	Muscular system
------------------	--------------------	--------------------	-----------------

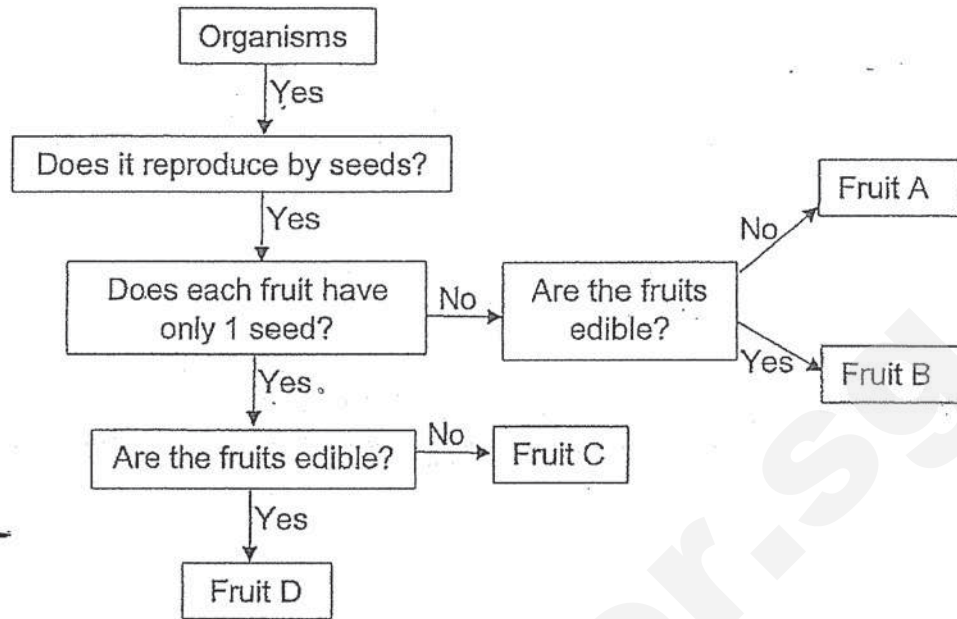
Functions	Fill in the boxes with the correct human body systems
Carries digested food, water and oxygen in the blood to all parts of the body	
Helps different parts of the body to move	
Breaks down food into simpler substances so that they can be used by the body	
Takes in and removes air into and from the body	

- b) State which system the lungs belong to. (1m)



(Go on to the next)

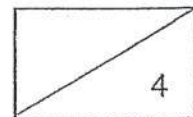
23. Study the flowchart below.



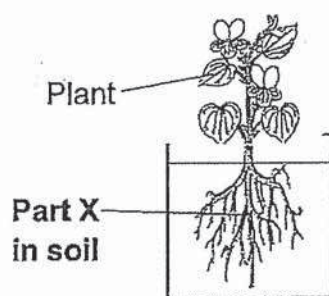
- a) Based only on the above flowchart, state 2 similarities in characteristic between fruits A and C. (2m)

- b) Based only on the above flowchart, state one difference in characteristic between fruits B and D. (1m)

- c) Based only on the above flowchart, explain why Bird's Nest Fern cannot be classified into Fruit A, B, C or D. (1m)



24. Joanne placed a plant in a pot of soil as shown below.

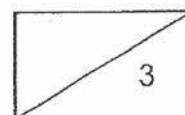


a) State 2 functions of Part X. (2m)




Joanne then placed the plant in a beaker of water.






b) Joanne observed that there was less water in the beaker after a week. Based on Joanne's observation, which characteristic of living things does the plant show? (1m)



25. Jill had 3 similar pieces of bread, A, B and C, as shown below.

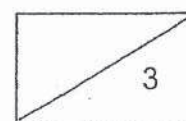
Bread			
	A	B	C
Amount of water provided	3 ml	3 ml	0 ml
Brightness of surrounding	Very bright	Dark	Very bright

After 5 days, she observed there were equal amount of mould growing on Bread A and B, but none on Bread C, as shown below.

		
Bread A	Bread B	Bread C
Presence of mould	Presence of mould	No mould

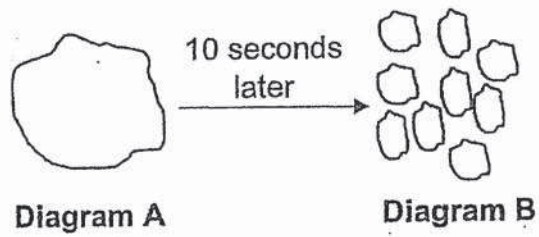
- a) Jill concluded that the mould needs _____ to grow but does not need _____ to grow. (2m)
- b) Tick (✓) the action(s) which will prevent the growth of ^{mould} brown-patches on the bread. (1m)

Action(s) that will prevent growth of brown-patches mould	Put (✓) in the correct boxes below.
a) Cut the bread into smaller piece	
b) Spread jam on the bread	
c) Put the bread in the classroom	
d) Put the bread in the freezer	



(Go on to the next)

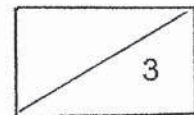
26. Diagram A shows the size of a biscuit before Ella puts it into her mouth. Diagram B shows the size of the biscuit after 10 seconds in her mouth.



- a) Which part of Ella's mouth causes the food to become smaller pieces? (1m)

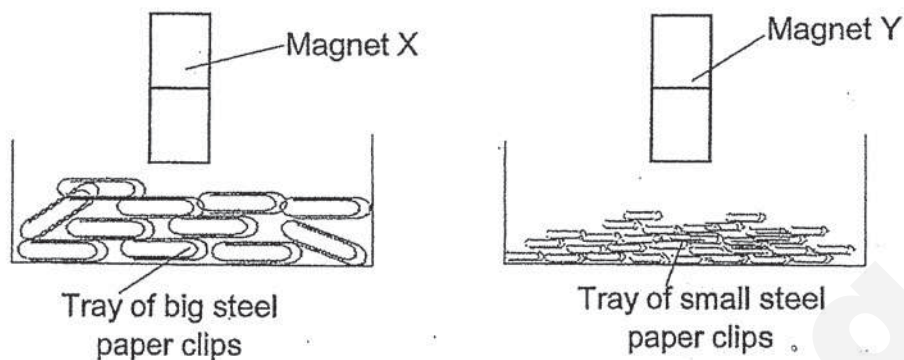
- b) Besides making food softer, what does saliva in Ella's mouth do to the food? (1m)

- c) In which part of the human digestive system is the biscuit **completely digested**? (1m)



(Go on to the next)

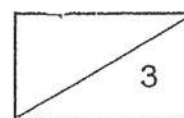
27. a) Shayna wanted to find out if Magnet X or Y is stronger so she set up an experiment as shown below.



- i) Her teacher told her that her experiment was unfair. What should Shayna do to make her experiment a fair one? (1m)

- ii) Put a tick (✓) in the correct boxes for the variables which she should keep the same to ensure a fair test (2m)

	Variables	Put a tick (✓) in the correct boxes
(a)	The type of magnet.	
(b)	The magnetic strength of each magnet.	
(c)	The number of magnetic objects in each tray.	
(d)	The distance between the magnet and the magnetic object.	



(Go on to the next)

28. The table below shows the properties of 4 materials, J, K, L and M.

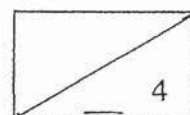
Materials	Waterproof	Mass it can hold before breaking	Allow light to pass through	Flexible
J	✓	15 kg		✓
K	✓	10 kg		
L	✓	15 kg	✓	✓
M		20 kg		✓

a) Based on the table above, describe Material M. (2m)

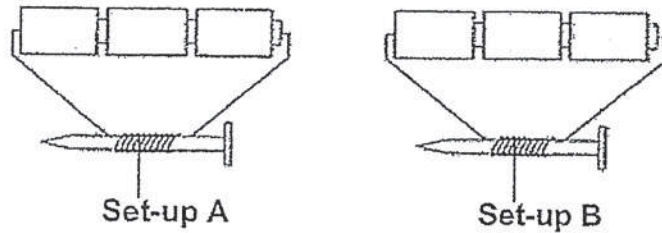


b) What is the difference between using a bag made of Material J and a bag made of Material L? (1m)

c) A bag made of which material, J, K, L or M, will break if it is holding 14kg of goods? (1m)



29. Sheela set-up an experiment as shown below.



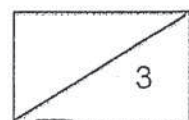
Set-up	Type of nail
A	Copper
B	Steel

- a) Which set-up, A or B, can be made into an electromagnet? Explain. (1m)

- b) State the 2 ways in which she can increase the strength of the electromagnet. (2m)

End of Booklet B

B - 11



(Go on to the next)

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ANSWER KEY

YEAR : 2019

LEVEL : PRIMARY 3

SCHOOL : SINGAPORE CHINESE GIRL'S SCHOOL

SUBJECT : SCIENCE

TERM : SA2

BOOKLET A

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

BOOKLET B

Q21a)i) B A C

ii) clips can also be made of nickel.

b)(i) True

(ii) True

(iii) Not possible to tell

(iv) Not possible to tell

Q22a) circulatory system

muscular system

digestive system

respiratory system

b) Respiratory system.

Q23a) Both Fruits A and C are both inedible.

Both fruits A and C reproduce by seeds.

b) Fruit D has only one seed while Fruit B does not have one seed.

c) The Bird's Nest Fern reproduces by spores while Fruits A, B, C and D all reproduce by seeds. Hence, the Bird's Nest Fern cannot be classified into Fruits A, B, C or D.

Q24a) Part X anchors the plant firmly in the soil.

Part X absorbs water and the mineral salts for the plant.

b) Based on Jannes experiment, living things need water to survive.

Q25a) Water, light

b) Put the bread in the freezer

Q26a) The teeth in Ella's mouth

b) Saliva is also a digestive system juice that digests the food.

c) In the small intestine.

Q27a) i) Shanya should change the tray of big steel paper clips to a tray with small steel paper clips.

(ii) The number of magnetic objects in each tray

The distance between the magnet and the magnetic object.

Q28a) Material M can hold 20 kg mass before breaking, is not waterproof, does not allow light to pass through and it is not flexible.

b) Using a bag made of Material J will not allow light to pass through and using a bag made of Material L will allow light to pass through.

c) Material K

Q29a) Set-up B can be made into an electromagnet. The type of nail used in Set-up B was steel and the type of nail used in set-up A was a copper, copper is a non-magnetic material and cannot be magnetised into an electromagnet. Hence, only set-up B can be made into an electromagnet and only magnetic materials can be magnetised into an electromagnet.

b) Sheela can increase the coils of wire around the nail of the electromagnet. Sheela can increase the number of batteries.

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2
2/10

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ST. HILDA'S PRIMARY SCHOOL
SEMESTRAL ASSESSMENT 2, 2019

PRIMARY 3

SCIENCE

Booklet A

Name : _____ ()

Class : Primary 3 / _____

Date: 1 November 2019

Total Duration for Booklets A and B: 1h 45 min

Booklet A:

28 Questions

56 Marks

INSTRUCTIONS TO CANDIDATES

1. This question booklet consists of 23 printed pages, excluding this cover page.
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.

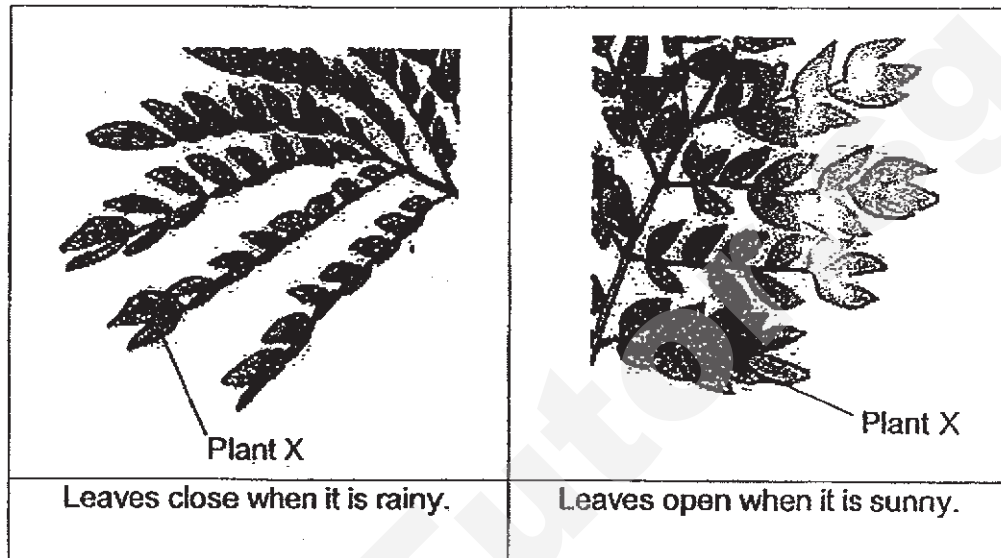
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For each question from 1 to 28, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and shade your answer on the Optical Answer Sheet.

(56 marks)

1 The diagram below shows the leaves of plant X.

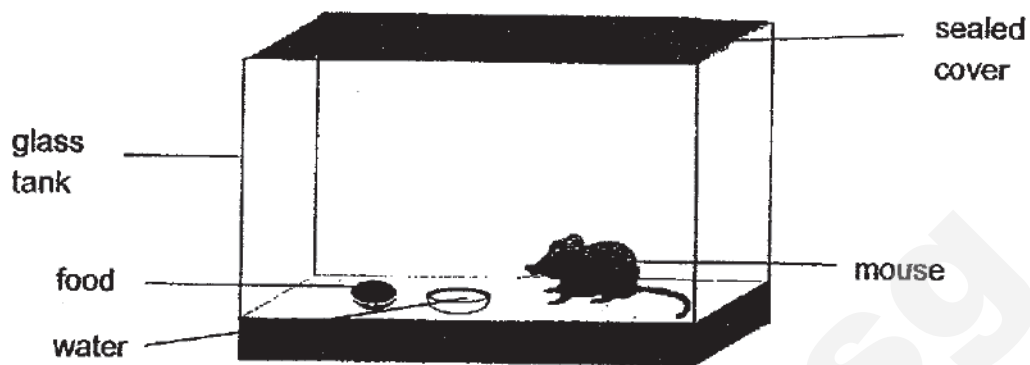
It is observed that the leaves of plant X close when it rains, and open when it is sunny.



Based on the diagram above, which of the following characteristics of living things is shown by plant X?

- (1) Living things need air, food and water.
- (2) Living things respond to changes.
- (3) Living things reproduce.
- (4) Living things grow.

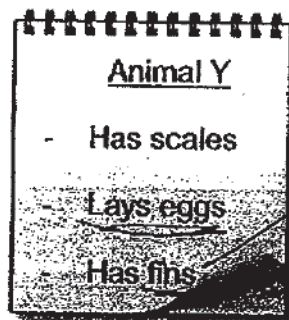
- 2 John kept a mouse in a glass tank with a sealed cover to prevent it from escaping. He gave the mouse some food and water as shown in the diagram below.



John's father told him that the mouse would not be able to survive for more than one day.

Which of the following should he do to ensure that the mouse can survive for a longer period?

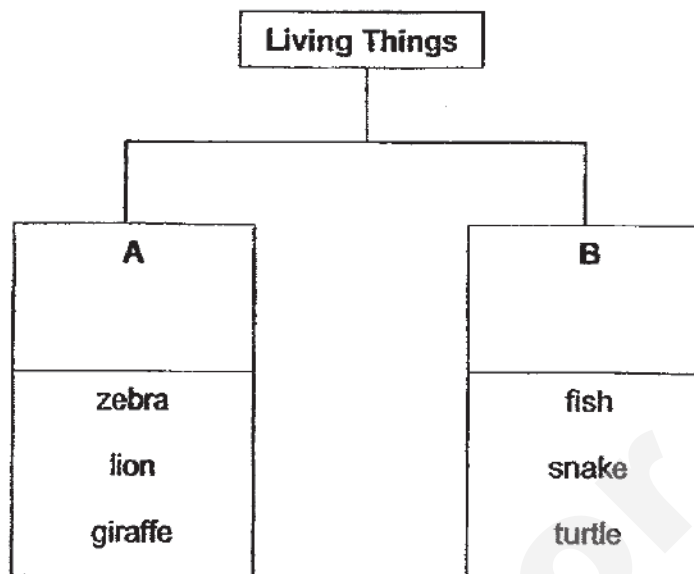
- (1) Provide it with more food.
 - (2) Provide it with more water.
 - (3) Make some holes in the sealed cover.
 - (4) Change to a glass cover to allow light to enter the tank.
- 3 Nazri wrote down the characteristics of Animal Y in his notebook.



Which one of the following is another characteristic that Animal Y would most likely have?

- (1) It has 4 legs.
- (2) It has feathers.
- (3) It breathes through gills.
- (4) It lives both on land and in water.

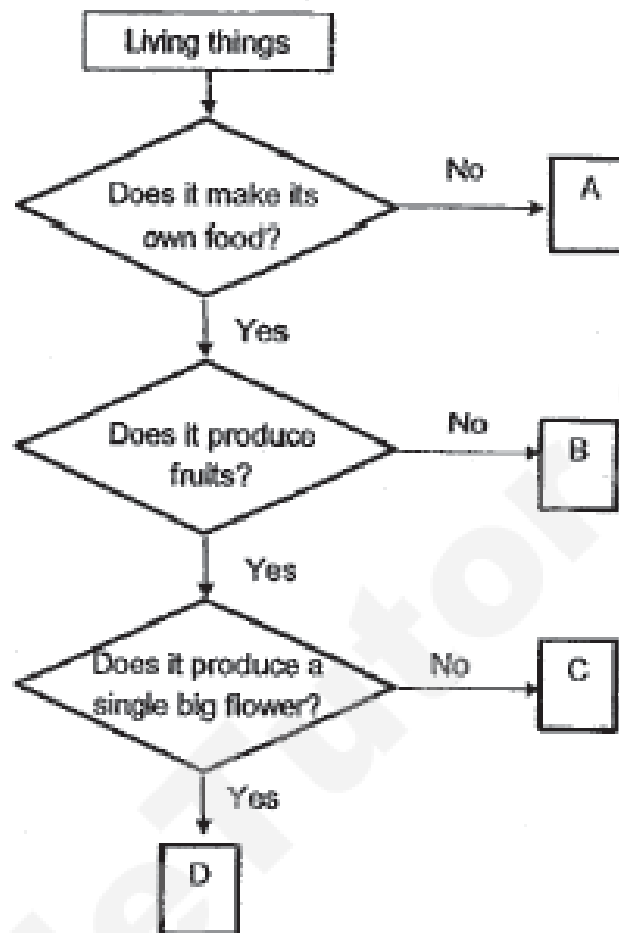
- 4 The diagram below shows a classification chart.



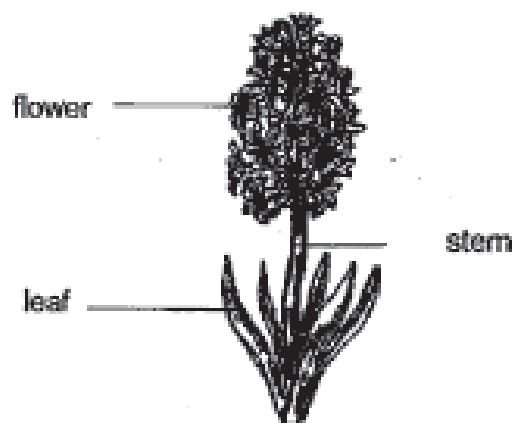
Which of the following is the most suitable headings for A and B?

	A	B
(1)	Have hair as a body covering	Have moist skin as a body covering
(2)	Have hair as a body covering	Have scales as a body covering
(3)	Have feathers as a body covering	Have scales as a body covering
(4)	Have scales as a body covering	Have moist skin as a body covering

5 Study the flowchart below carefully.



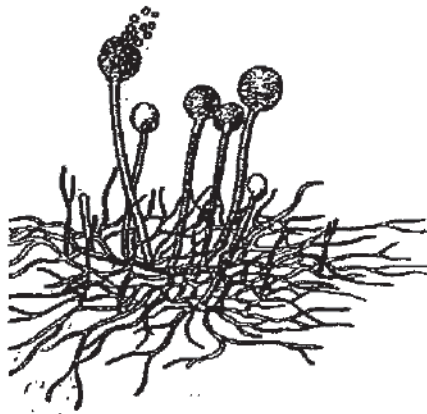
The diagram below shows a newly discovered plant.



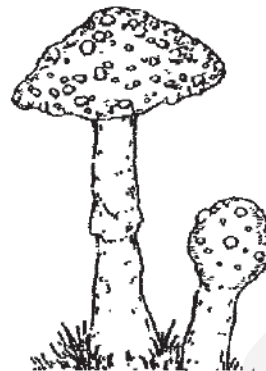
Which letter in the above flowchart best represents the plant above?

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

6 Study the diagram below.



bread mould



mushroom

Which one of the following statements is true for both the bread mould and the mushroom?

- (1) Both are non-living things.
- (2) Both reproduce from seeds.
- (3) Both cannot make their own food.
- (4) Both have to be viewed under a microscope.

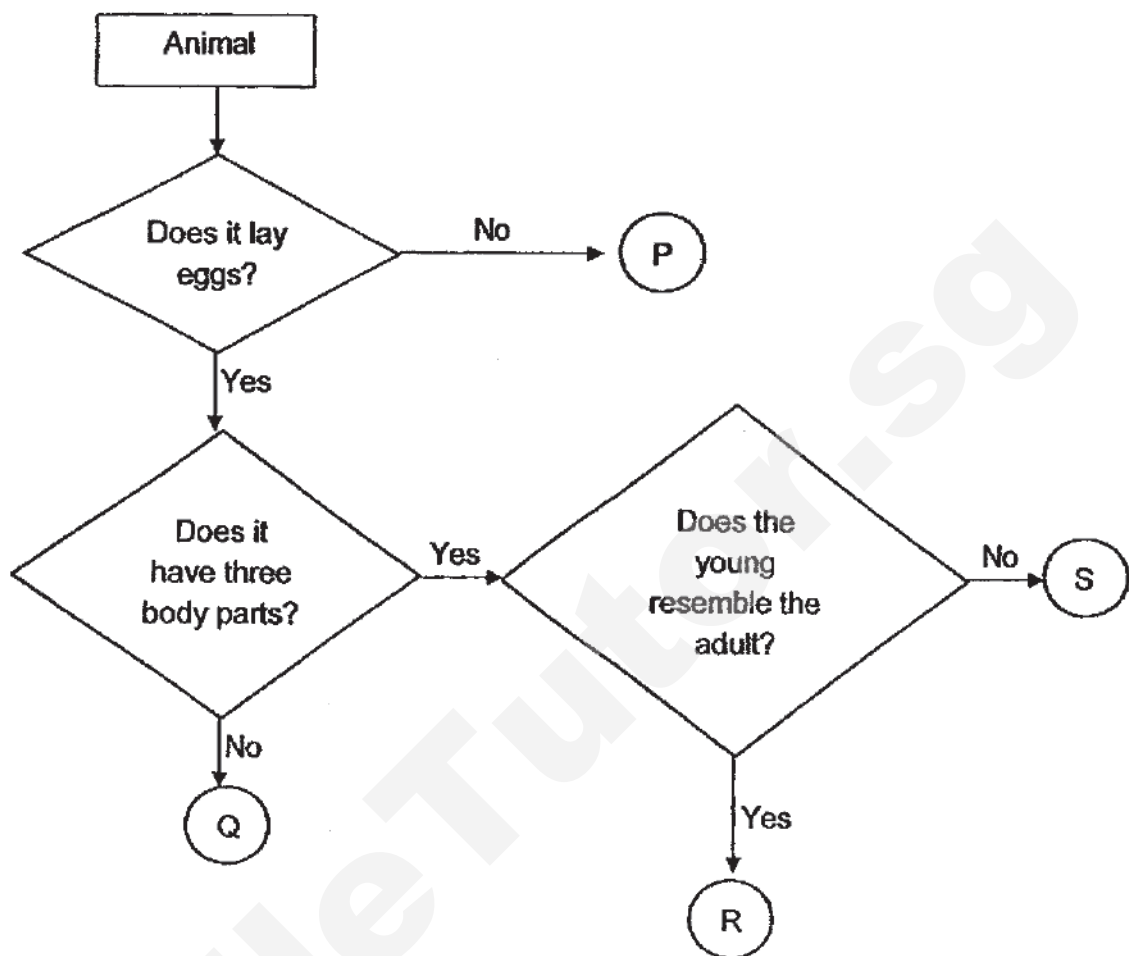
7 Four students read up about bacteria and yeast and came up with these statements.

Students	Statements
Azelina	Both bacteria and yeast are microorganisms.
Ilman	Both bacteria and yeast reproduce by seeds.
Jovia	Both bacteria and yeast are fungi.
Pei Ying	All bacteria and yeast are useful.

Which student's statement is correct?

- (1) Azelina
- (2) Ilman
- (3) Jovia
- (4) Pei Ying

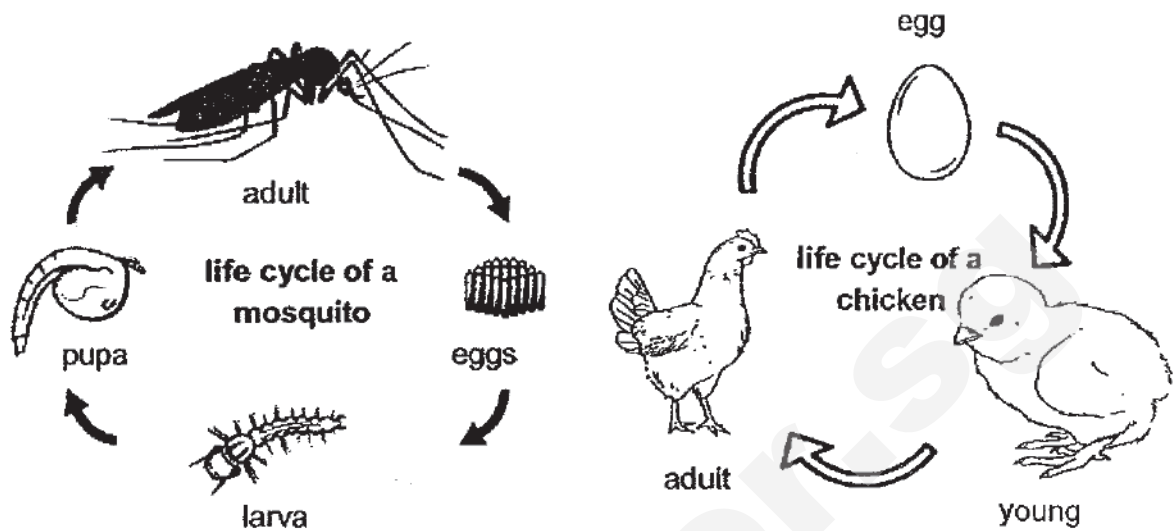
8 Study the flowchart below carefully.



Which animal, P, Q, R or S is most likely to be a cockroach?

- (1) P
- (2) Q
- (3) R
- (4) S

- 9 The diagrams below show the life cycles of a mosquito and a chicken.



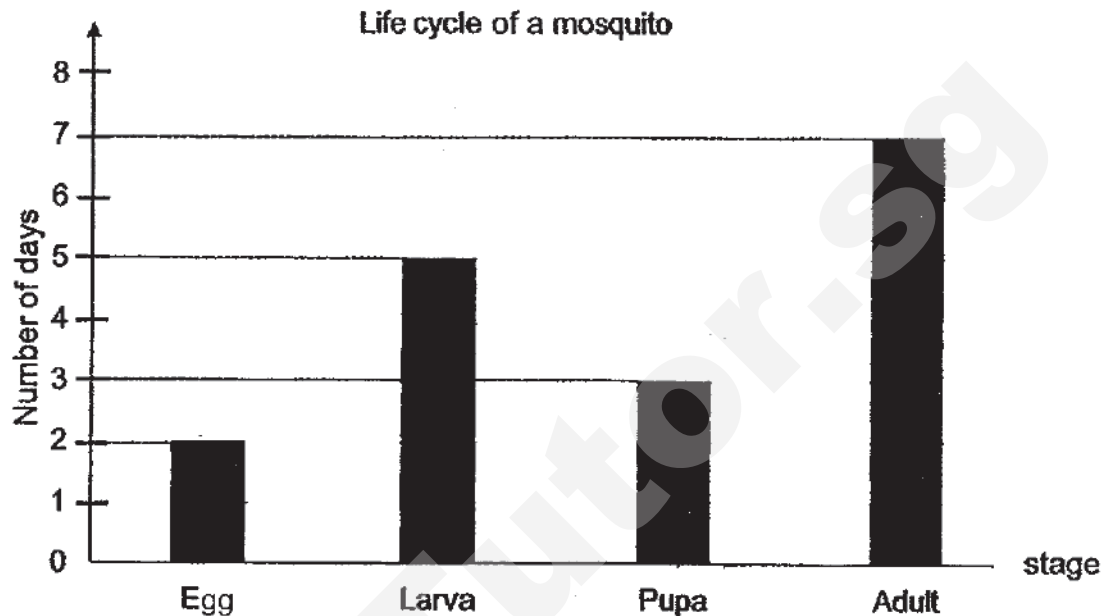
Which of the following statements correctly state the differences between these two life cycles?

- A: The chicken gives birth to its young while the mosquito lays eggs.
- B: The young of the chicken resembles its adult but the young of a mosquito does not.
- C: There are four stages in the life cycle of a mosquito but there are three stages in the life cycle of a chicken.

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

- 10 Tom carried out an experiment to find out the duration of each stage in the life cycle of a mosquito.

The graph below shows the results.

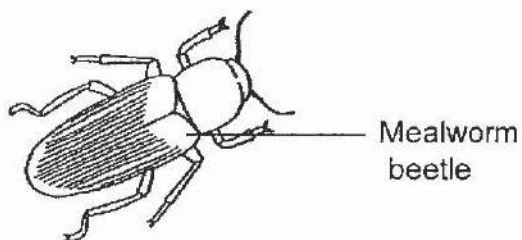


Based on the data given in the graph, which of the following statement(s) is/are true?

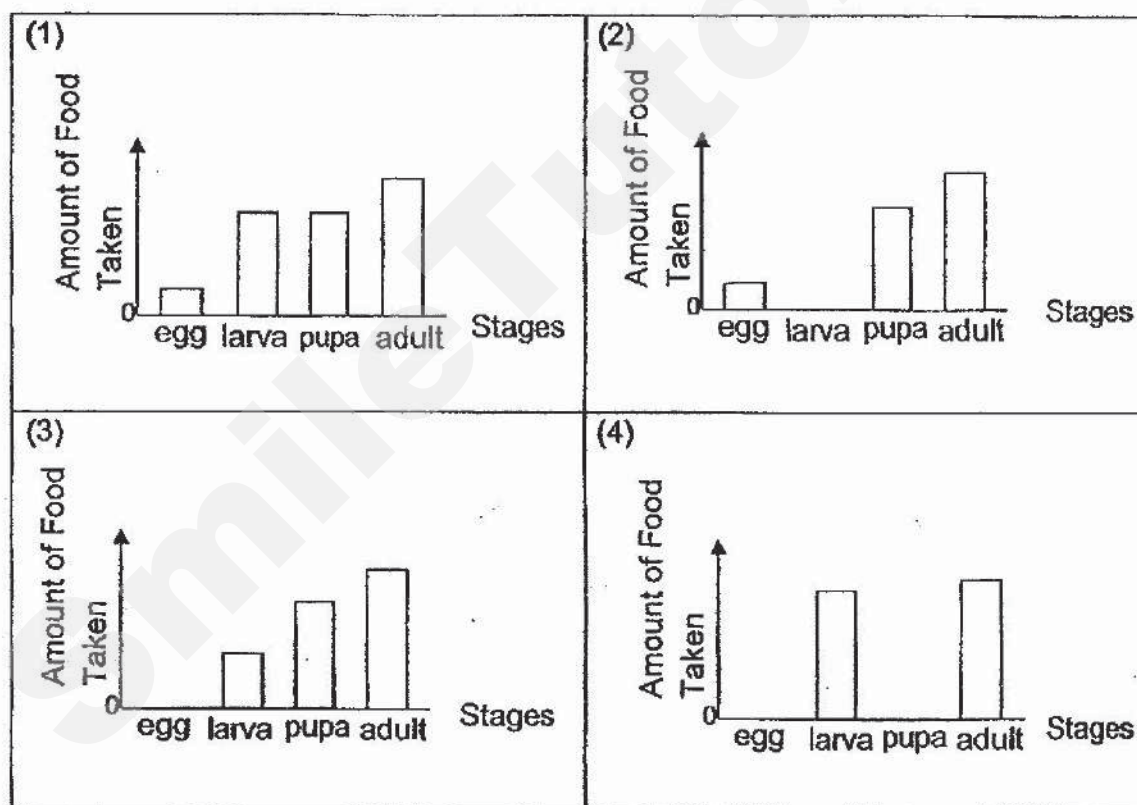
- A: It takes two days for the eggs to hatch.
- B: There are three stages in the life cycle of a mosquito.
- C: The mosquitoes can reproduce 8 days after they are hatched from the eggs.

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

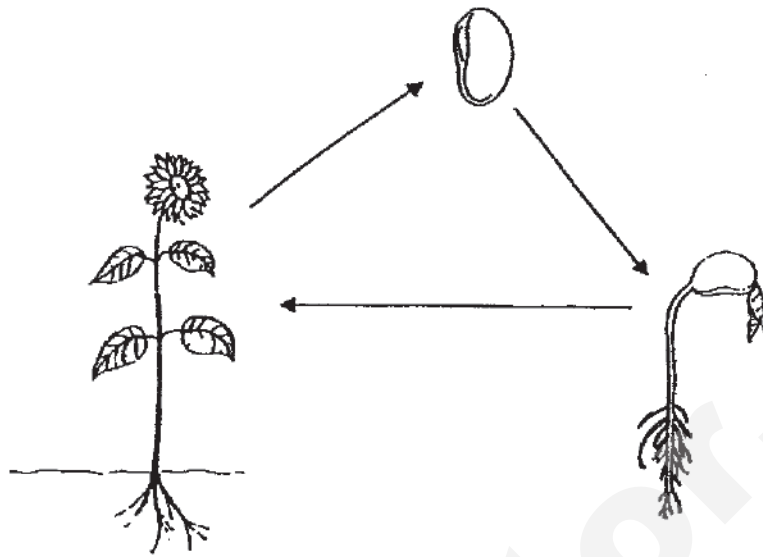
- 11 Some students observed the life cycle of a mealworm beetle. They recorded the amount of food taken by the beetle at each stage of growth in the life cycle and drew a bar graph to represent the amount of food the beetle ate.



Which one of the following bar graphs correctly shows the amount of food taken by the mealworm beetle at each stage of growth in its life cycle?



12 The diagram below shows the life cycle of a plant.

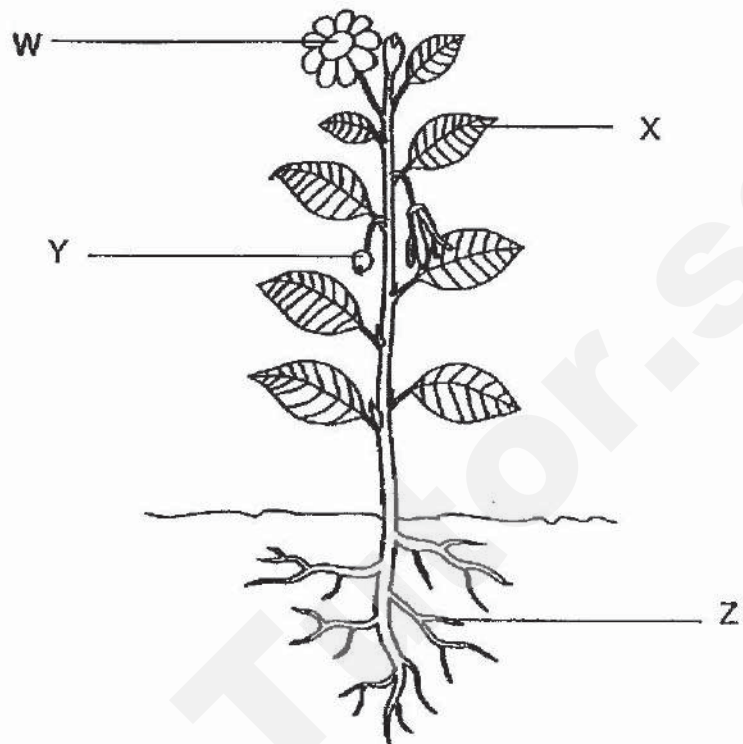


Based on the diagram above, the plant is at the adult stage when it has

_____.

- (1) roots
- (2) flowers
- (3) a stem
- (4) leaves

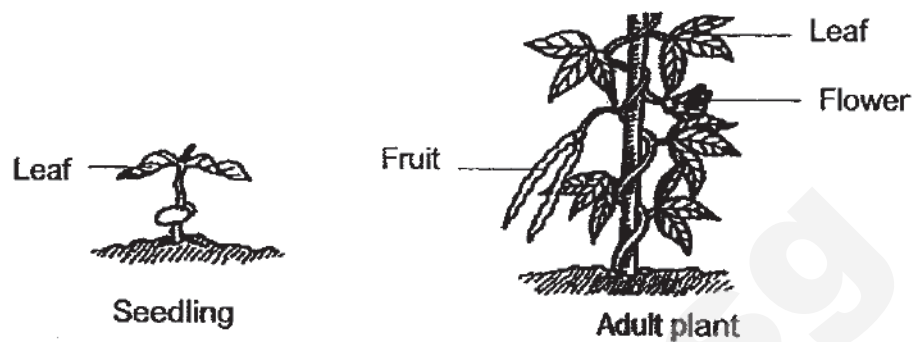
13 The diagram below shows parts of a plant.



Which of the following correctly shows the name of the plant part?

	Plant Part	Name
(1)	W	flower
(2)	X	fruit
(3)	Y	leaf
(4)	Z	stem

14 The diagrams below show a seedling and an adult plant.



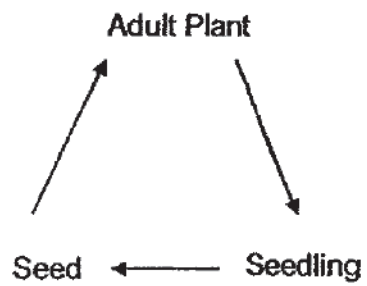
Which of the following can **both** the seedling and the adult plant do?

- A: Both can take in air.
- B: Both can produce fruits.
- C: Both can make its own food.
- D: Both can absorb water through the roots.

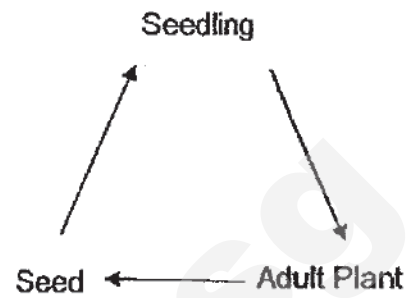
- (1) B only
- (2) A and B only
- (3) B and C only
- (4) A, C and D only

15 Which of the following shows the life cycle of a flowering plant?

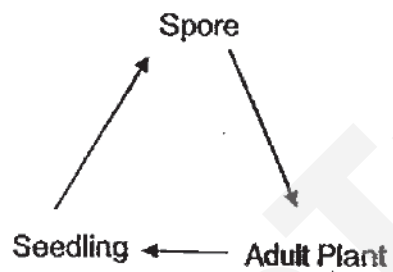
(1)



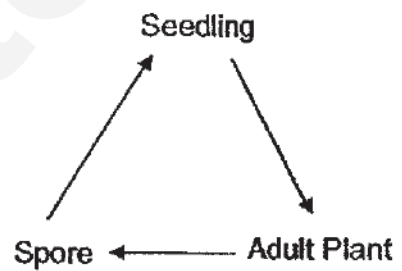
(2)



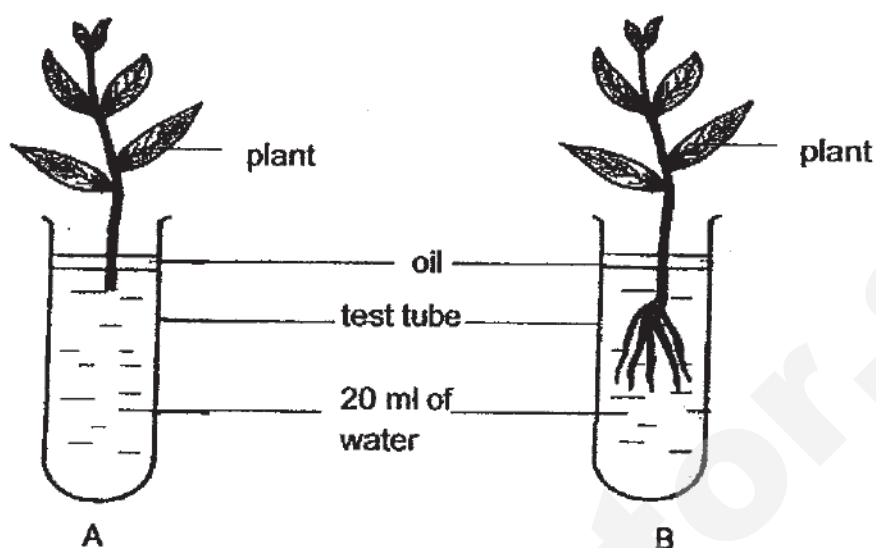
(3)



(4)



- 16 Philip carried out an experiment using two set-ups, A and B, as shown below. The plants used in the set-ups were similar and 20 ml of water was added to each test tube. Philip recorded the amount of water left in each test tube after three days.



Which one of the following correctly shows the amount of water left in each test tube after three days?

Amount of water left in test tube (ml)		
	A	B
(1)	19	20
(2)	19	14
(3)	14	20
(4)	0	0

17 Marie and Joe made the following statements about plant part X:

Marie: It transports water and minerals to all parts of the plant.

Joe: It supports the leaves and branches of the plant.

What do you think plant part X is?

- (1) stem
- (2) roots
- (3) leaf
- (4) fruit

18 The diagram below shows a ring file.



Part X is made of metal because metal is _____.

- (1) strong
- (2) flexible
- (3) opaque
- (4) waterproof

- 19 Devi wants to make a bag used for carrying wet groceries.
Which of the following best describes the properties of the material used for making the grocery bag?

- A: The material needs to be flexible.
- B: The material needs to be strong.
- C: The material needs to be waterproof.
- D: The material needs to be able to float on water.

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

- 20 Harry conducted an experiment on four different materials, W, X, Y and Z. The materials are of the same size and mass.
He placed the materials into a container of water.

The table below shows the mass of the materials before and after placing them into the container of water.

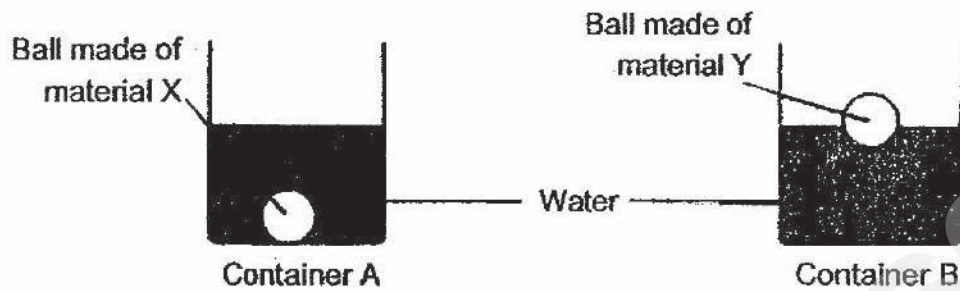
Material	Mass (g) before placing in container	Mass (g) after placing in container
W	250	400
X	250	330
Y	250	320
Z	250	280

Based on Harry's results, which material, W, X, Y or Z is most suitable to make a towel?

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

- 21 Ali put two balls of the same size, but made of different materials into two containers, A and B, each containing the same amount of water.

The results are shown below.



Based on the results, what can Ali conclude about materials X and Y?

- A: Material X is heavier than Material Y.
 - B: Materials X and Y are not waterproof.
 - C: Material X sinks in water but Material Y floats on water.
- (1) A only
 - (2) B only
 - (3) C only
 - (4) A and C only

- 22** Ember lowered the bar magnet into a container of paper clips. She lifted the bar magnet and recorded the number of paper clips attracted to the magnet at the 3 positions, L, M and N.

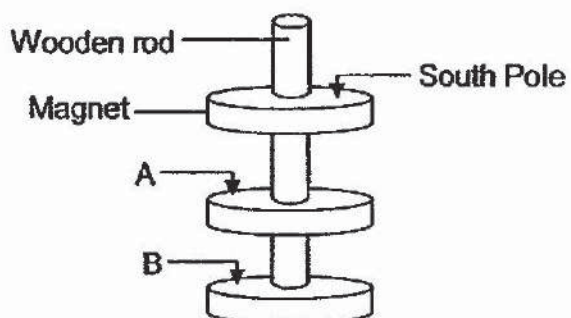
Bar magnet



Which one of the following correctly represents the correct number of paper clips attracted at position L, M and N?

	L	M	N
(1)	1	2	6
(2)	1	6	2
(3)	6	6	1
(4)	6	1	6

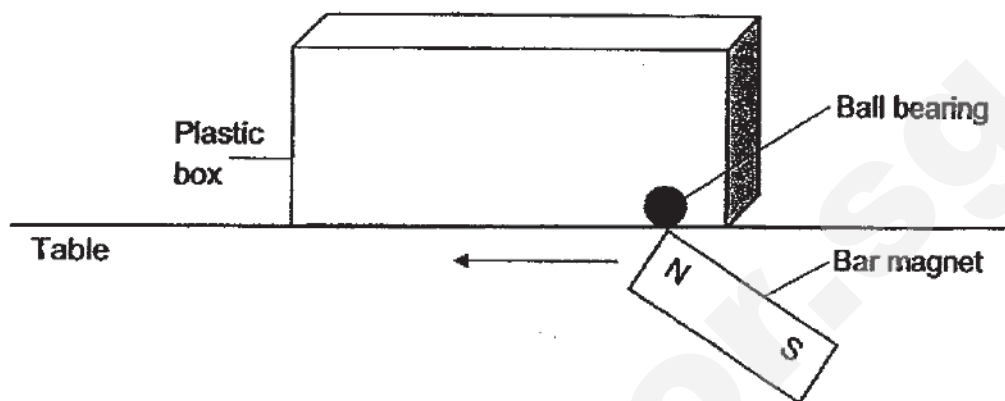
- 23 The diagram below shows the positions of 3 ring magnets when they are put through a wooden rod.



Which one of the following correctly shows the poles of A and B?

	A	B
(1)	North	North
(2)	North	South
(3)	South	North
(4)	South	South

- 24 Hanisah placed a small plastic box containing a ball bearing on a table. She slid a bar magnet along the side of the box in the direction shown by the arrow in the diagram below. The ball bearing moved along with the magnet.

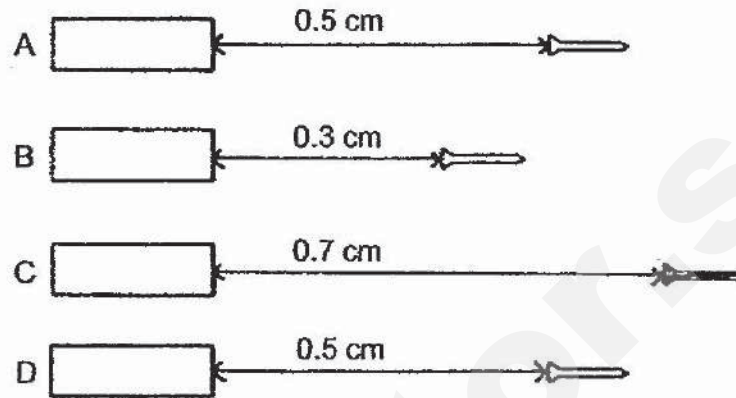


What material could the ball bearing be made of?

- A: iron
 - B: wood
 - C: steel
 - D: copper
- (1) A and C only
- (2) B and D only
- (3) C and D only
- (4) A, C and D only

- 25 Jamal wanted to find out the strength of four different magnets, A, B, C and D, using an iron nail.

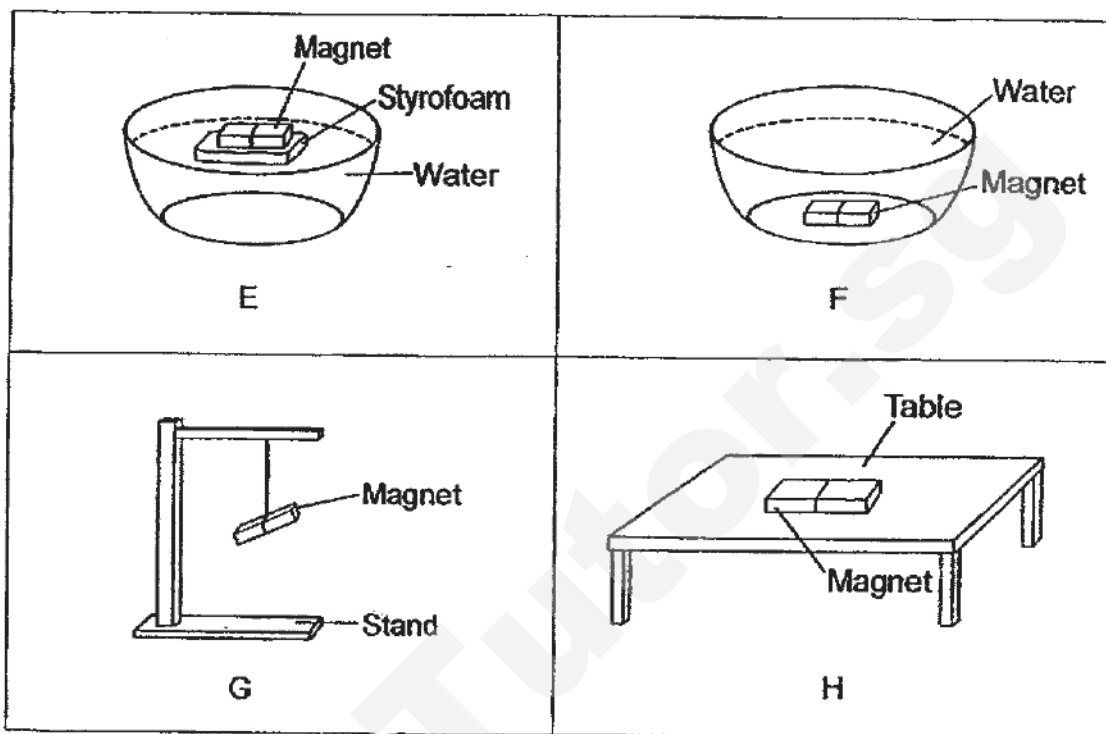
He moved the iron nail slowly towards magnet A until the nail was attracted by the magnet. He then measured the distance between the nail and the magnet. He repeated this experiment with magnets B, C and D. The results of the experiment are shown below.



Which one of the following statements about the four magnets is correct?

- (1) Magnet B is the weakest magnet.
- (2) Magnet B is stronger than magnet A.
- (3) Magnet D is stronger than magnet C.
- (4) Magnet D is weaker than magnet A.

- 26 The diagrams below show four set-ups, E, F, G and H. Mika wanted to use a magnet to find out the direction of the North pole from his home. Which of the following set-ups would allow him to do so?



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

- 27 Charis had two metal bars as shown in the diagram below. She brought one end of one metal bar next to the end of the other metal bar and recorded her observations as shown below.

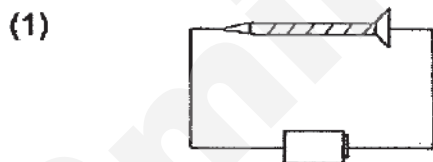


Action taken	Observation
When I is brought near J	I and J moved nearer to each other.
When I is brought near K	I and K moved away from each other.

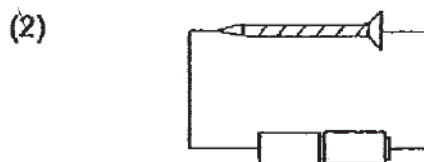
Which one of the following will likely happen when H is brought near J?

- (1) Nothing will happen.
- (2) H and J will spin continuously.
- (3) H and J will move nearer to each other.
- (4) H and J will move away from each other.

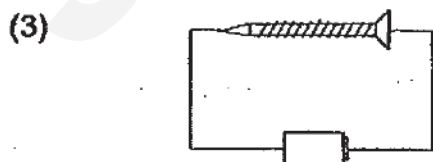
- 28 Ric wanted to make a magnet using electrical method. Which of the following set-up should he use to make the strongest magnet?



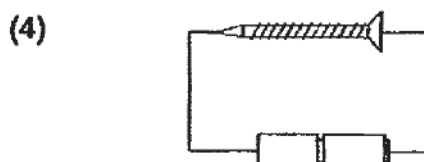
1 battery, 6 coils



2 batteries, 6 coils



1 battery, 15 coils



2 batteries, 15 coils

End of Booklet A

(Go on to Booklet B)

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ST. HILDA'S PRIMARY SCHOOL
SEMESTRAL ASSESSMENT 2, 2019

PRIMARY 3

SCIENCE

Booklet B

Name : _____ () Class : Primary 3 / _____

Date: 1 November 2019

Total Duration for Booklets A and B: 1h 45 min

Booklet B:

13 Questions

44 Marks

Parent's Signature:

INSTRUCTIONS TO CANDIDATES

1. This question booklet consists of **15** printed pages, excluding this cover page.
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 this booklet.

Booklet	Maximum Marks	Marks Obtained
A	56	
B	44	
Total	100	

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For questions 29 to 41, write your answers in this booklet.

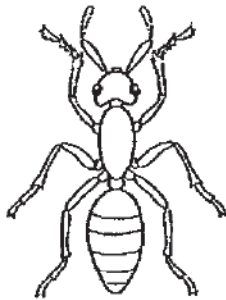
The number of marks available is shown in brackets [] at the end of each question or part question.

(44 marks)

29 Classify the following items in the table below.

[2]

(a)



Ant



Baby



Flower

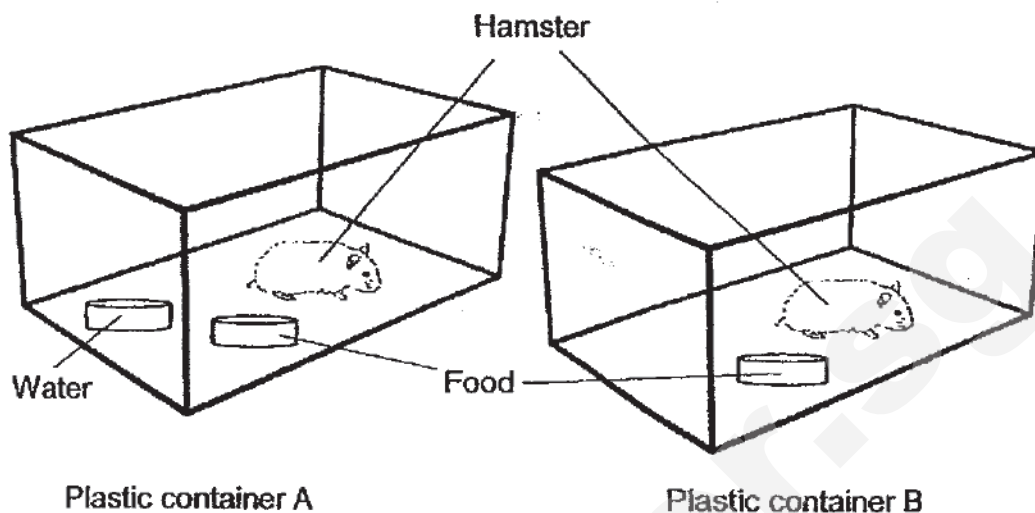


Toy Dog

Non-living things	Living Things	
	Animals	Plants

(continue on next page)

- (b) Josh placed similar hamsters in two separate plastic containers without covers.

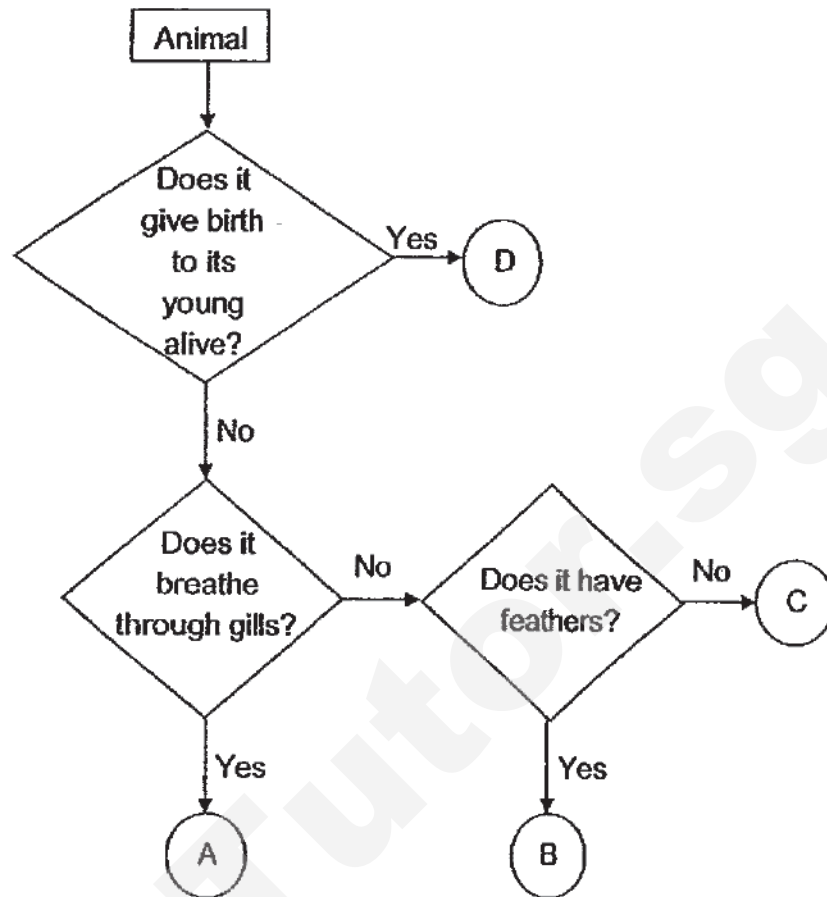


What was the aim of the experiment? Put a tick (✓) in the table below.

[1]

Aim of the experiment	Tick (✓)
To find out if the hamsters need air to survive.	
To find out if the hamsters need food to survive.	
To find out if the hamsters need water to survive.	

30 Study the flowchart below.

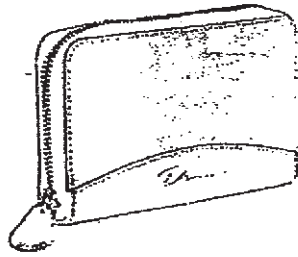


- (a) Based on the flowchart above, state one similarity between animals A and B. [1]

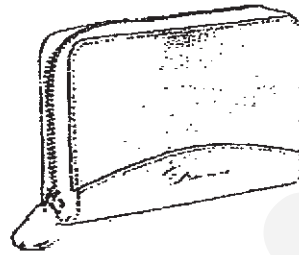
- (b) Based on the flowchart above, state one difference between animals A and C. [1]

- (c) Based on the flowchart above, which animal group does animal D belong to? [1]

- 31 Miss Tang owns two similar leather wallets, C and D. Wallet D was soaked in the rain.

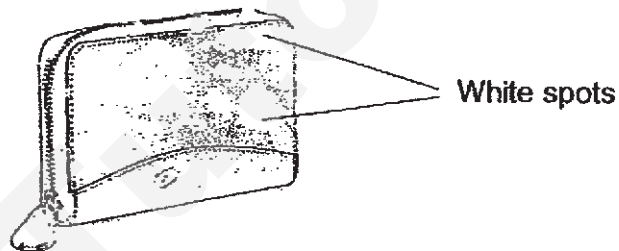


Wallet C (Dry)



Wallet D (Wet)

She kept both wallets in the same drawer and closed it. After a week, she noticed white spots on one of the wallets. She concluded that the white spots were mould.

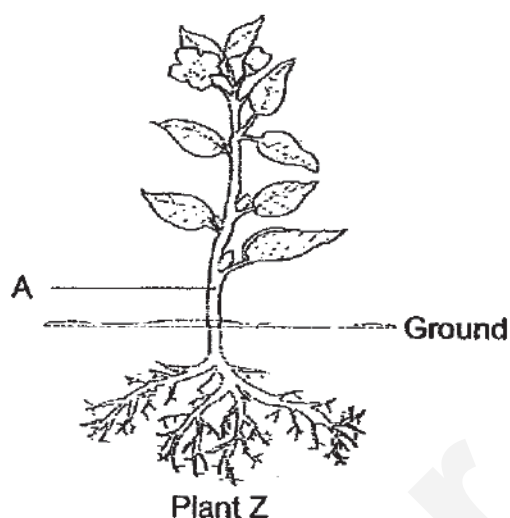


- (a) Which wallet, C or D, most likely had mould growing on it? Explain why. [1]

- (b) Miss Tang thinks that mould can make its own food. Do you agree with her? [1]
Explain why.

- (c) State two conditions needed for the mould to grow. [2]

32 Li Xing observed plant Z in the garden.



(a) In the diagram above, [2]

(i) Draw a line and name the part of Plant Z that holds it firmly to the ground.

(ii) Draw a line and name the part of Plant Z that helps it to make food.







(b) State the function of part A. [1]

(c) Study the table below.

Organisms in Group K	Organisms in Group L
• Cannot make its own food	• Can make its own food

Which group, K or L, can Plant Z be classified under? Give a reason for your answer. [1]

- 33 In the table below, the animals are classified according to their animal groups.

Group Q	Group R	Group S
 Toad	 Lizard	 Duck
 Salamander	 Snake	 Sparrow

- (a) Identify Group Q and Group R. [2]

Group Q: _____ Group R: _____

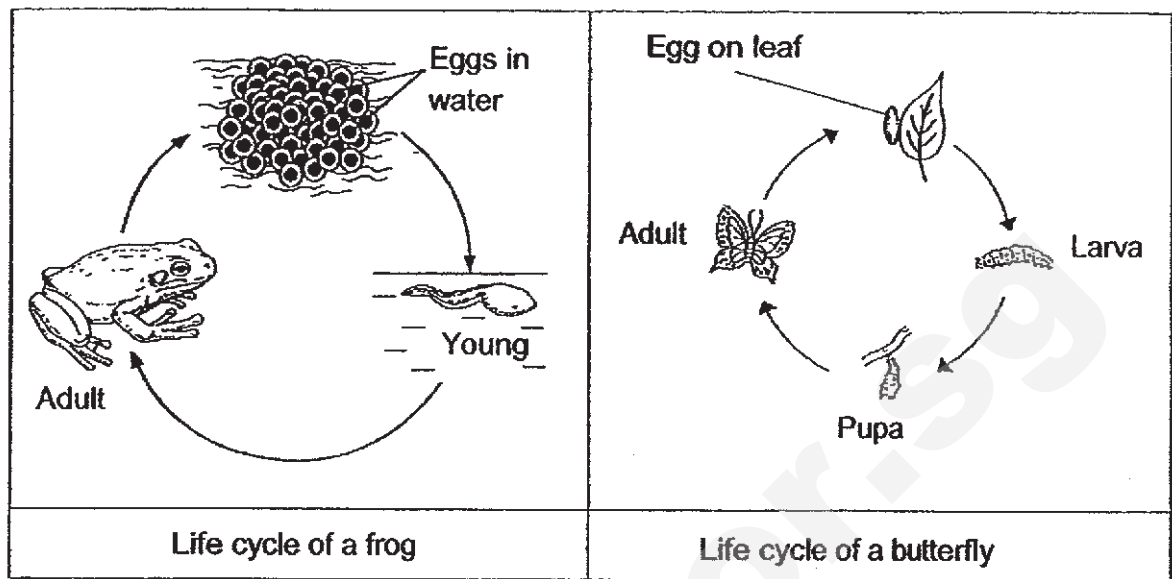
- (b) State one similarity between how all the animals in Groups Q, R and S reproduce. [1]

- (c) State one difference between the body covering of the animals in Group Q and S. [1]

- (d) State one function of the body covering of animals in Group S. [1]

SCORE	5
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- 34 The diagrams below show the life cycles of a frog and a butterfly.



- (a) Based on what you observe in the diagrams above, state one similarity between the two life cycles. [1]

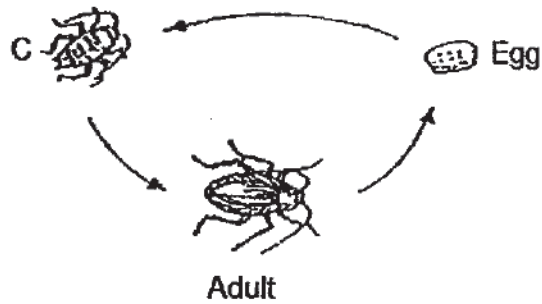
- (b) Based on what you observe in the diagrams above, state two differences between the two life cycles. [2]

Difference 1: _____

Difference 2: _____

- (c) How is the life cycle of a chicken similar to the life cycle of a butterfly? [1]

35 Look at the diagram below.



(a) Name stage C.

[1]

(b) The young of a cockroach goes through a process several times at stage C to increase its size before it becomes an adult.
What is this process called?

[1]

- 36 Crystal tested the properties of two materials, F and G, and recorded the results in the table as shown below.

Properties	F	G
It is flexible	Yes	Yes
It allows light to pass through	No	Yes

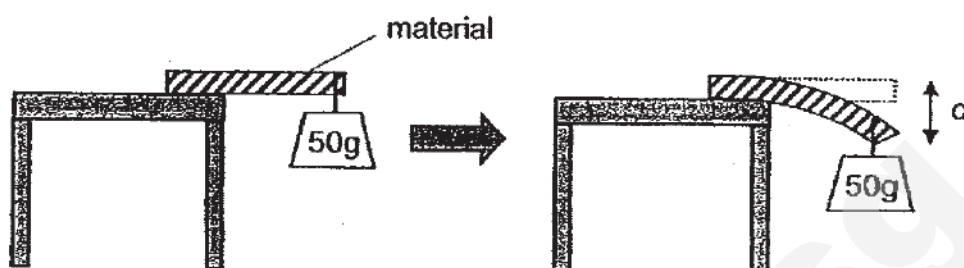
- (a) Based on the experiment above, state the properties of material F. [1]

- (b) The diagram below shows Crystal's bedroom. Crystal would like to make a curtain for her bedroom windows, so that no one can see what she is doing through the window when she draws the curtain.



- Based on the results given in the table, which is the best material, F or G, she should use to make the curtain with? Explain why. [2]

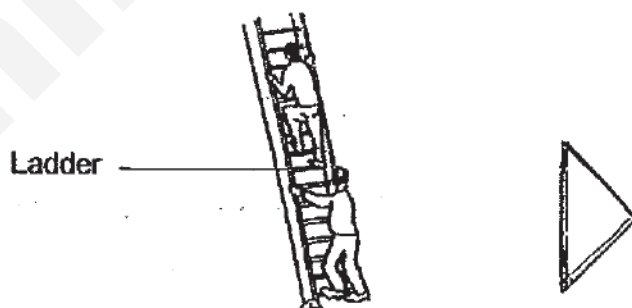
- 37 George wanted to test a property of three materials, P, Q and R. He placed each material on the side of a table and hung a 50g weight on one end of the material. He measured the distance 'd' as shown in the diagram and recorded his observation in the table below.



Material	Distance 'd'
P	5
Q	13
R	0

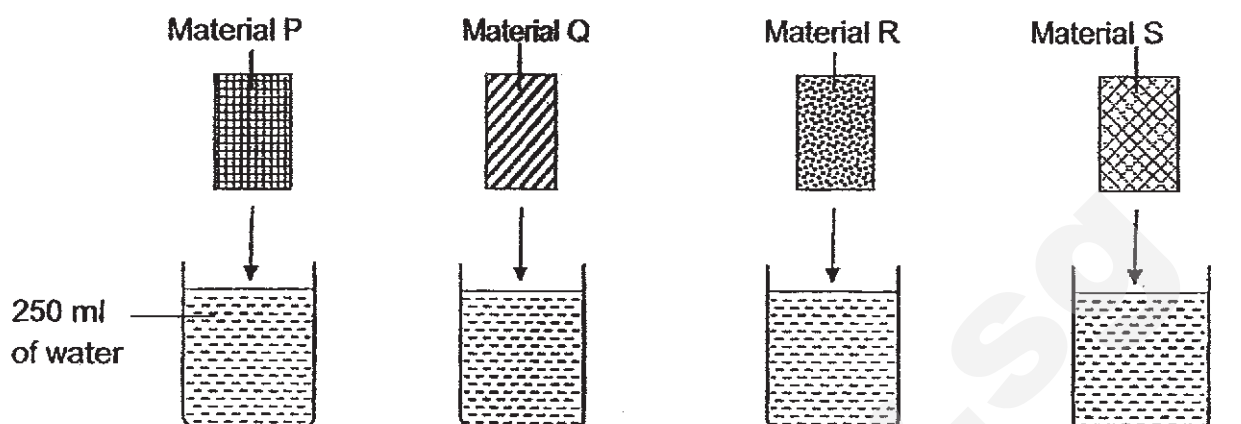
- (a) State the property of the materials that George is trying to test. [1]

- (b) Which material, P, Q or R is most suitable for making a ladder for its use? [1]



Material : _____

- 38 Mrs Wong wanted to find out which of the 4 materials, P, Q, R or S, is able to absorb the most amount of water. She placed the four materials into four similar beakers each containing 250 ml of water as shown in the diagrams below.



Fifteen minutes later, Mrs Wong took the materials out and measured the volume of water each material absorbed. She recorded the results in the table below.

Material	Amount of water absorbed by each material (ml)
P	35
Q	21
R	0
S	50

- (a) Arrange the materials according to how well they absorb water. [2]
Write down P, Q, R and S in the boxes below.

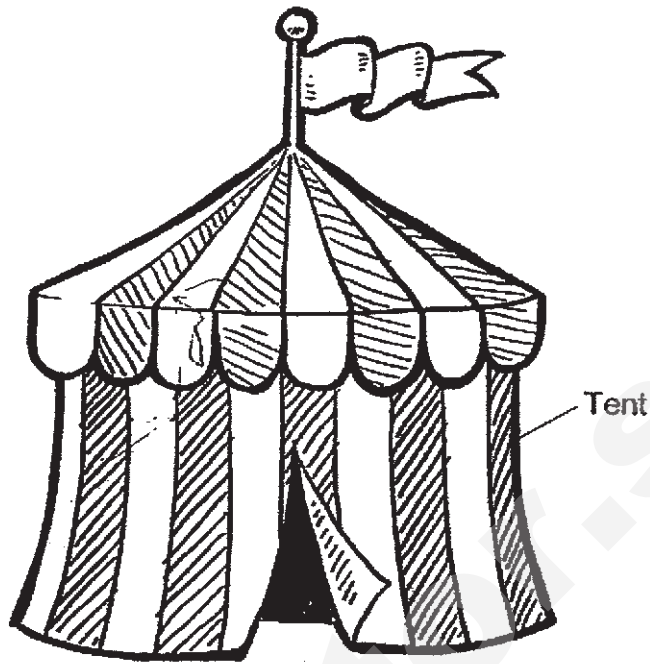
Least absorbent → Most absorbent

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(continue on next page)

SCORE	2
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In the diagram below, a tent was built for a carnival.

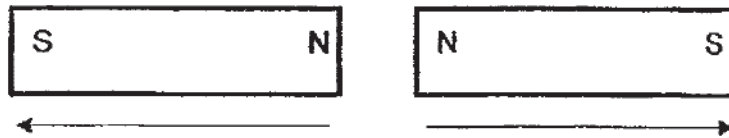


- (b) Based on your answer in (a), which material, P, Q, R or S, is most suitable to make the tent as shown above? Explain why. [2]

SCORE	2
-------	---

- 39 The diagrams below show the magnets interacting with each other.
For each diagram, fill in the blanks to state how the magnets are interacting with each other. [2]

(a)



The magnets _____ each other.

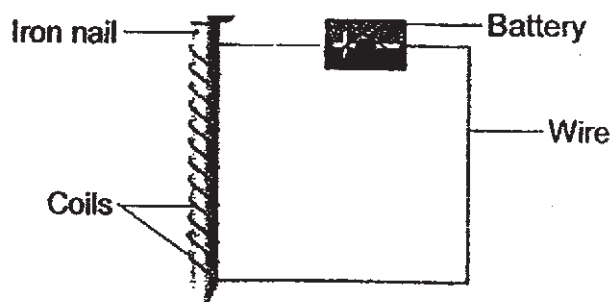
(b)



The magnets _____ each other.

SCORE	2
-------	---

- 40 Auni created an electromagnet using an iron nail, a battery and some wire.



She added a battery, one at a time, and counted the number of steel paper clips attracted to the iron nail. She recorded her results in the table below.

Number of batteries	Number of steel paper clips attracted
1	1
2	2
3	4

- (a) What is the relationship between the number of batteries and the number of paper clips attracted? [1]

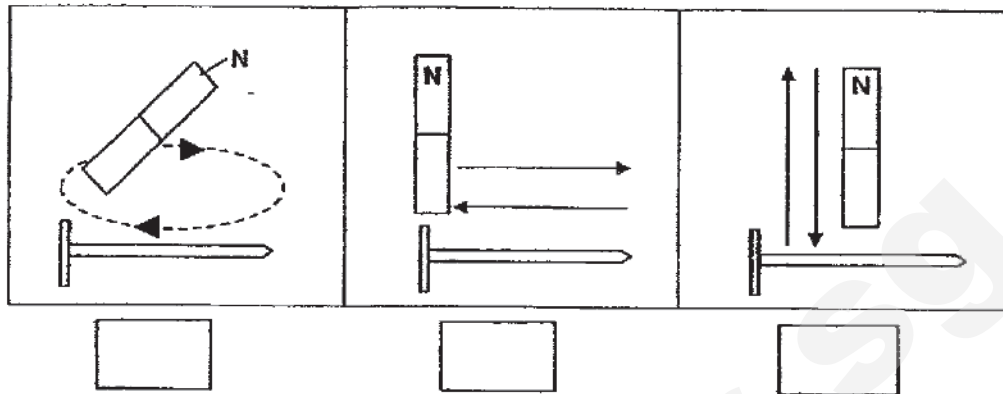
- (b) If all the batteries are removed, explain what will be observed when the iron nail is immediately placed near the paper clips. [1]

- (c) Name two ways to increase the strength of the electromagnet. [2]

First way: _____

Second way: _____

- 41 Matthew wants to make an iron nail into a magnet using the stroking method.



- (a) Tick (✓) the diagram above that shows the correct way of using the stroking method to make the iron nail into a temporary magnet. [1]

- (b) Explain how Matthew can tell if the iron nail has become a magnet. [2]

- (c) How can Matthew increase the strength of the magnetised iron nail? [1]

END OF PAPER

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SCHOOL : ST.HILDA'S PRIMARY SCHOOL

LEVEL : PRIMARY 3

SUBJECT : SCIENCE

TERM : 2019 SA2

SECTION A

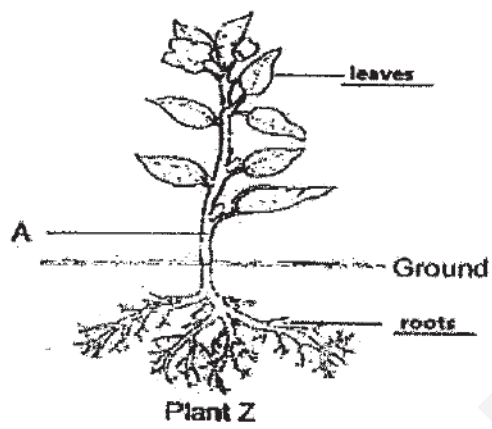
Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
2	3	3	2	3	3	1	3	4	4

Q 11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
4	2	1	4	2	2	1	1	3	1

Q 21	Q22	Q23	Q24	Q25	Q26	Q27	Q28
4	4	2	1	1	2	4	4

SECTION B

Q29)	a) <table><tr><th>Non-living things</th><th colspan="2">Living things</th></tr><tr><td></td><th>Animals</th><th>Plants</th></tr><tr><td>Toy dog</td><td>ant</td><td>flower</td></tr><tr><td></td><td>baby</td><td></td></tr></table>	Non-living things	Living things			Animals	Plants	Toy dog	ant	flower		baby	
Non-living things	Living things												
	Animals	Plants											
Toy dog	ant	flower											
	baby												
	b)To find out if the hamsters need water to survive.												
Q30)	a)They both do not give birth to its young alive. b)A breathes through gills while C does not. c)Mammal												
Q31)	a)Wallet D . It had moisture for the mould to grow. b)No .The mould does not have leaves.												

	c) Warmth and moisture.				
Q32)	<p>a)</p>  <p>b) Helps to transport food to the plant. c) Group L. It has leaves to make its own food.</p>				
Q33)	<p>a) Group Q : Amphibians Group R : reptiles b) They reproduce by laying eggs. c) Animals in group Q have moist skin while S has feathers. d) Helps to keep the animals warm.</p>				
Q34)	<p>a) They both lay eggs. b) Difference 1: The frog has no pupa in its life cycle but the butterfly does. Difference 2 : The butterfly has wings while the frog does not. c) They both lay eggs.</p>				
Q35)	<p>a) Nymph b) Moulting</p>				
Q36)	<p>a) F is flexible and does not allow light to pass through. b) F does not allow light to pass through, so nobody can see what she is doing.</p>				
Q37)	<p>a) Flexibility. b) Material R</p>				
Q38)	<p>a) Least absorbent → Most absorbent</p> <table border="1" data-bbox="509 1789 1259 1856"> <tr> <td>R</td><td>Q</td><td>P</td><td>S</td></tr> </table> <p>b) R. It is waterproof , so if it rains, the people inside will not get wet.</p>	R	Q	P	S
R	Q	P	S		

Q39)	<p>a)The magnets repelled each other.</p> <p>b)The magnets attracted each other.</p>
Q40)	<p>a)As the number of batteries increase, the number of paper clips attracted will increase.</p> <p>b)No nails will be attracted.</p> <p>c)First way : Add more batteries to the circuit. Second way : Add more coils to the nail.</p>
Q41)	<p>a)</p> <div style="text-align: center;"> </div> <p>b)He can bring the nail towards another magnet. One end of the nail would attract one pole of the magnet while the other end will repel the other pole of the magnet.</p> <p>c)Stroke the nail a few more times.</p>

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2019 PRIMARY 3 SEMESTRAL ASSESSMENT 2

Name : _____ ()

Date: 22 October 2019

Class : F

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

Parent's _____

Duration: 1 hour 30 minutes

SCIENCE

BOOKLET A

INSTRUCTIONS TO CANDIDATES

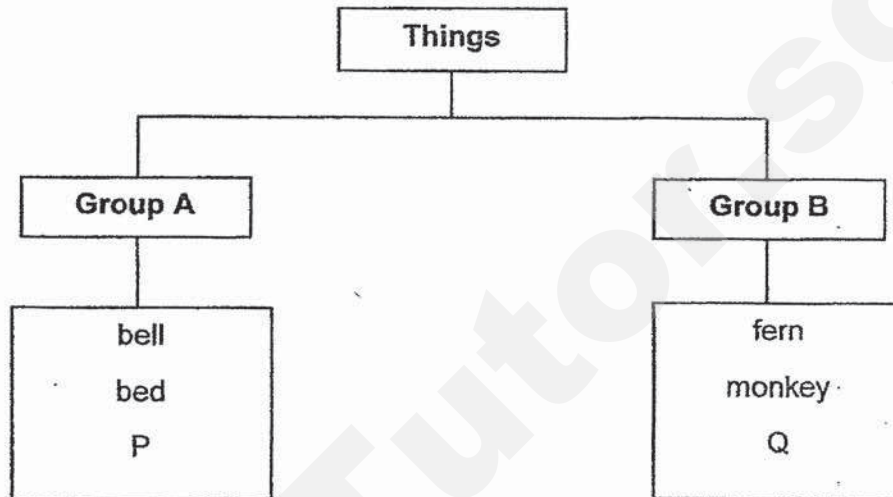
1. Write your name, class and register number.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Shade your answers on the Optical Answer Sheet (OAS) provided.

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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)

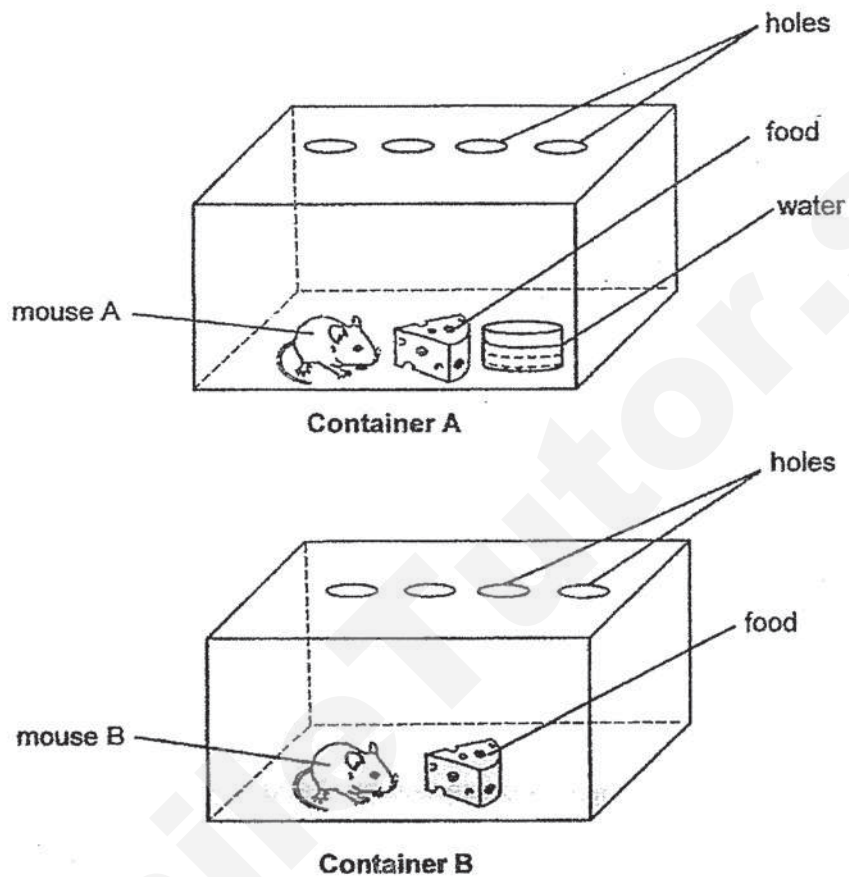
1. Study the classification chart below.



Which of the following is represented by P and Q?

	P	Q
(1)	car	stone
(2)	bacteria	guppy
(3)	stone	bacteria
(4)	guppy	car

2. Sarah placed two mice in two similar glass containers as shown in the diagram below. Each mouse is given the same amount of food every day.



Which of the following best explains which mouse would live longer?

- (1) Mouse A. It has air.
- (2) Mouse A. It has air, food and water.
- (3) Mouse B. It has food.
- (4) Mouse B. It has air and food and water.

3. Look at the pictures below.



A dog



A teddy bear

Which of the following statements is correct?

- (1) Both are non-living things as they cannot reproduce.
- (2) A teddy bear is a non-living thing as it cannot grow.
- (3) A teddy bear is a living thing as it needs air to survive.
- (4) Both are living things as they can respond to changes.

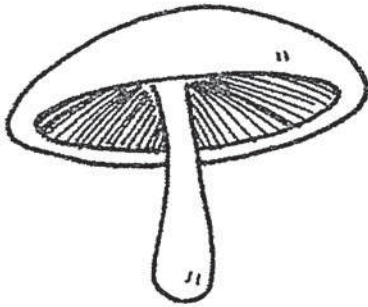
4. Study the table below. The table shows the characteristics of four things, A, B, C and D. A tick (✓) means that the characteristic is present.

Thing	Needs air, food and water	Can make food	Has four legs
A	✓		✓
B			✓
C	✓		
D	✓	✓	

Which do A, B, C and D represent?

	A	B	C	D
(1)	mosquito	sunflower plant	table	lion
(2)	lion	table	sunflower plant	mosquito
(3)	table	mosquito	lion	sunflower plant
(4)	lion	table	mosquito	sunflower plant

5. Study the pictures below carefully.



mushroom

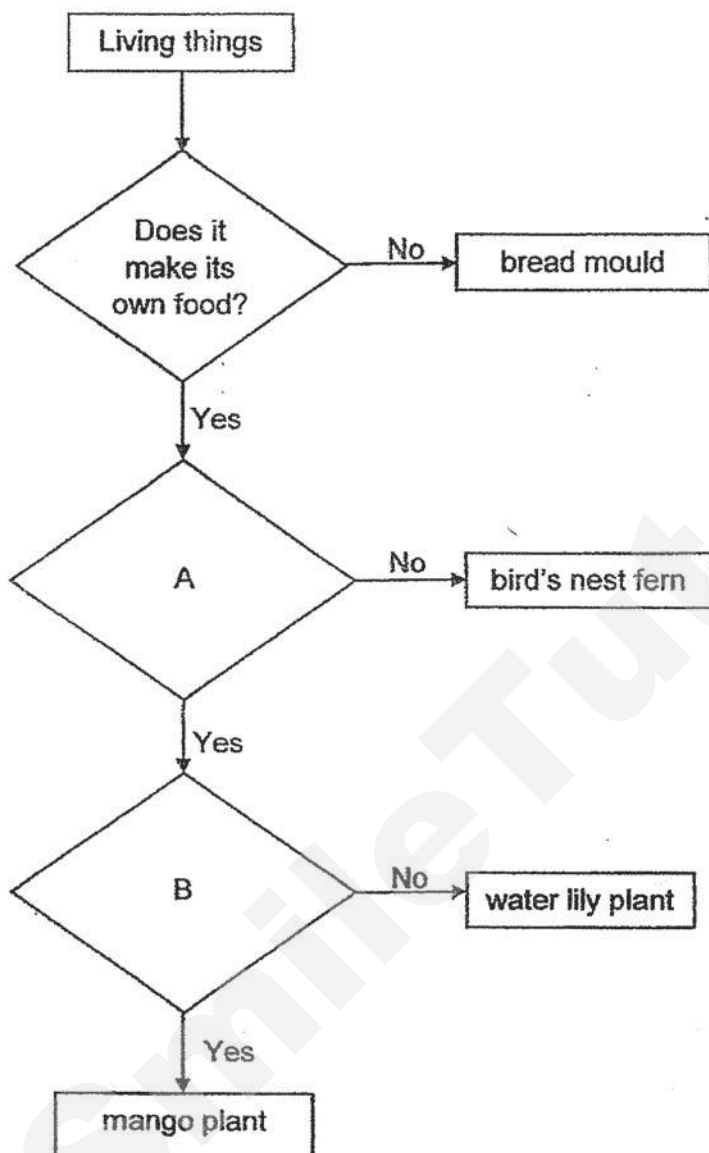


fern

How are these two living things similar?

- (1) Both have leaves.
- (2) Both reproduce by spores.
- (3) Both are non-flowering plants.
- (4) Both can make their own food.

6. Study the flowchart below.



Based on the flowchart above, which of the following is represented by the questions, A and B?

	A	B
(1)	Does it reproduce by seeds?	Does it grow on land?
(2)	Does it reproduce by seeds?	Does it grow in water?
(3)	Does it reproduce by spores?	Does it grow in water?
(4)	Does it reproduce by spores?	Does it grow on land?

7. The following table describes the characteristics of animal groups, X and Y. A tick (✓) means that the animal group has that characteristic.

Characteristics	X	Y
Have moist skin		✓
Give birth to young alive	✓	
Live in water and on land		✓

Which of the following is represented by the animal groups, X and Y?

	X	Y
(1)	Mammal	Amphibian
(2)	Mammal	Fish
(3)	Insect	Reptile
(4)	Bird	Reptile

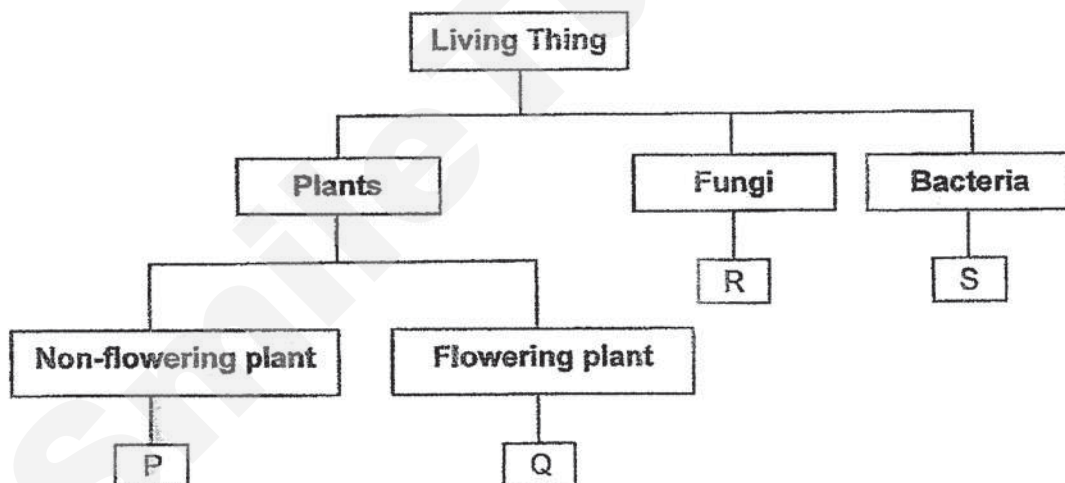
8. Siti has a living thing in her garden and describes it as shown below.



Siti

I have a living thing. It can make its own food. It bears red flowers.

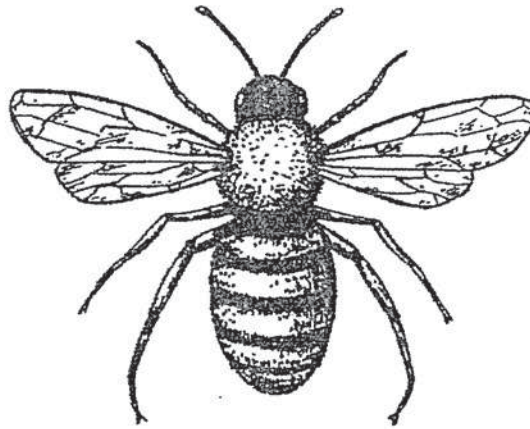
She drew the following classification chart to classify it.



Which letter, P, Q, R or S represents the living thing Siti is describing?

- (1) P
- (2) Q
- (3) R
- (4) S

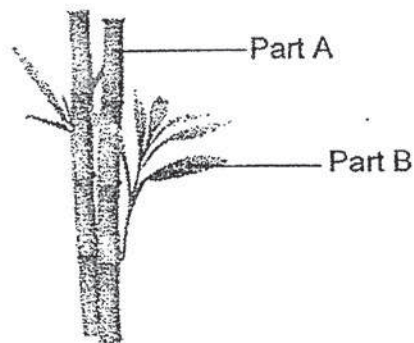
9. Bala saw an animal as shown below in his garden.



Which of the following represents the animal that Bala saw in his garden?

	Animals	Characteristics	
		Does it have wings?	Does it have three body parts?
(1)	A	No	Yes
(2)	B	No	No
(3)	C	Yes	No
(4)	D	Yes	Yes





10. Study the diagram below.



Which of the following is represented by Part A and Part B?

	Part A	Part B
(1)	leaf	roots
(2)	roots	stem
(3)	stem	leaf
(4)	leaf	stem

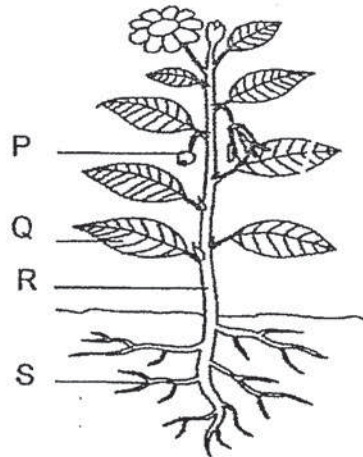
11. Peter wants to find out if the amount of water given to a plant affects the growth of the plant.

 Plant D 300 ml of water	 Plant E 500 ml of water	 Plant F 500 ml of water	 Plant G 300 ml of water
---	---	---	---

Which 2 setups should Peter use for his experiment?

- (1) Plant D and Plant F
- (2) Plant D and Plant G
- (3) Plant E and Plant F
- (4) Plant E and Plant G

12. The diagram below shows the different parts, P, Q, R and S, of a plant.



Which of the following correctly describes the function of the plant parts?

	Plant part	Function
(1)	P	Absorbs water for the plant.
(2)	Q	Makes food for the plant.
(3)	R	Holds the plant firmly to the ground.
(4)	S	Enables the plant to stand upright.

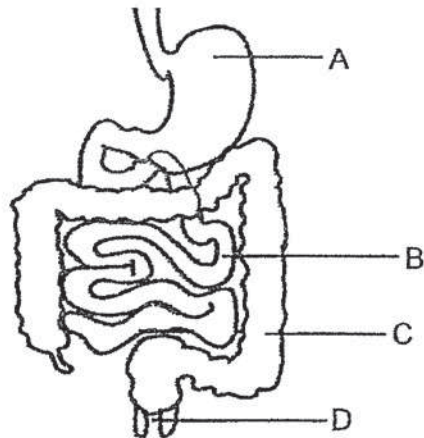
13. Mrs Lim's house was on fire. She ran to a nearby window and shouted loudly for help. Then, she choked on some smoke and started coughing.



Which human body system that was affected caused her to cough?

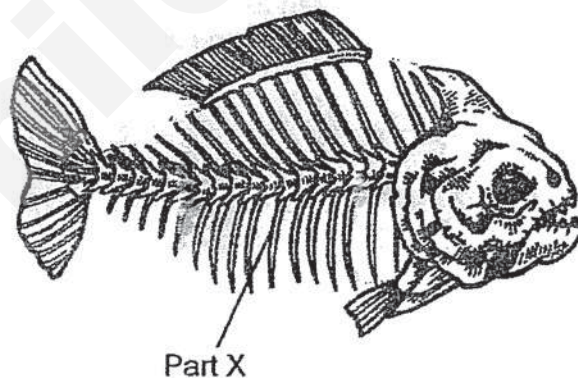
- (1) skeletal system
- (2) digestive system
- (3) muscular system
- (4) respiratory system

14. The diagram below shows some parts of a human digestive system.



In which part, A, B, C or D, is water absorbed from the undigested food?

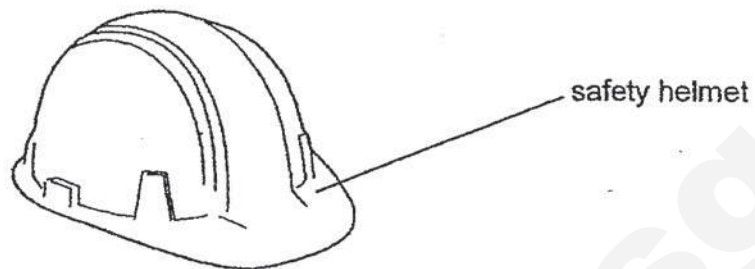
- (1) A
 - (2) B
 - (3) C
 - (4) D
15. The diagram below shows some parts of a fish.



Which fish body system does Part X belong to?

- (1) skeletal system
- (2) digestive system
- (3) circulatory system
- (4) respiratory system

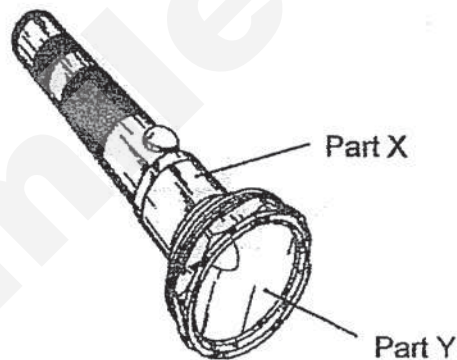
16. Chris has to choose a suitable material for making safety helmets that protect workers' heads from falling objects.



What is the most important consideration when selecting the suitable material for the safety helmet?

- (1) How strong the material is?
- (2) How flexible the material is?
- (3) How well the material absorbs water?
- (4) How well the material floats on water?

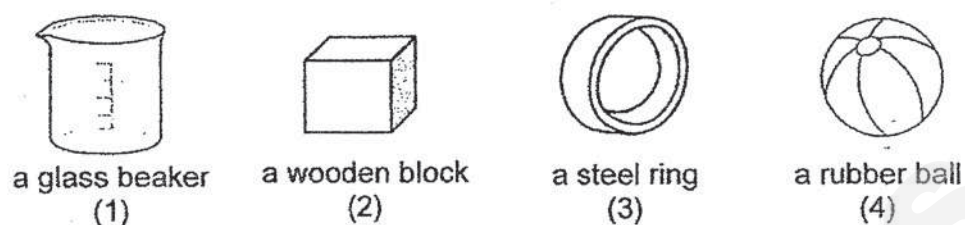
17. The drawing below shows a torchlight.



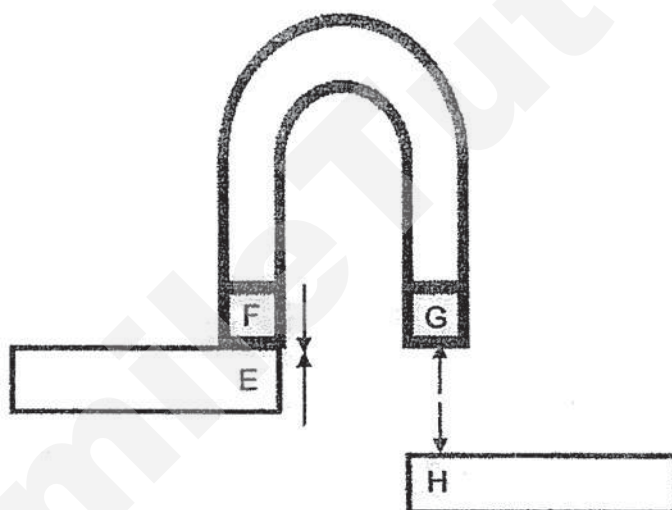
Which materials are most suitable to make the parts, X and Y?

	X	Y
(1)	wood	glass
(2)	plastic	metal
(3)	plastic	glass
(4)	wood	metal

18. A magnet is used to attract 4 objects shown below. Which object will be attracted by the magnet?



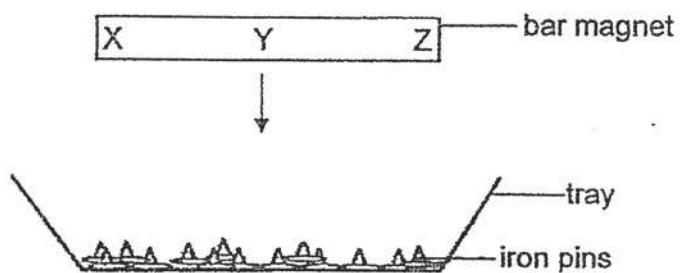
19. The diagram below shows a possible arrangement of some magnets. E, F, G and H are the poles of the magnets. The arrows show the movement of the magnets.



What are the poles, E, F and G, if H is the N-pole?

	E	F	G
(1)	N-pole	S-pole	N-pole
(2)	N-pole	N-pole	S-pole
(3)	S-pole	S-pole	N-pole
(4)	S-pole	N-pole	S-pole

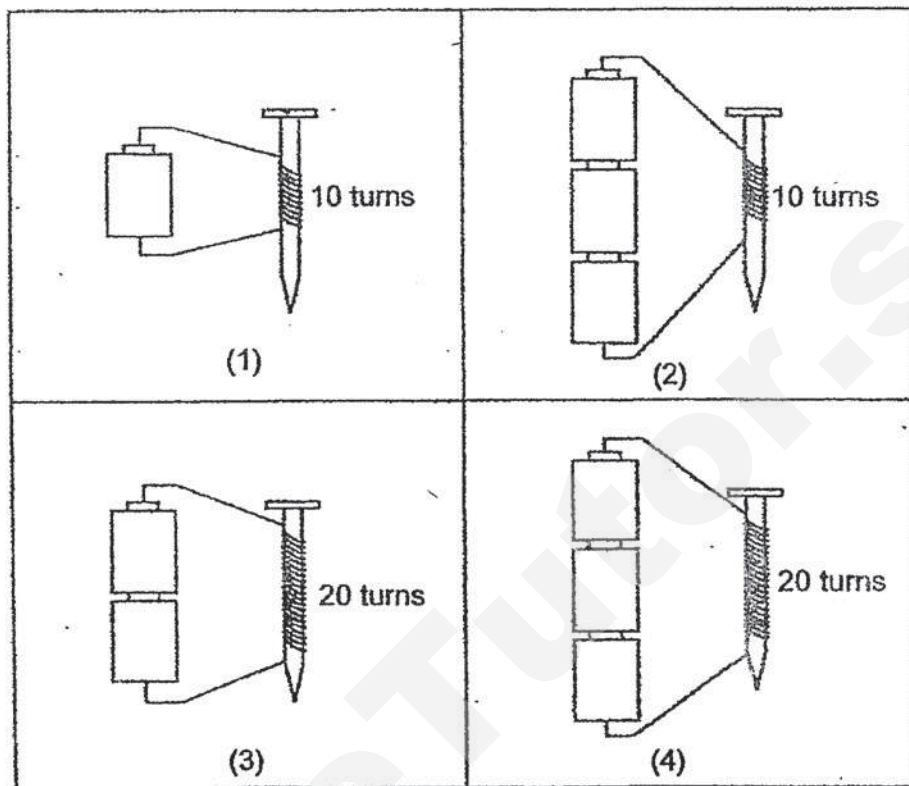
20. A bar magnet is lowered into a tray of iron pins. X, Y and Z are parts of the magnet.



Which of the following shows the possible number of iron pins attracted to the parts, X, Y and Z?

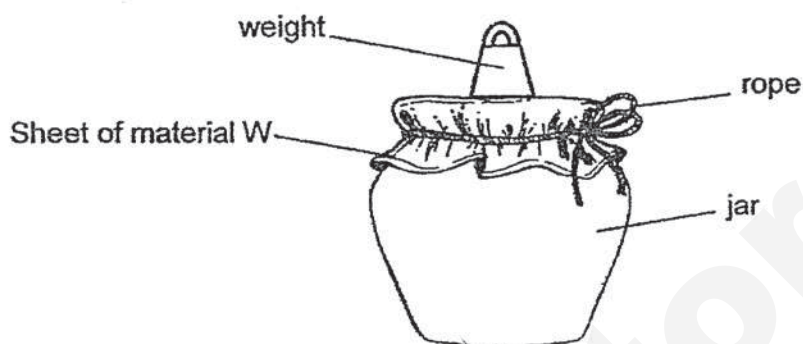
	Number of iron pins attracted		
	X	Y	Z
(1)	1	4	5
(2)	5	1	4
(3)	2	5	3
(4)	5	5	5

21. Which of the following electromagnets will have the greatest magnetic strength of attraction?

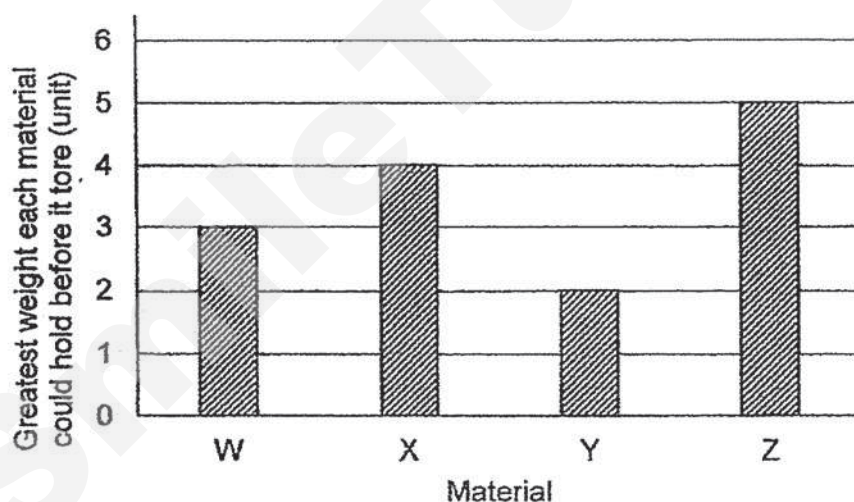


22. Sam wanted to find out which material, W, X, Y or Z, is the strongest. He cut each material into sheets of the same size.

He covered the brim of a jar using a sheet of material W and secured it with a rope. He added weights on the sheet of material W until it started to tear. He recorded the greatest weight that it could hold before it tore.



He repeated the experiment above using the materials, X, Y and Z. The graph below shows the greatest weight each material could hold before it tore.



Which of the following statements is true?

- (1) Z is the weakest.
- (2) Y is the strongest.
- (3) X is stronger than Y.
- (4) Y is stronger than W.

End of Booklet A



2019 PRIMARY 3 SEMESTRAL ASSESSMENT 2

Name : _____ ()

Date: 22 October 2019

Class : Pri _____

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 A	44
Booklet B	36
Total	80

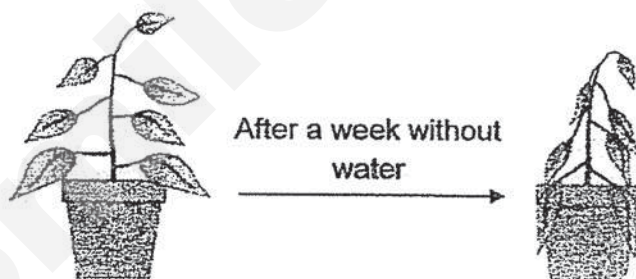
Booklet B (36 marks)

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]

23. Mark found three things, X, Y and Z, with the characteristics shown in the table below. A tick (✓) shows that the thing has the characteristic and a cross (X) shows that it does not have the characteristic.

Thing	Needs air	Makes its own food	Reproduces
X	✓	X	✓
Y	✓	X	X
Z	✓	✓	✓

- (a) Based on the table above, state two characteristics of living thing X. [2]



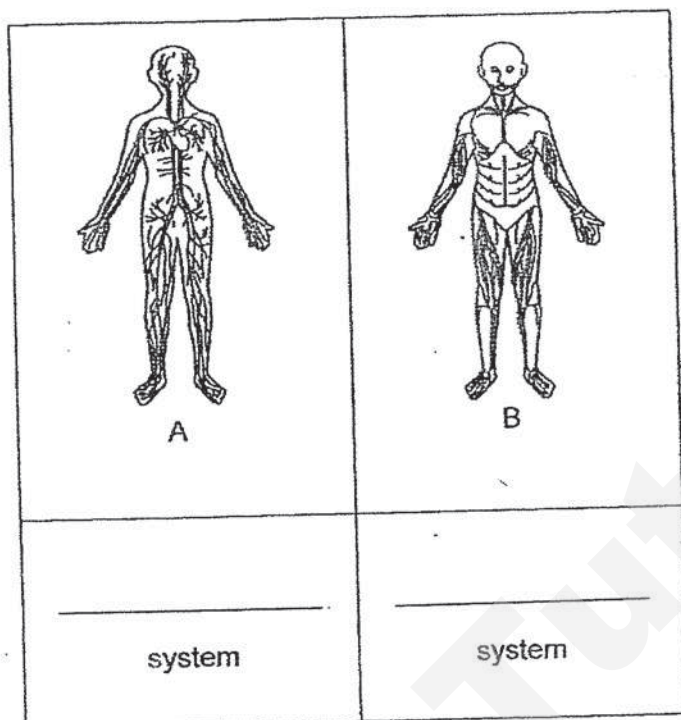
- (b) Based on the diagram above, state a characteristic of living things. [1]

Score	3
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24. Study the human body systems, A and B, below.

(a) Identify the human body systems, A and B, below.

[2]



A brain can be found under a skull as shown in the diagram below.

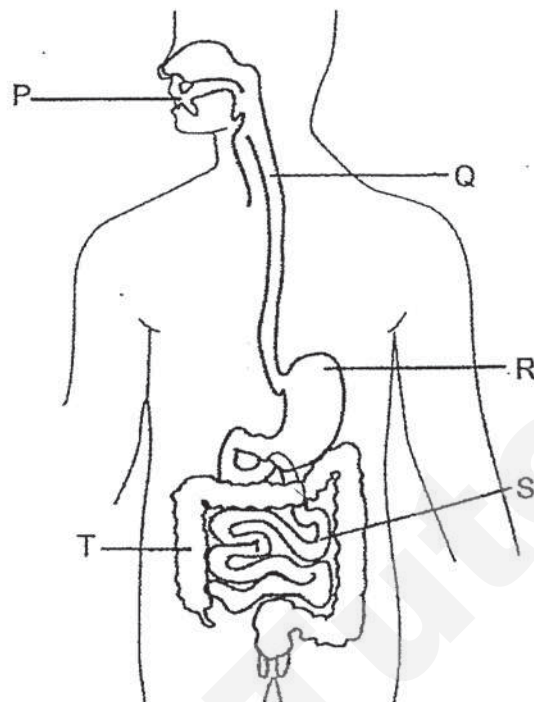


(b) What is the function of the skull?

[1]

Score	3
-------	---

25. The diagram below shows the parts of a human digestive system, represented by the letters, P, Q, R, S and T.



- (a) Write the letters, P, Q, R, S or T, in the blanks below to complete the sentence.

[1]

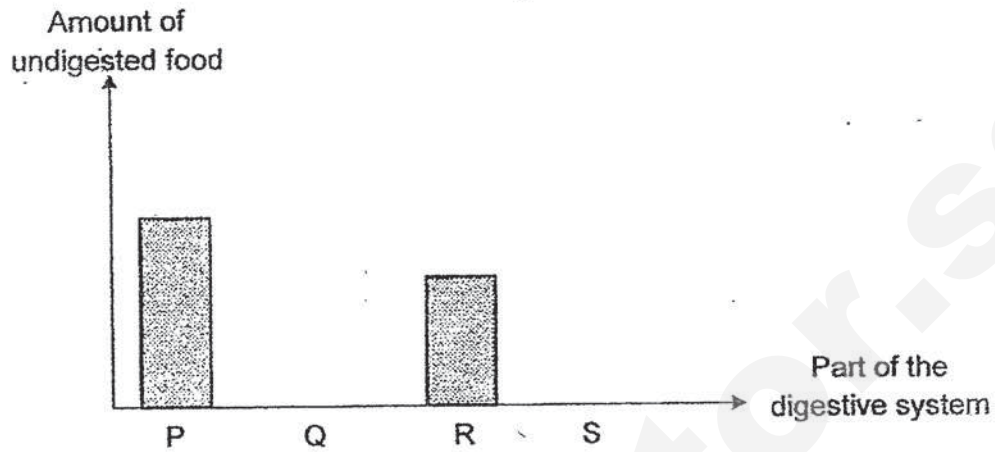
Digestion starts at _____ and ends at _____.

- (b) Mr Lim produces less digestive juice at R. How will this affect the amount of digested food leaving R?

[1]

Score	2
-------	---

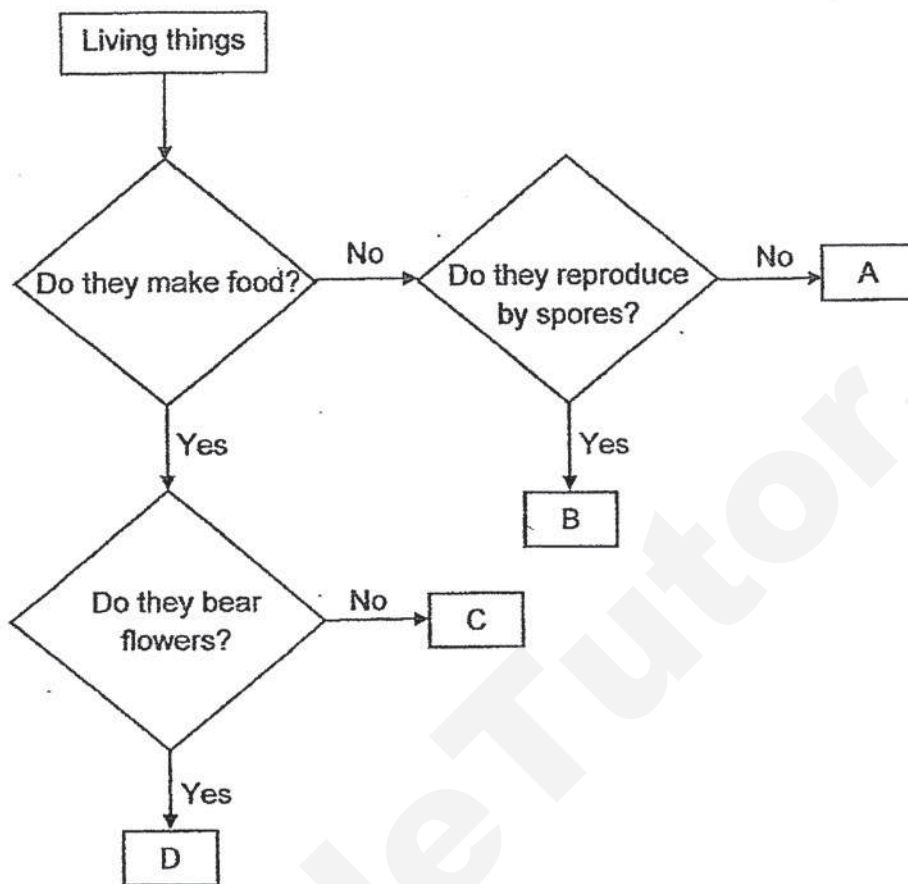
Mr. Lim ate a bowl of noodles for breakfast. The graph below shows the amount of undigested food leaving P and R of his digestive system.



- (c) Complete the bar graph above by drawing the amount of undigested food leaving Q and S of his digestive system. [1]

Score	1
-------	---

26. The flowchart below shows how living things are classified.

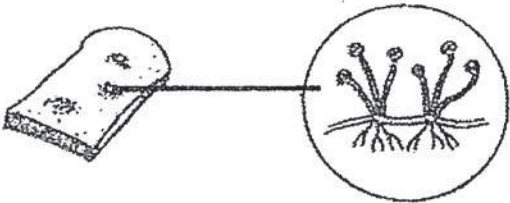
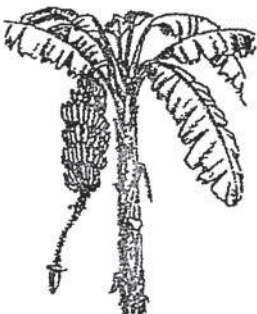

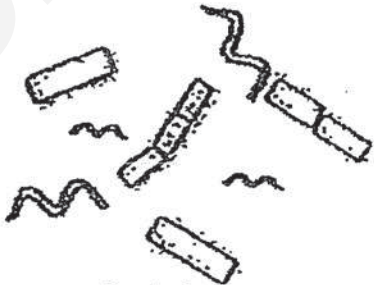


- (a) Based on the flowchart above, state a difference between the living things, A and D.

[1]

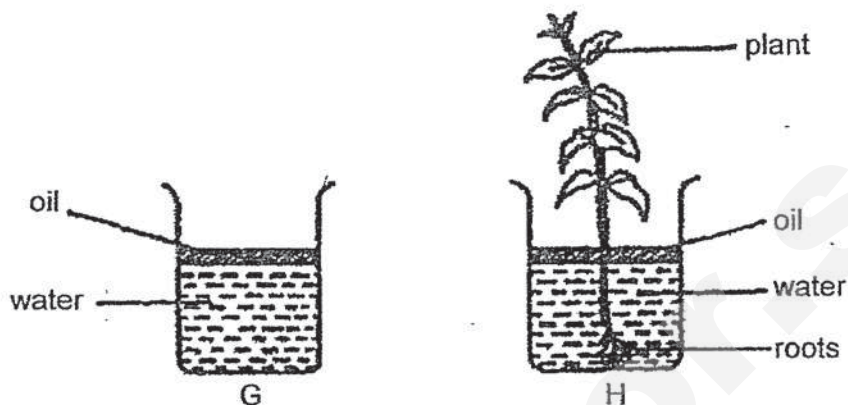
Score	1
-------	---

(b) Based on the flowchart, match A, B, C or D to the living things in the table below. [2]

Living things	(A, B, C or D)
<p>(i)</p>  <p>Bread mould</p>	
<p>(ii)</p>  <p>Banana plant</p>	
<p>(iii)</p>  <p>Fern</p>	
<p>(iv)</p>  <p>Bacteria</p>	

Score	2
-------	---

27. Raju poured equal amount of water into two identical beakers, G and H. He placed a plant in H as shown below. Oil prevents the water in the beakers from drying up.



He left the beakers by the window for one week.

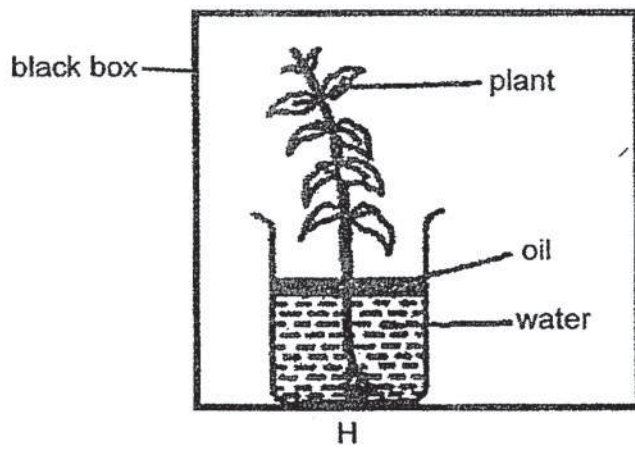
- (a) Write 'G' and 'H', in the boxes in the table below to match the beakers to the readings given. [1]

Beaker	Amount of water at the start (ml)	Amount of water after one week (ml)
<input type="checkbox"/>	500	410
<input type="checkbox"/>	500	500

- (b) Based on your answers in (a), what can we conclude about the plant? [1]

Score	2
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Raju then put H into a black box as shown below.

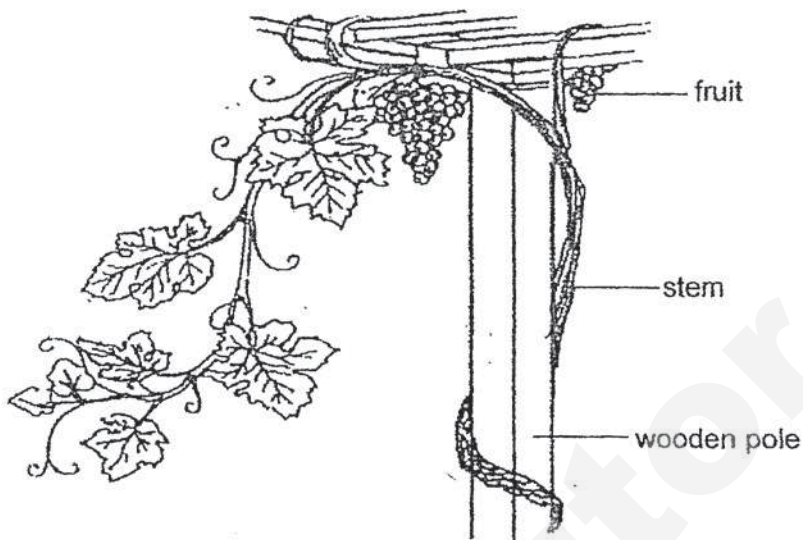


(c) After another week, the plant died. Explain why.

[1]

Score	1
-------	---

28. The diagram below shows a plant growing in a garden.



- (a) Based on the drawing above, which of the following statements are true about the plant. Put a tick (✓) in the box if the statement is correct. [1]

	Statement	Tick (✓)
(i)	It is a non-flowering plant.	
(ii)	It has a weak stem.	
(iii)	It can make food.	
(iv)	It does not need sunlight.	

Score	1
-------	---

Sam observed that a plant in a sunny area has both small leaves and large leaves.



small leaf in
a sunny area



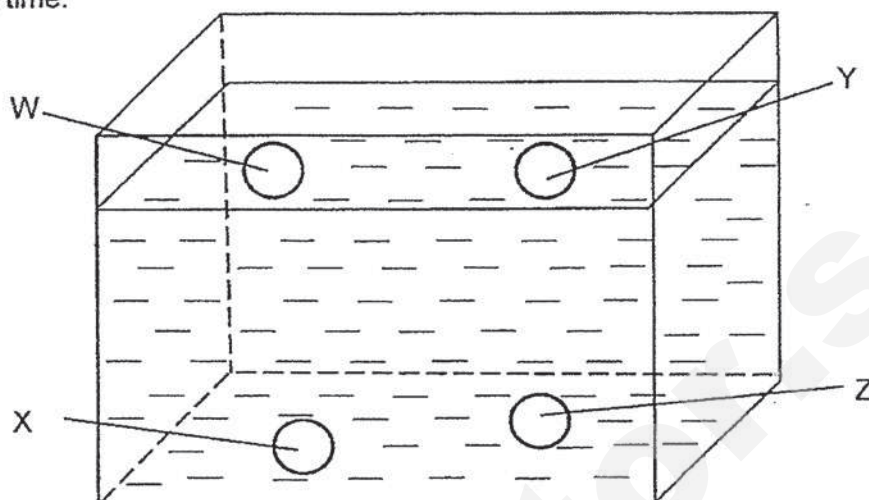
large leaf in a
sunny area

(b) Which leaf can make more food? Explain why

[1]

Score	1
-------	---

29. Sam dropped four balls of the same size but made of different materials, W, X, Y and Z, into a tank of water. The diagram below shows the positions of the balls after some time.



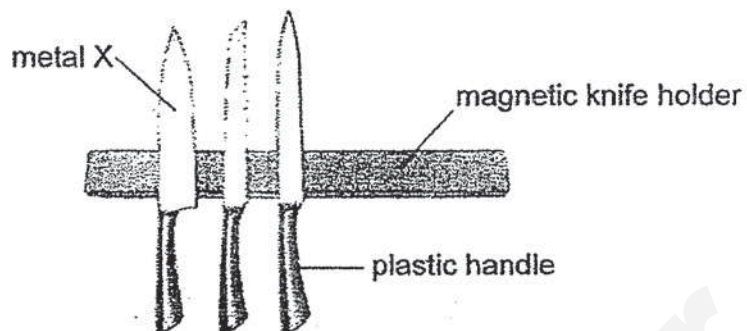
- (a) Based on the above, (i) complete the description of Group A and (ii) classify the four materials, W, X, Y and Z, into two groups in the table below. [2]

Materials	
<div style="text-align: center; border-bottom: 1px solid black; margin-bottom: 5px;"> Group A </div> <div style="text-align: center; border-bottom: 1px solid black; margin-bottom: 5px;"> Materials that </div> <div style="text-align: center;"> (i) _____ </div> <div style="text-align: center;"> (ii) _____ </div>	<div style="text-align: center; border-bottom: 1px solid black; margin-bottom: 5px;"> Group B </div> <div style="text-align: center; border-bottom: 1px solid black; margin-bottom: 5px;"> Materials that sink </div> <div style="text-align: center;"> _____ </div> <div style="text-align: center;"> _____ </div>

- (b) Which material, X or Y, should a float for swimming be made of? Explain your choice. [1]

Score	3
-------	---

30. A magnetic knife holder is a magnet used in the kitchen to hold knives in place as shown in the picture below.



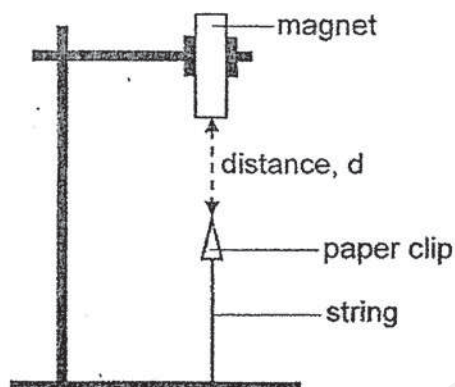
- (a) Give an example of what metal X can be. [1]

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

- (c) The magnetic knife holder cannot hold the knives by the handles. Explain why. [1]

Score	3
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31. Ken wanted to compare the strength of four magnets of similar size, E, F, G and H, using the setup below. He increased the distance between the magnet and the paper clip by moving the magnet up slowly until the paper clip fell.



The table below shows the results of his experiment.

Magnet	Distance, d , between the paper clip and the magnet when the paper clip fell (cm)
E	3
F	6
G	4
H	5

- (a) State a variable of the paper clip that was kept the same so that the experiment is a fair test. [1]

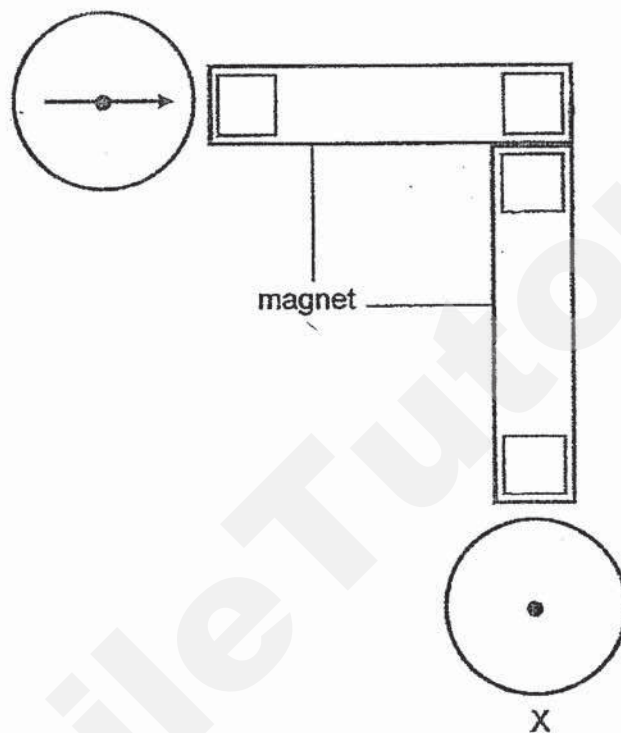
- (b) Based on the results of his experiment above, arrange the magnets according to their strength of attraction from the weakest to the strongest. [1]

weakest
→
 strongest

Score	2
-------	---

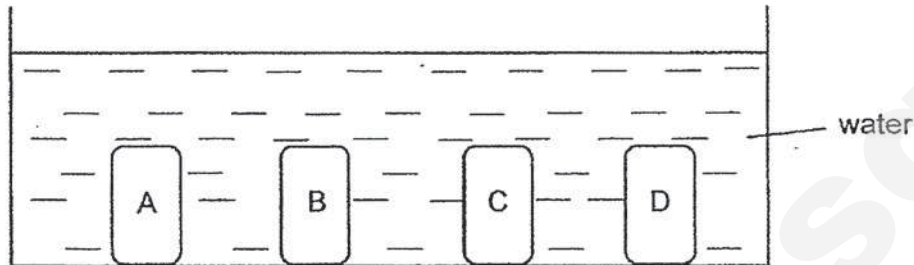
(c) Ken arranged 2 magnets and 2 compasses as shown below.

- (i) Label the poles of the magnets using 'N' and 'S' to indicate the north pole and the south pole of the magnets in the boxes provided. [1]
- (ii) Draw an arrow (\rightarrow) to show the correct position of the needle in the compass, X. [1]



Score	2
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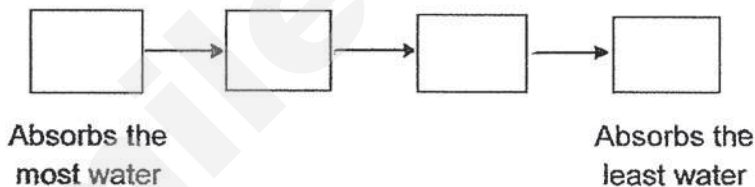
32. Michael weighed materials, A, B, C and D, of similar sizes. He then lowered them in a water tank for 2 minutes as shown in the diagram below.



After 2 minutes, he removed the materials from the water and weighed them again. He recorded the mass of the materials in the table below.

Material	A	B	C	D
Mass before placing it in water (g)	8	6	7	5
Mass after placing it in water for 2 minutes (g)	12	19	10	5

- (a) Arrange the materials, A, B, C and D, according to the amount of water they absorb. [1]



The drawing below shows a raincoat.



- (b) Based on the results above, which material, A, B, C or D, is most suitable to make a raincoat? Explain why. [1]

Rashid was asked to suggest a material to make part X of a meeting room in an office. Part X should allow the boss to see the activities of the workers in the meeting room from outside.

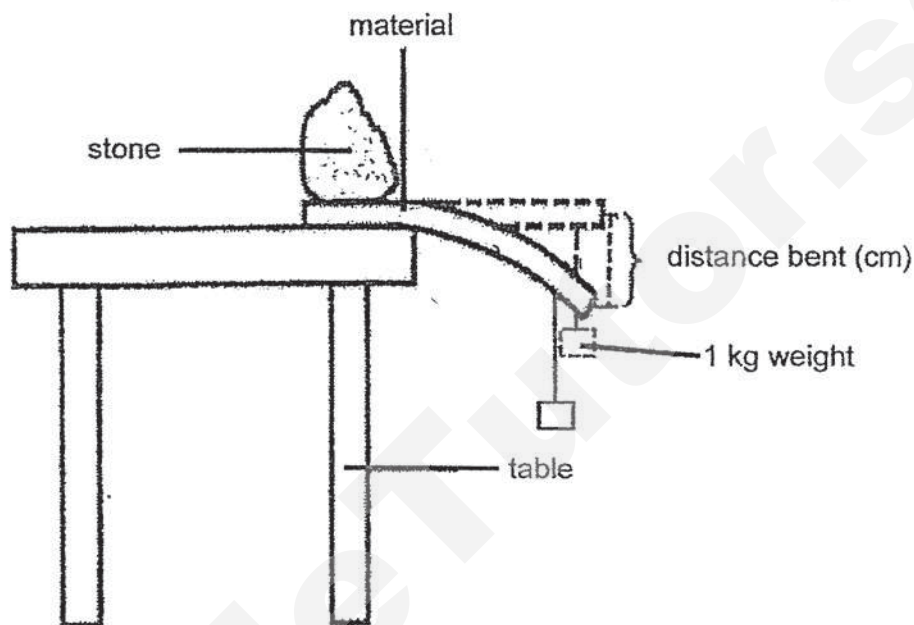
Meeting Room



- (c) Name a material that would be suitable to make part X. Give a reason for your answer. [1]

Score	1
-------	---

33. Samuel set up an experiment using four different materials, A, B, C and D. He placed material A on the side of a table and placed a heavy stone on it to hold it down firmly as shown below. Then, he hung a 1 kg weight on the material at one end to bend it. He recorded the distance material A bent in the table below. He repeated the experiment with the remaining materials, B, C and D.

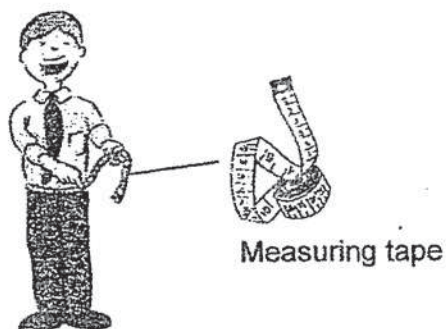


Material	Distance bent (cm)
A	20
B	0
C	8
D	10

(a) Which property of the materials was tested in the above experiment? [1]

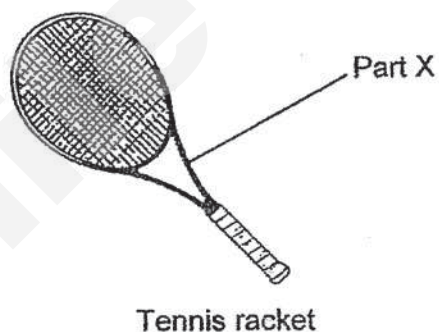
Score	1
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Jim wants to buy a new pair of pants. He uses a measuring tape to measure his waist as shown in the diagram below.



- (b) Which material, A, B, C or D, is the most suitable to make the measuring tape? Explain why. [1]

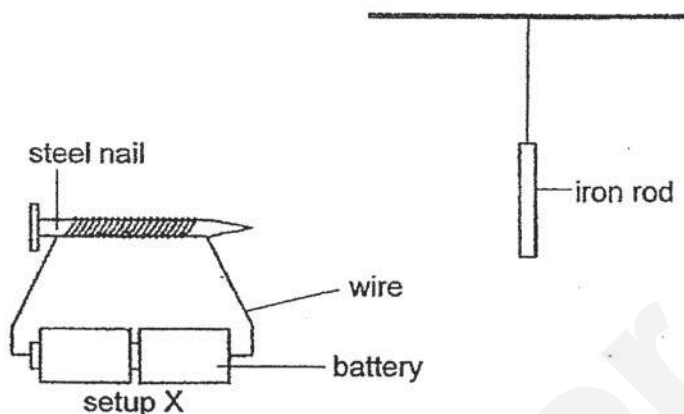
Mei Ling bought a new tennis racket as shown below.



- (c) Which material, A, B, C or D, is the most suitable to make Part X of the tennis racket? Explain why. [1]

Score	2
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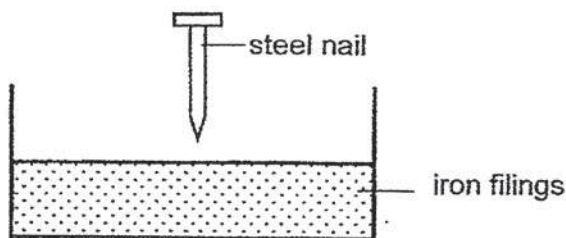
34. Suyin conducted an experiment using setup X and an iron rod below. She suspended the iron rod far away from the steel nail. She used new batteries for setup X.



- (a) What would Suyin observe happening to the iron rod when setup X was moved close to the iron rod? [1]

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

The steel nail was then removed from the coils of wires before it was lowered into a container of iron filings.



- (c) However, no iron filings was attracted to the steel nail. Explain why. [1]

End of Booklet B

Score	3
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ANSWER KEY

YEAR : 2019
 LEVEL : PRIMARY 3
 SCHOOL : TAO NAN SCHOOL
 SUBJECT : SCIENCE
 TERM : SEMESTRAL ASSESSMENT 2

BOOKLET A

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

BOOKLET B

Q23. (a) Living thing X needs air and reproduces.

(b) Living things need water to survive.

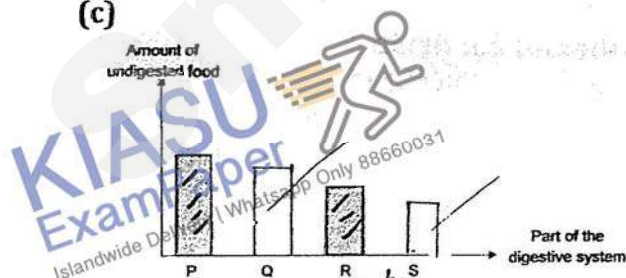
Q24. (a) circulatory system, muscular system

(b) The skull protects the brain.

Q25. (a) P, S

(b) The amount of digested food ~~decreases~~ *decreases*.

(c)



Q26. (a) Living thing D ~~make~~ *makes* food while living thing A does not.

(b)(i) B (ii) D (iii) C (iv) A

Q27. (a) H, G

(b) The roots of the plant in beaker H absorbs water.

(c) There was not enough sunlight for the plant to make food to stay alive.

Q28.

(a)(i)	<input type="checkbox"/>
(ii)	<input checked="" type="checkbox"/>
(iii)	<input checked="" type="checkbox"/>
(iv)	<input type="checkbox"/>

(b) The large leaf can make more food as it can trap more sunlight.

Q29(a)

Group A Materials that float	Group B Materials that sink
W	X
Y	Z

(b) Y. Y will float on water and will not sink.

Q30. (a) Iron

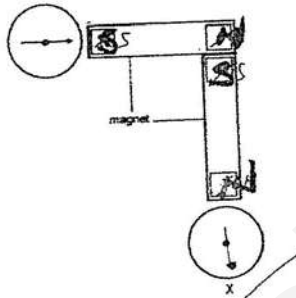
(b) Iron is a magnetic material so it can get attracted by the magnetic knife holder.

(c) Plastic is a non-magnetic material so it cannot be attracted by the magnetic knife holder.

Q31. (a) The length of paper clip.

(b) E, G, H, F

(c) (i)(ii)



Q32. (a) B, A, C, D

(b) Material D, it does not absorb any water, showing that it is waterproof and will not get wet thus being the most suitable material for a raincoat.

(c) Plastic, it is transparent so the boss can see through it.

Q33. (a) flexibility

(b) A, it is the most flexible.

(c) B, so part X will be stiff and not flexible.

Q34. (a) The iron rod will get attracted to the steel nail.

(b) The steel nail had become an electromagnet.

(c) The steel nail is no longer a magnet so it cannot attract any iron fillings.

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