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.

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)

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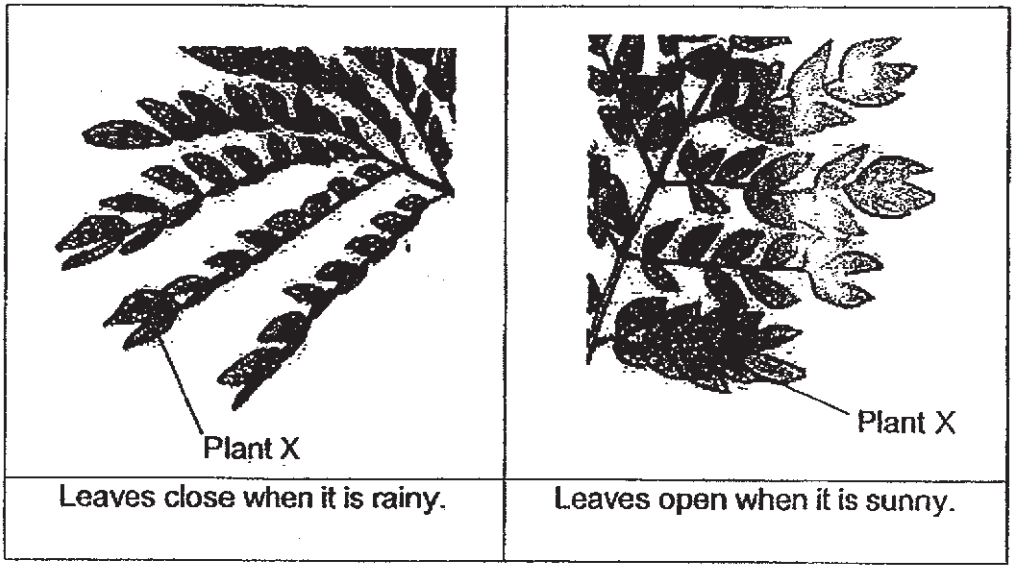
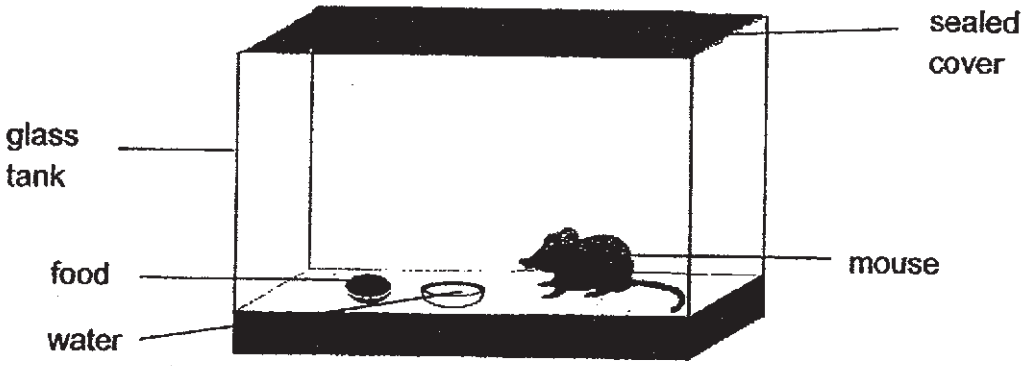
1 The diagram below shows the leaves of plant X.
It is observed that the leaves of plant X close when it rains, and open when it is sunny.



Based on the diagram above, which of the following characteristics of livings 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.

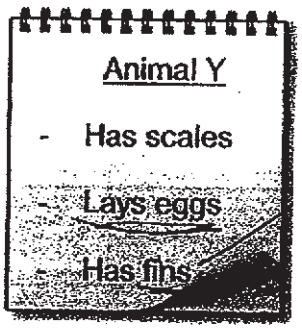


John's father told him that the mouse would not be able to survive for more than one day.

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.

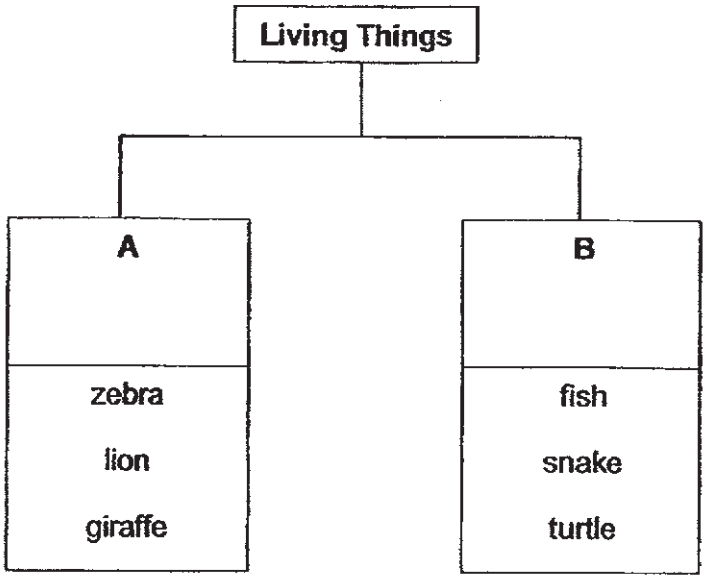
3 Nazri wrote down the characteristics of Animal Y in his notebook.



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.

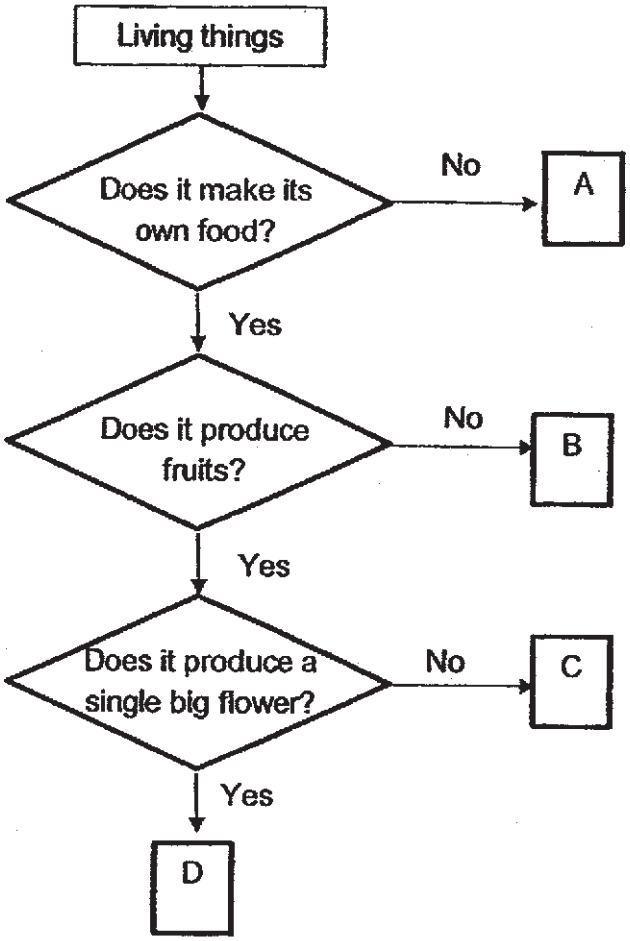
4 The diagram below shows a classification chart.



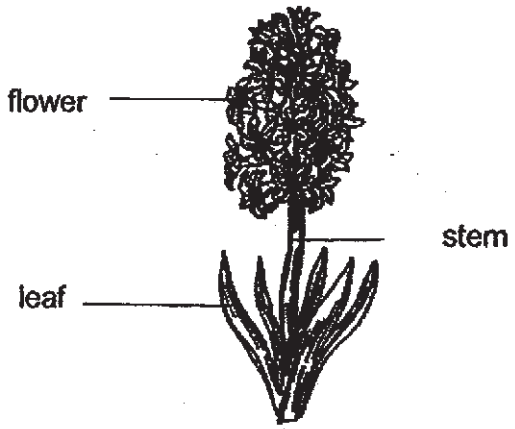
Which of the following is the most suitable headings for **A** and **B**?

	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.



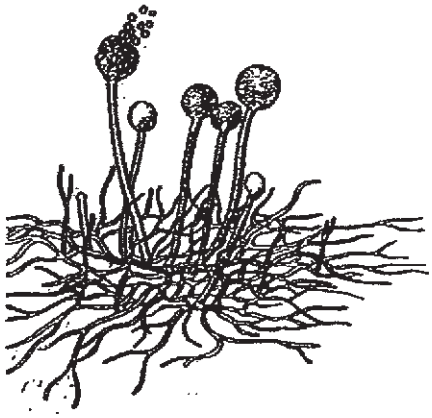
The diagram below shows a newly discovered plant.



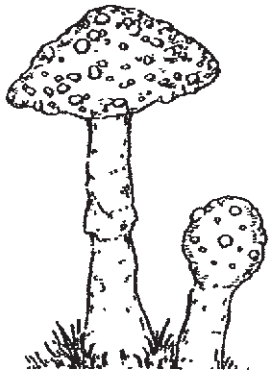
Which letter in the above flowchart best represents the plant above?

(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.

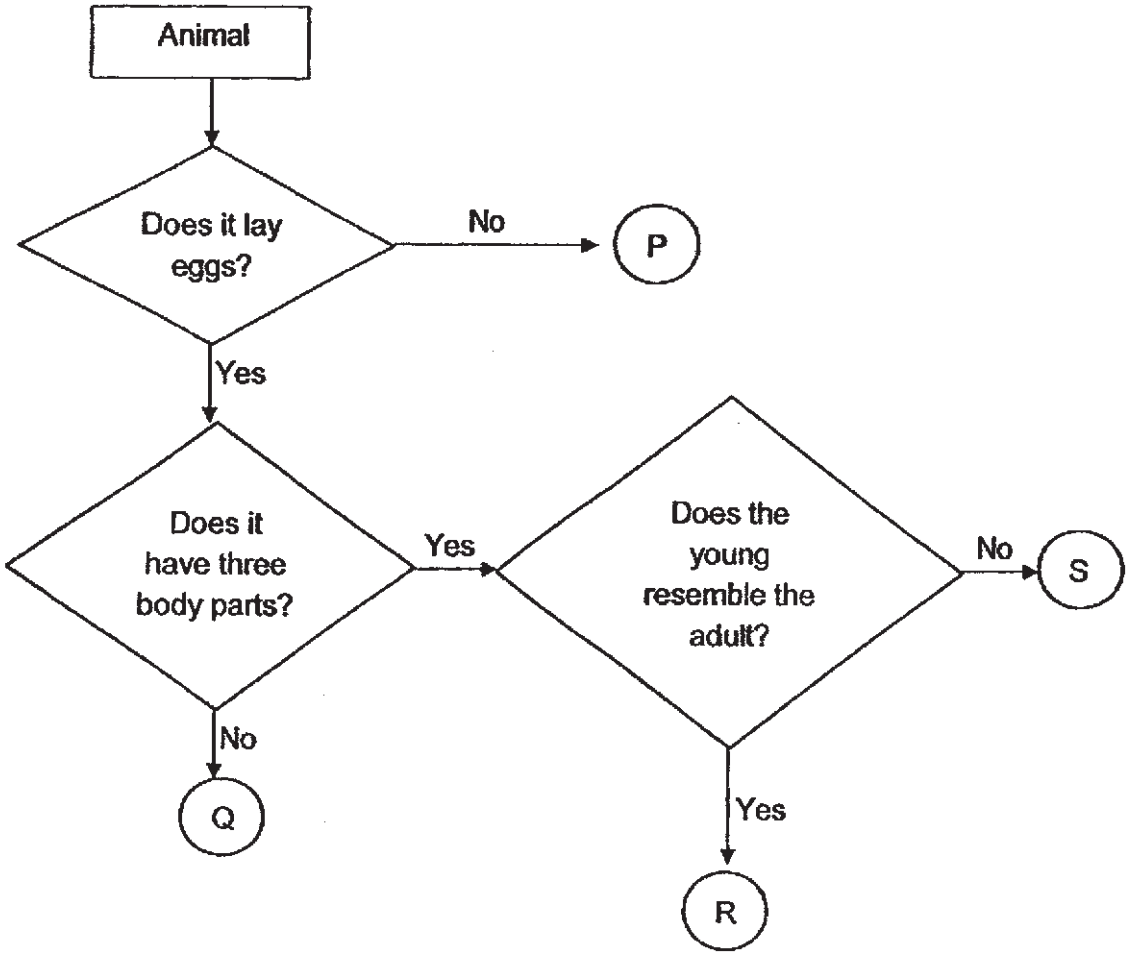
7 Four students read up about bacteria and yeast and came up with these statements.

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

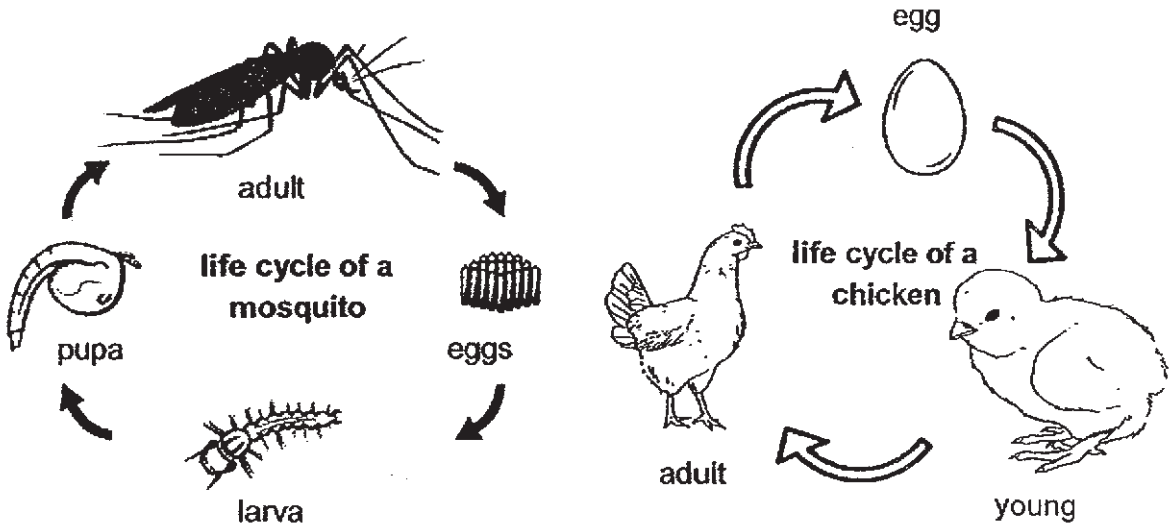
8 Study the flowchart below carefully.



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.

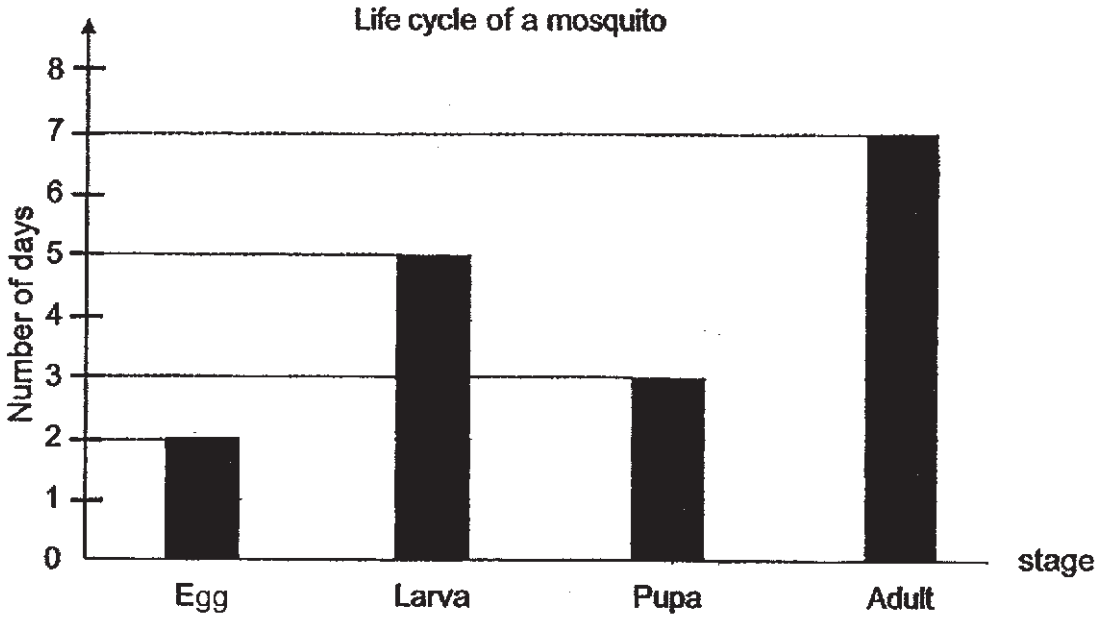
B: The young of the chicken resembles its adult but the young of a mosquito does not.

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?

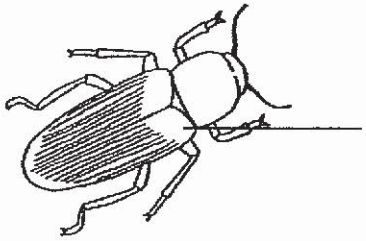
A: It takes two days for the eggs to hatch.

B: There are three stages in the life cycle of a mosquito.

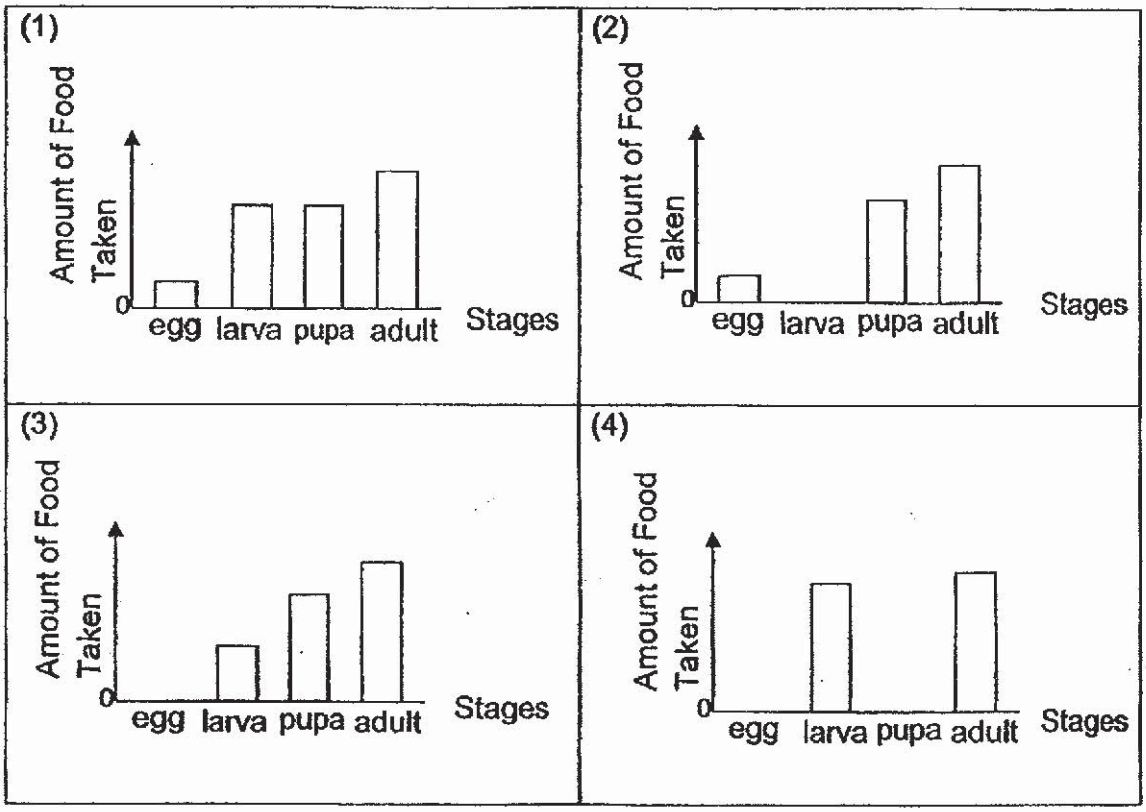
C: The mosquitoes can reproduce 8 days after they are hatched from the eggs.

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

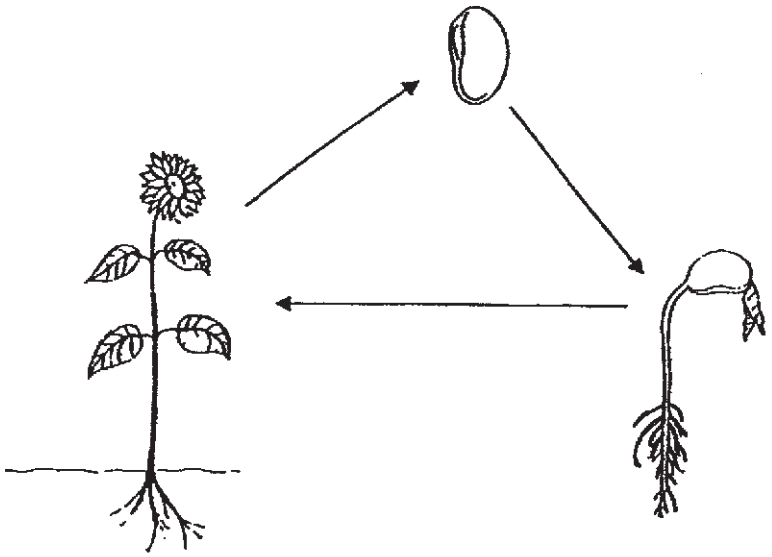
11 Some students observed the life cycle of a mealworm beetle. They recorded the amount of food taken by the beetle at each stage of growth in the life cycle and drew a bar graph to represent the amount of food the beetle ate.



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?



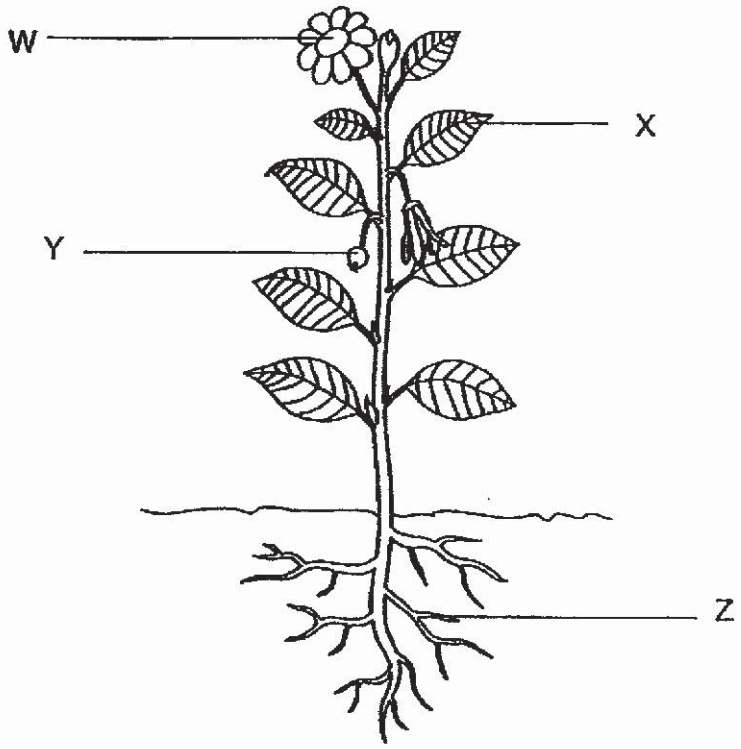
12 The diagram below shows the life cycle of a plant.



Based on the diagram above, the plant is at the adult stage when it has _____.

(1) roots
(2) flowers
(3) a stem
(4) leaves

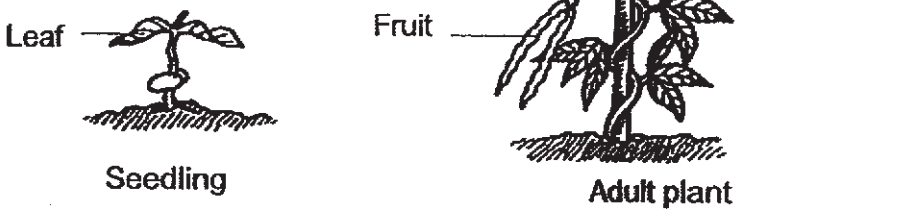
13 The diagram below shows parts of a plant.



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.

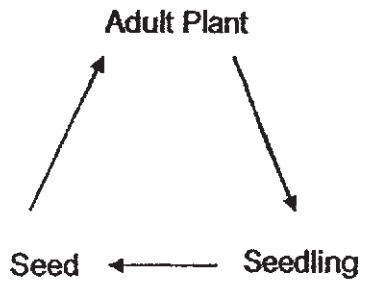
C: Both can make its own food.

D: Both can absorb water through the roots.

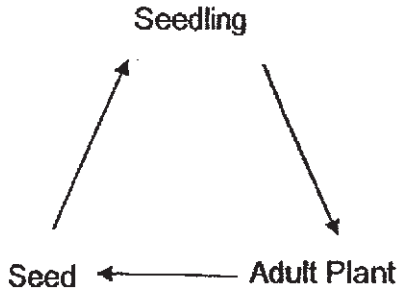
(1) B only
(2) A and B only
(3) B and C only
(4) A, C and D only

15 **Which of the following shows the life cycle of** a flowering plant?

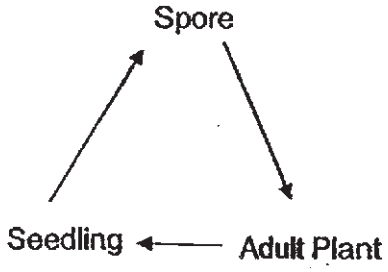
(1)



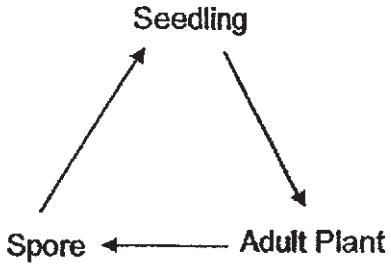
(2)



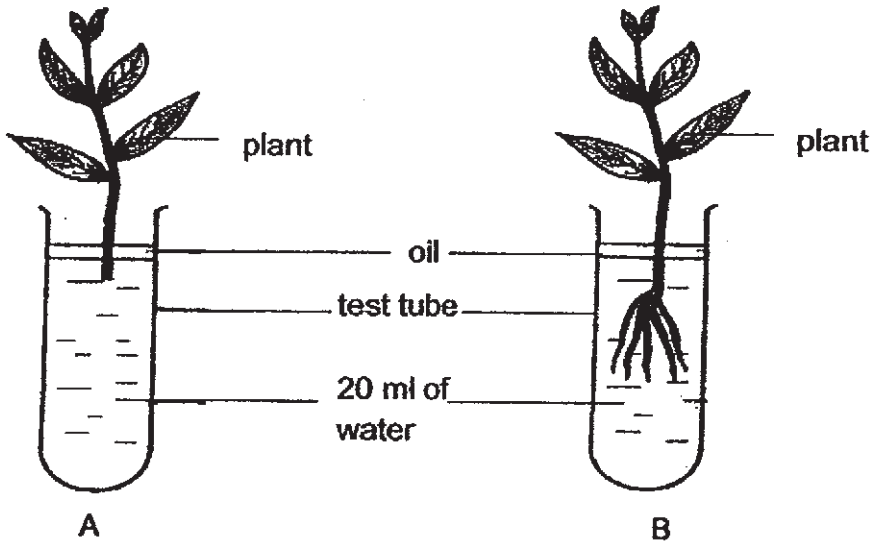
(3)



(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.

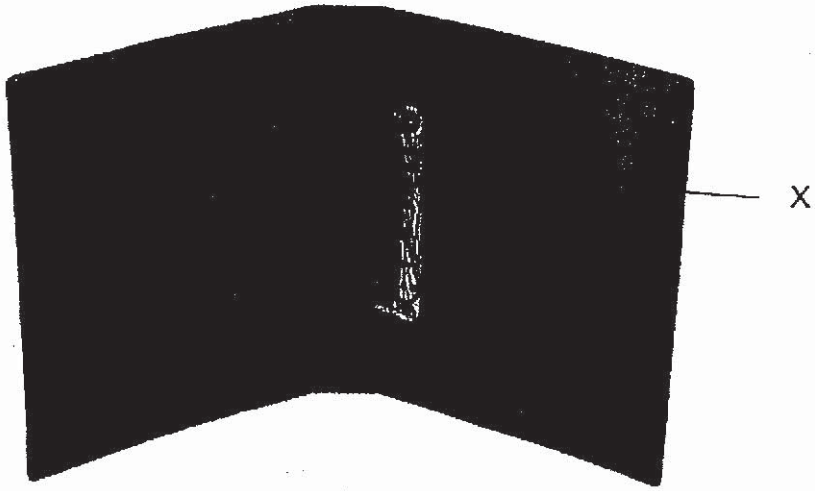
Marie: It transports water and minerals to all parts of the plant.

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.

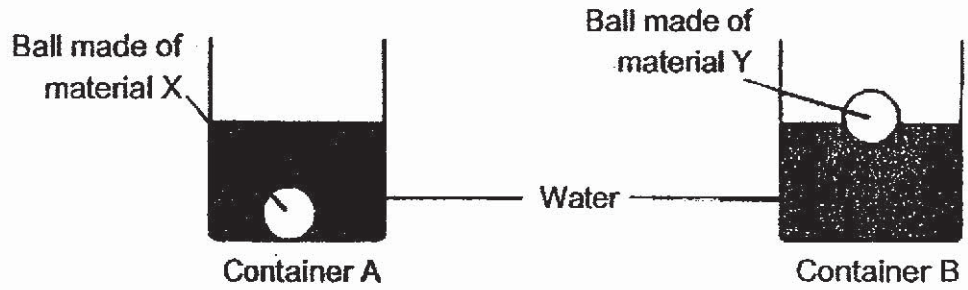
Material	**Mass (g) before placing in container**	**Mass (g) after placing in container**
W	250	400
X	250	330
Y	250	320
Z	250	280

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.

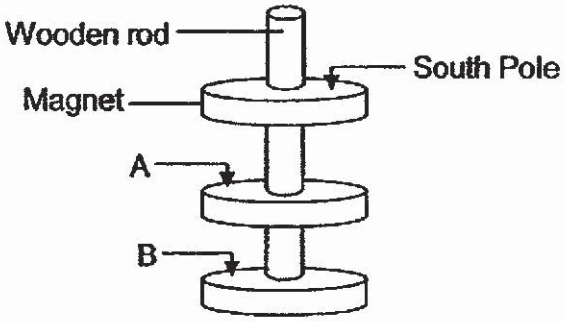
(1) A only
(2) B only
(3) C only
(4) A and C only

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.

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

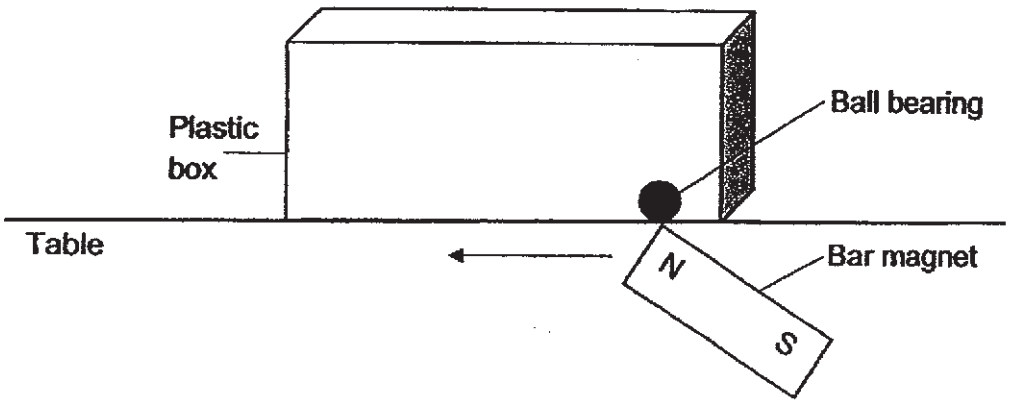
23 The diagram below shows the positions of 3 ring magnets when they are put through a wooden rod.



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

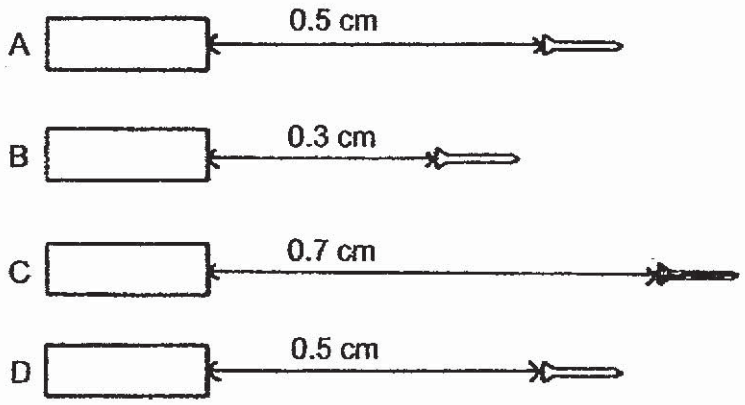
(2) B and D only

(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?

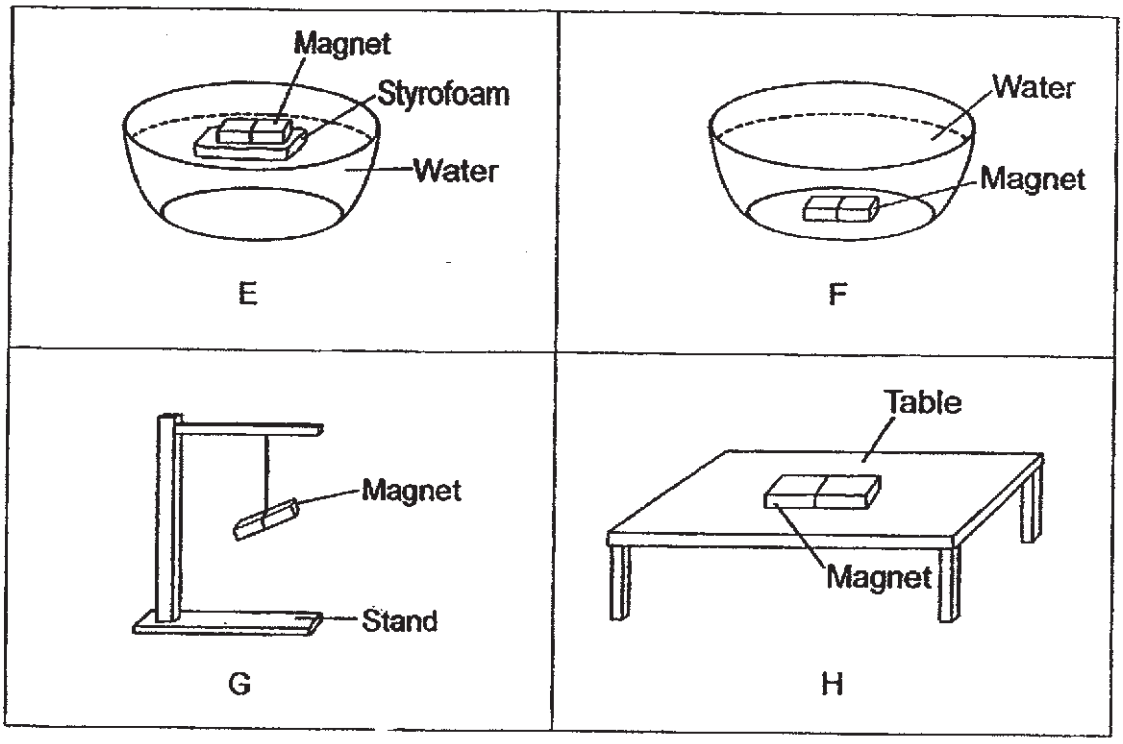
(1) Magnet B is the weakest magnet.

(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.

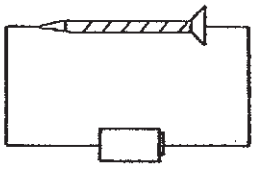
(2) H and J will spin continuously.

(3) H and J will move nearer to each other.

(4) H and J will move away from each other.

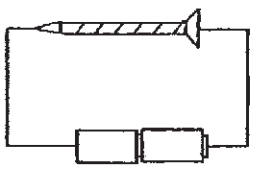
28 Ric wanted to make a magnet using electrical method. Which of the following set-up should he use to make the strongest magnet?

(1)



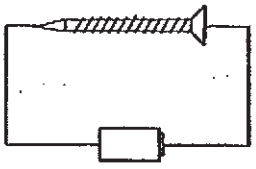
1 battery, 6 coils

(2)



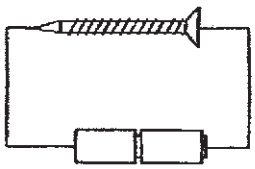
2 batteries, 6 coils

(3)



1 battery, 15 coils

(4)



2 batteries, 15 coils

End of Booklet A

(Go on to Booklet B)

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	

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)

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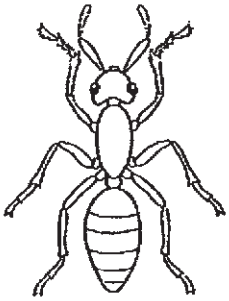
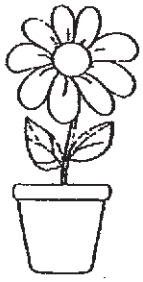
29 Classify the following items in the table below. [2]
(a)



Ant

Baby



Flower

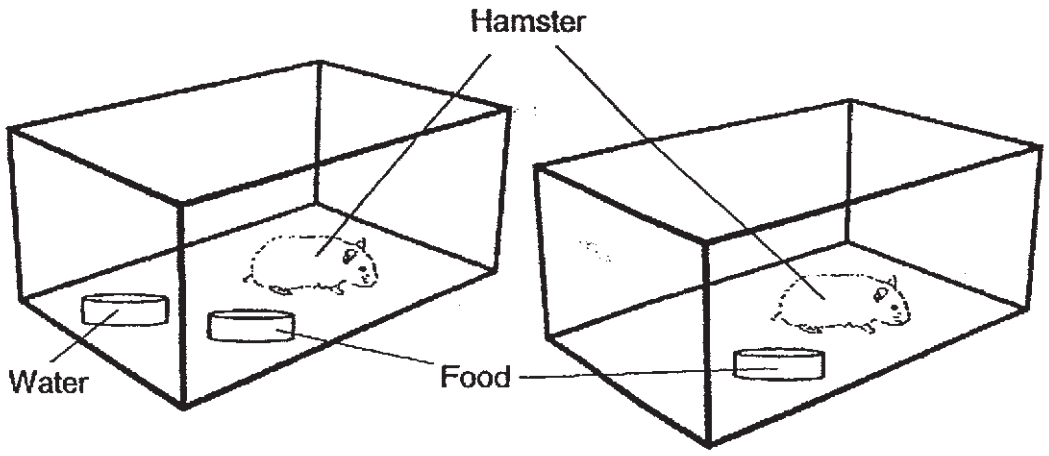
Toy Dog

Non-living things	Living Things	
	Animals	Plants

(continue on next page)

SCORE	/2

(b) Josh placed similar hamsters in two separate plastic containers without covers.

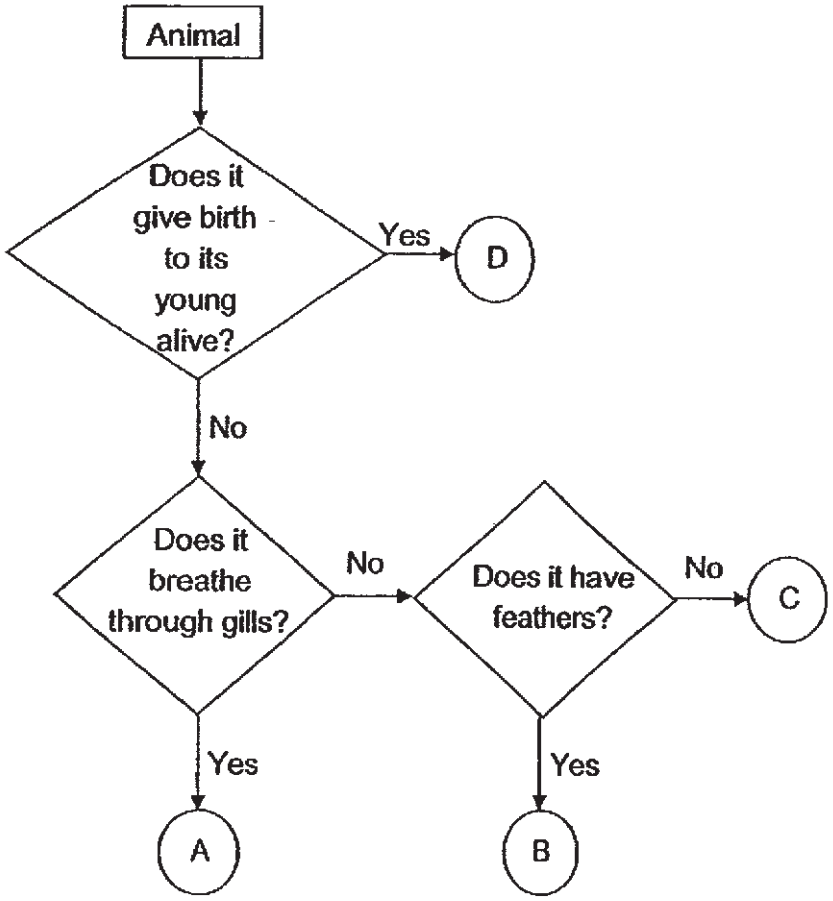


What was the aim of the experiment? Put a tick (√) in the table below. [1]

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.	

SCORE	/ 1

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]

_____

_____

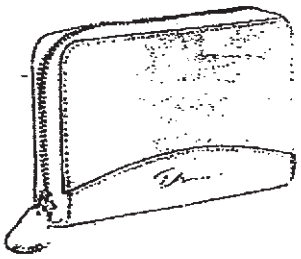
(c) Based on the flowchart above, which **animal group** does animal D belong to? [1]

_____

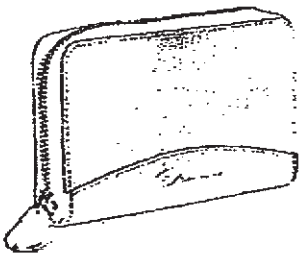
_____

SCORE 3

31 Miss Tang owns two similar leather wallets, C and D. Wallet D **was soaked** in the rain.

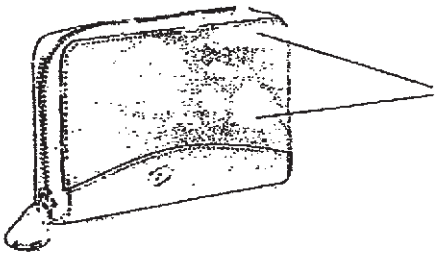


Wallet C (Dry)



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? Explain why. [1]

_____

_____

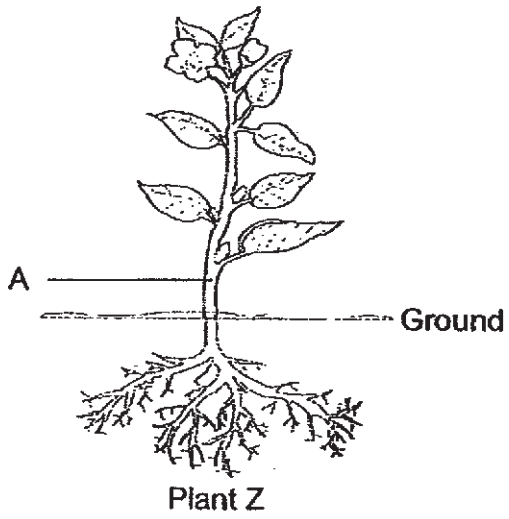
(c) State two conditions needed for the mould to grow. [2]

_____

_____

SCORE	/ 4

32 Li Xing observed plant Z in the garden.



Plant Z

(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

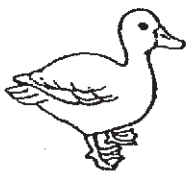
Which group, K or L, can Plant Z be classified under? Give a reason for your answer. [1]

_____

_____

SCORE	/ 4

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]

_____

_____

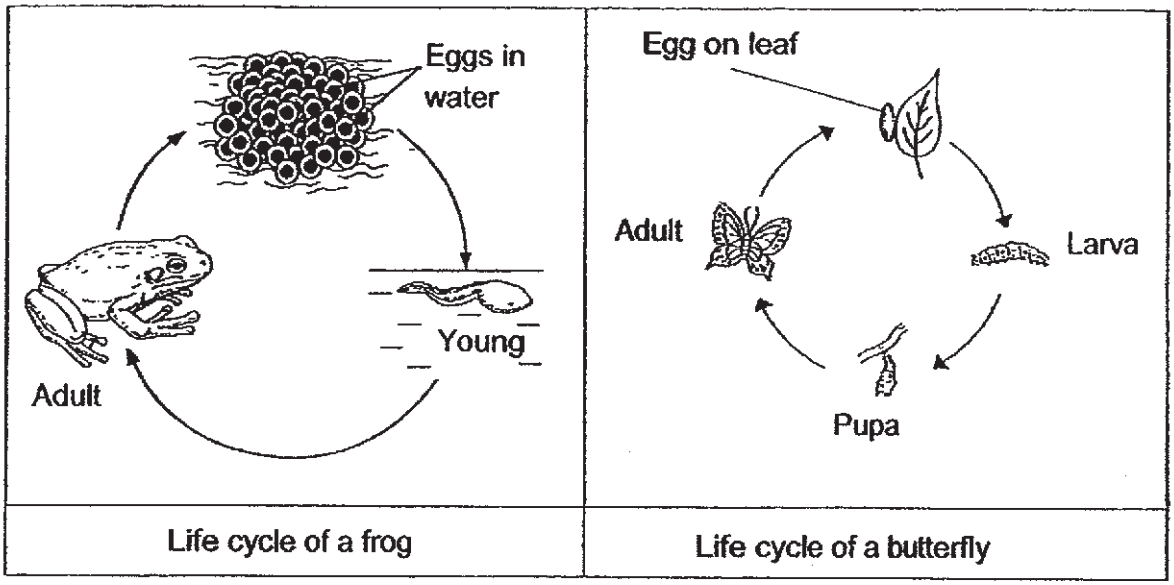
(d) State one function of the body covering of animals in Group S. [1]

_____

_____

SCORE	5

34 The diagrams below show the life cycles of a frog and a butterfly.



Life cycle of a frog | Life cycle of 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: _____

_____

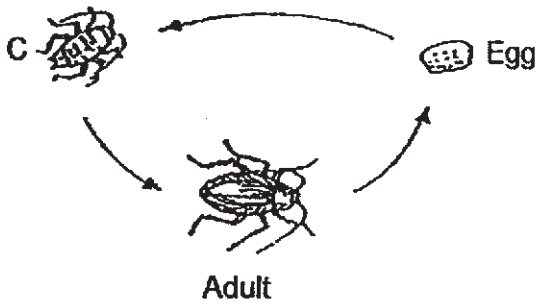
(c) How is the life cycle of a chicken **similar** to the life cycle of a butterfly? [1]

_____

_____

SCORE	/ 4

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]

_____

SCORE 2

36 Crystal tested the properties of two materials, F and G, and recorded the results in the table as shown below.

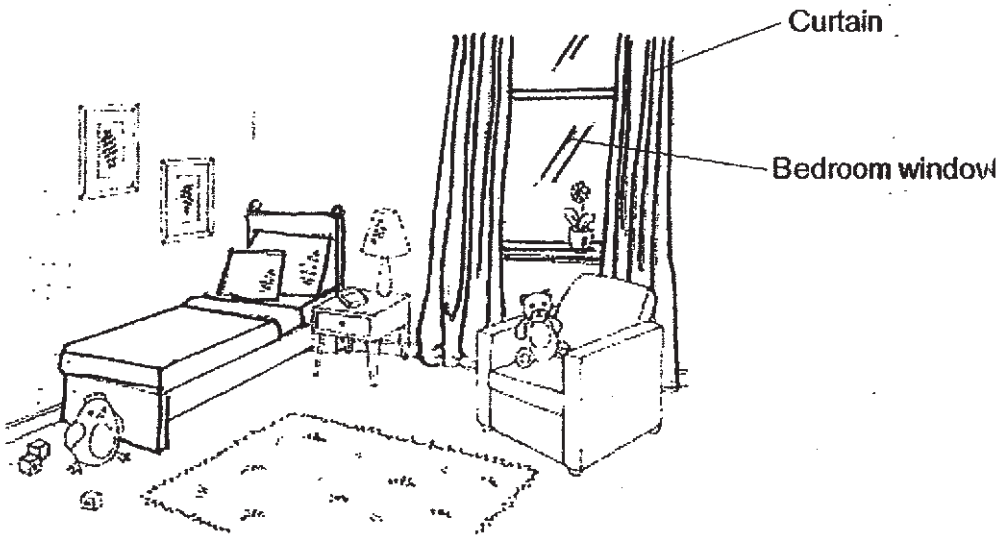
Properties	F	G
It is flexible	Yes	Yes
It allows light to pass through	No	Yes

(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]

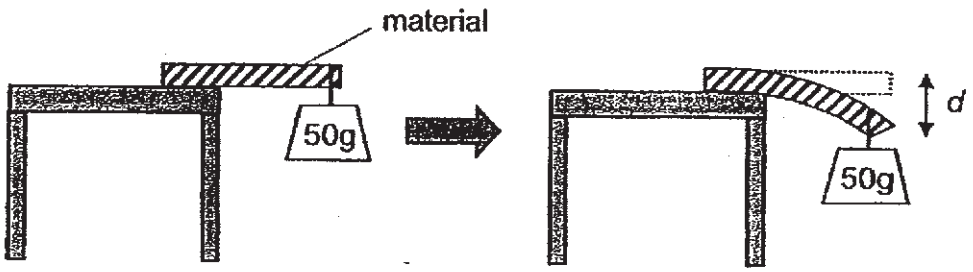
_____

_____

_____

SCORE	/ 3

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.

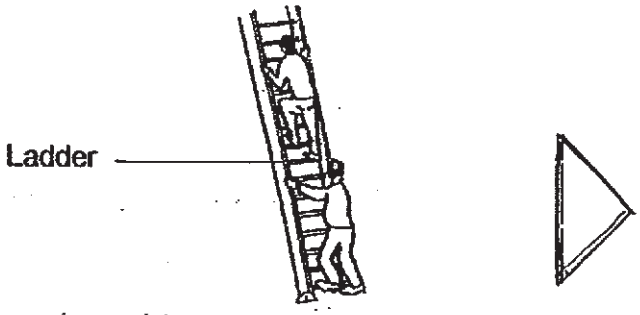


Material	Distance '*d*'
P	5
Q	13
R	0

(a) State the property of the materials that George is trying to test. [1]

_____

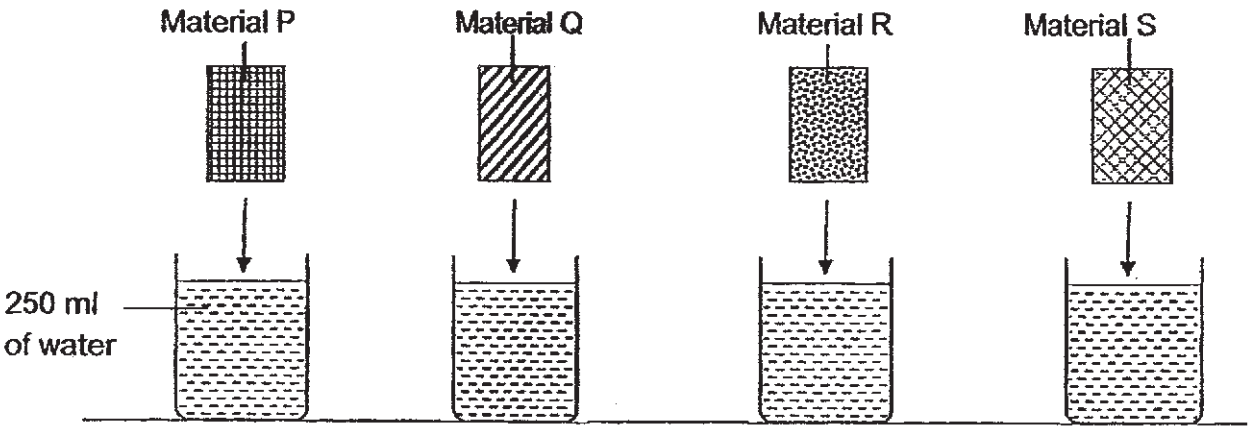
(b) Which material, P, Q or R is most suitable for making a ladder for its use? [1]



Material : _____

SCORE	/ 2

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]

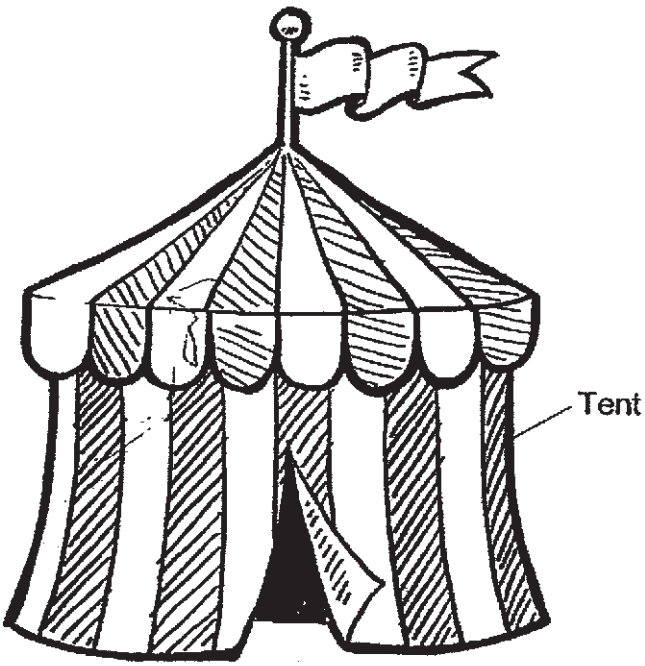
Write down P, Q, R and S in the boxes below.

Least absorbent → **Most absorbent**

(continue on next page)

SCORE	/ 2

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]

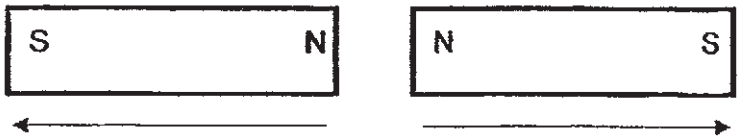
_____

_____

SCORE	/ 2

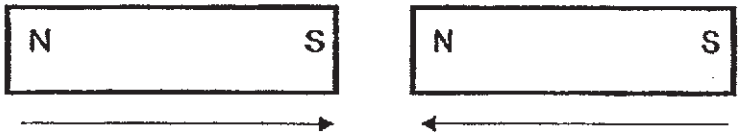
39 The diagrams below show the magnets interacting with each other.
For each diagram, fill in the blanks to state how the magnets are interacting with each other. [2]

(a)



The magnets _____ each other.

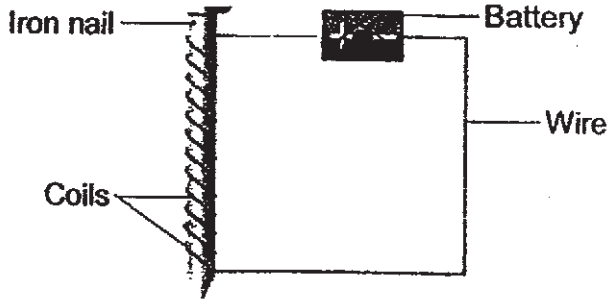
(b)



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: _____

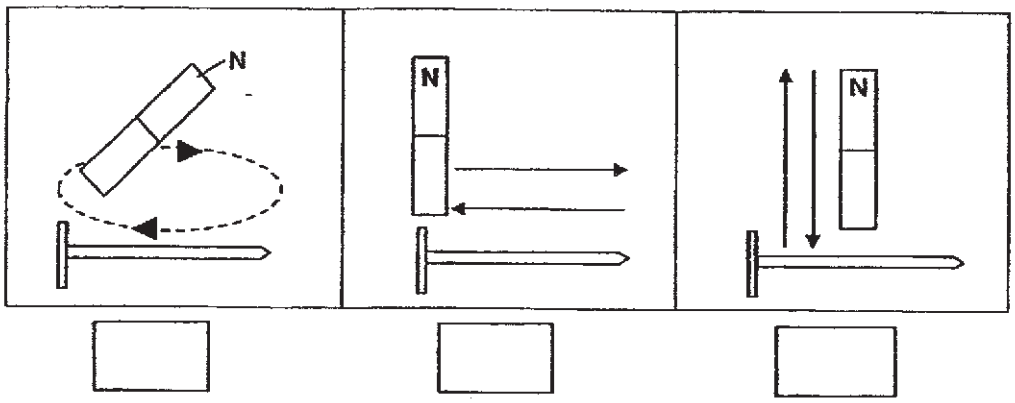
_____

Second way: _____

_____

SCORE ____/4

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

SCORE	/ 4

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)

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.

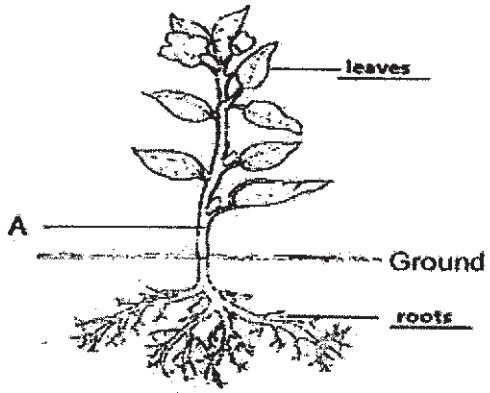
b)A breathes through gills while C does not.

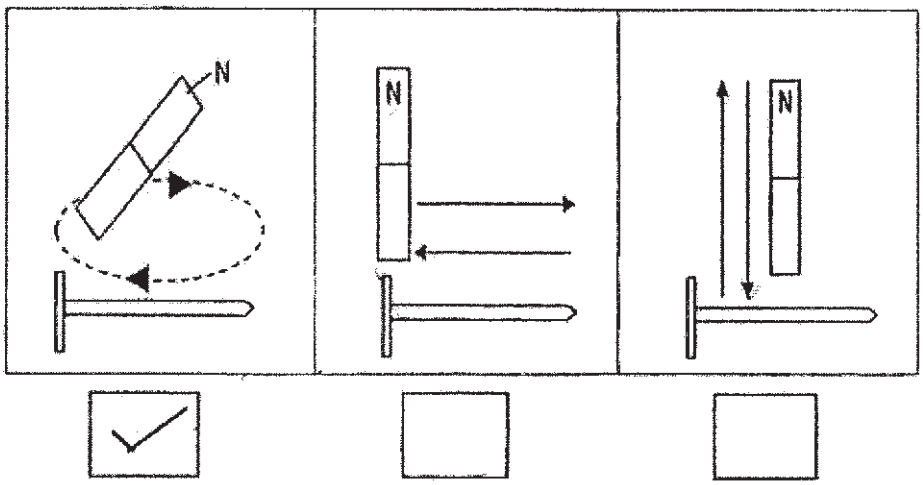
c)Mammal

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)	a)  Plant Z b)Helps to transport food to the plant. c)Group L. It has leaves to make its own food.
Q33)	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.
Q34)	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.
Q35)	a)Nymph b)Moulting
Q36)	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.
Q37)	a)Flexibility. b)Material R
Q38)	a) Least absorbent ⟶ Most absorbent R | Q | P | S b)R. It is waterproof , so if it rains, the people inside will not get wet.

Q39)	a)The magnets repelled each other. b)The magnets attracted each order.
Q40)	a)As the number of batteries increase, the number of paper clips attracted will increase. b)No nails will be attracted. c)First way : Add more batteries to the circuit. Second way : Add more coils to the nail.
Q41)	a)  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. c)Stroke the nail a few more times.