MAHA BODHI SCHOOL

2019 SEMESTRAL ASSESSMENT 1

PRIMARY FOUR SCIENCE

(BOOKLET A)

Name : _____( )

Class : Primary 4 _____

Date : 16 May 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.

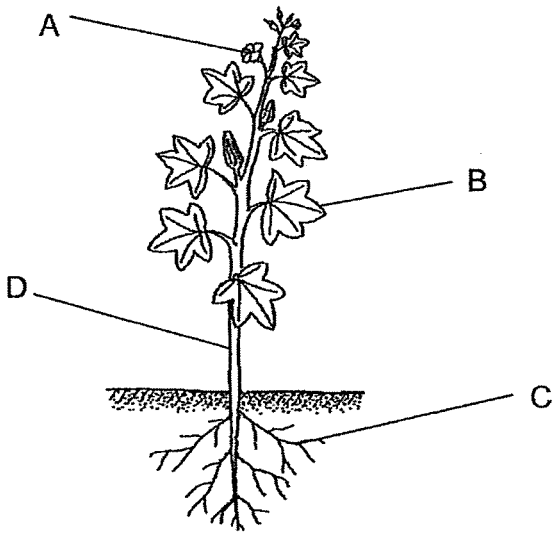
This booklet consists of **15** printed pages.

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BOOKLET 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 your answer on the Optical Answer Sheet.**

1. The picture below shows a plant.

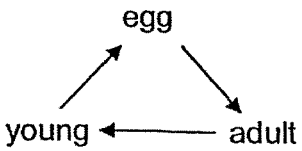


Which part A, B, C or D absorbs water and mineral salts?

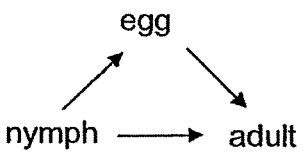
(1) A
(2) B
(3) C
(4) D

2. Which of the following correctly shows the life cycle of a chicken?

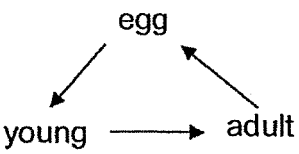
(1)



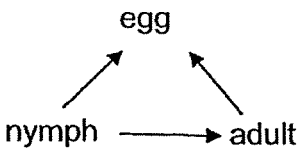
(2)



(3)



(4)



3. Which of the following statements about the life cycle of a cockroach is correct?

(1) The young resembles the adult.
(2) The adult eats a lot and moults.
(3) The life cycle has a pupa stage.
(4) The cockroach has a four-stage life cycle.

4. Object Q has no definite volume.

Which of the following is true about object Q?

(1) It is a solid.
(2) It is definitely a gas.
(3) It is definitely a liquid.
(4) It can be a gas or a liquid.

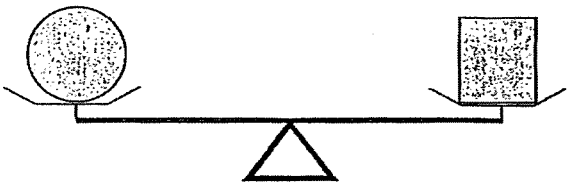
5. Gloria observed the properties of A, B and C.

Property	A	B	C
Does it occupy space?	Yes	Yes	No
Can it be compressed?	No	No	No
Does it have a fixed shape?	No	Yes	No

What can A, B and C possibly be?

	A	B	C
(1)	air	stone	shadow
(2)	oil	shadow	stone
(3)	milk	marble	shadow
(4)	ice	water	fire

6. Two objects are placed on each side of the balance as shown below. The balance is not tilted.



This shows that the two objects _____.

(1) are of the same size
(2) have the same mass
(3) have the same volume
(4) are made of same materials

7. Thomas observed an animal for a few days. His observations are shown below.

- It has a tail.
- It can swim.
- It has four legs.
- It has dry scaly skin.

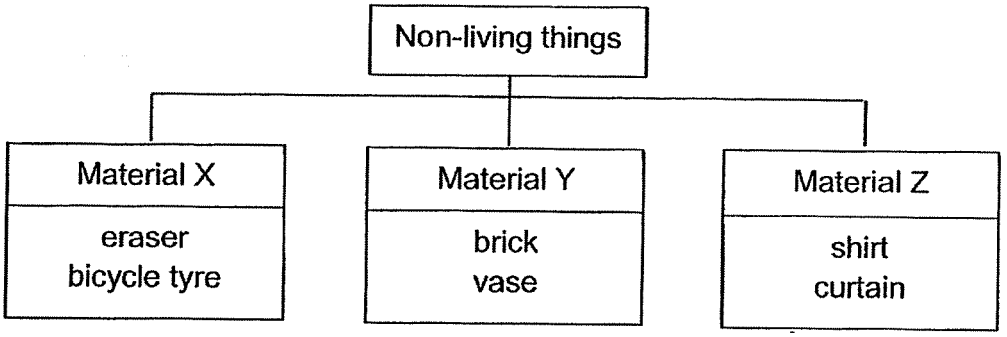
Which group of living things does this animal belong to?

(1) birds
(2) reptiles
(3) mammals
(4) amphibians

8. Which of the following statements about bacteria is true?

(1) They are non-living things.
(2) They can make their own food.
(3) They cannot respond to changes.
(4) They can only be seen under a microscope.

9. Study the classification chart below.



What can Materials X, Y and Z be?

	Material X	Material Y	Material Z
(1)	rubber	ceramics	metal
(2)	metal	rubber	plastic
(3)	plastic	fabric	rubber
(4)	rubber	ceramics	fabric

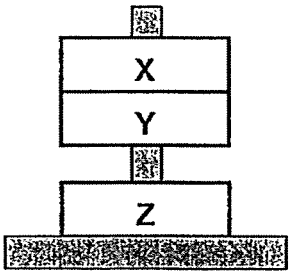
10. Which of the following human systems is correctly matched to its function?

	System	Function
(1)	Skeletal	protects organs in the body
(2)	Respiratory	helps body to move
(3)	Circulatory	removes air from the body
(4)	Muscular	gives the body shape

11. Which of the following objects will be attracted by a magnet?

(1) steel clip
(2) plastic fork
(3) aluminium can
(4) wooden button

12. The set-up below consists of three rings, X, Y and Z. Two of them are ring magnets and one is a plastic ring. Ring Y "floats" above ring Z as shown in the diagram below.

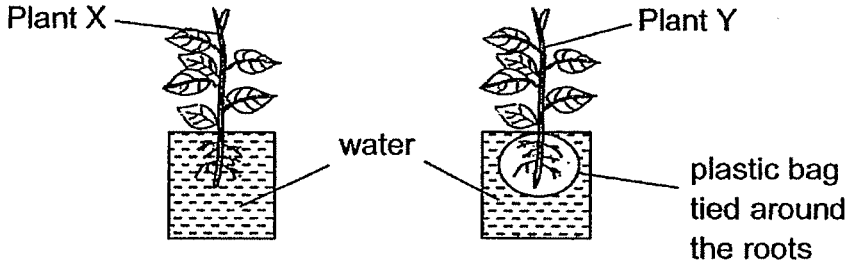


Based on the information above, which of the following statement(s) is/are correct?

A. Rings X and Y are magnets.
B. Like poles of rings Y and Z are facing each other.
C. Unlike poles of rings X and Y are facing each other.

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

13. Jonas set up an experiment as shown below. He placed similar plants X and Y in the garden. He made sure there was always enough water in both set-ups

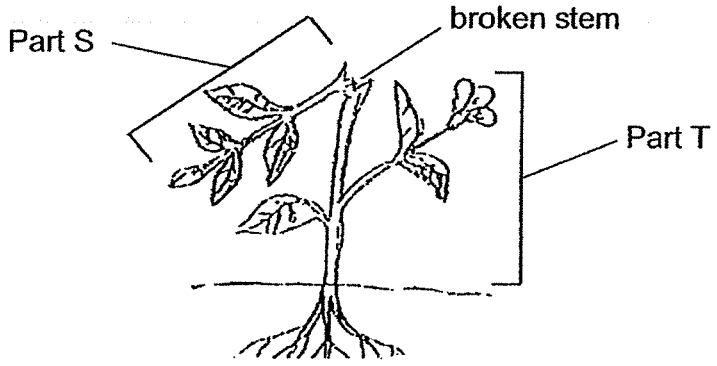


Which of the following would he observe after 2 weeks?

A. Plant Y dries up and dies.
B. Plant X will have new leaves.
C. Plant X will grow taller than plant Y.
D. Plant Y will grow taller than plant X.

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

14. The stem of a healthy plant was broken into two parts as shown in the diagram below.

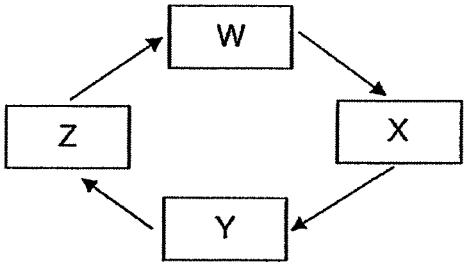


After two weeks, Part S dried up while Part T was healthy and grew new leaves. Which of the following could be the reason(s) for this observation?

A. Part S did not have enough leaves.
B. Part S could not get enough water.
C. Leaves in Part T could still make food.

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

15. The diagram below shows the life cycle of an animal. W, X, Y and Z represent the stages of the life cycle.

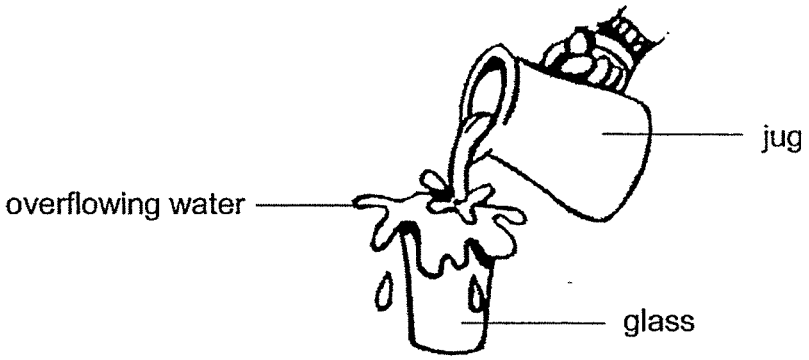


The animal is able to reproduce in stage X.

In which stage does the animal eat and grow the most?

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

16. Jenny poured water from a jug into a glass till it overflowed.



What can she conclude from her observation?

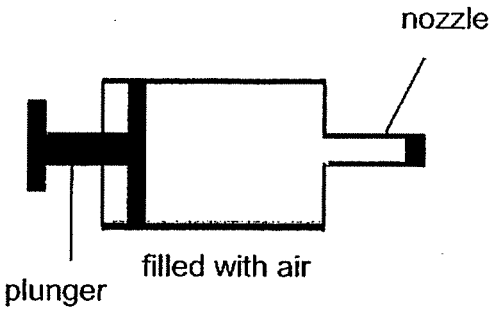
A. Water can be compressed.
B. Water is a matter and occupies space.
C. Glass has a definite volume but not water.
D. Water in the glass has a definite shape but not the water in the jug.

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

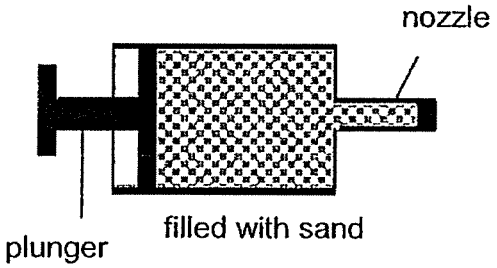
17. Four identical syringes were filled with the same volume of the following substances as shown below. The nozzle of each syringe was completely sealed.

Which one of the plungers could be pushed the most into the syringe?

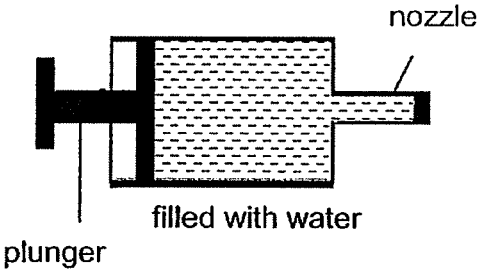
(1)



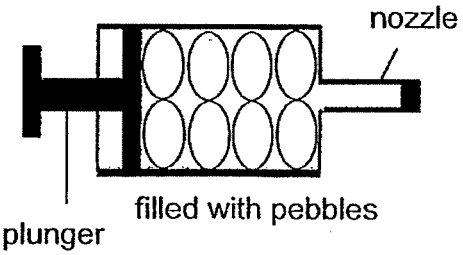
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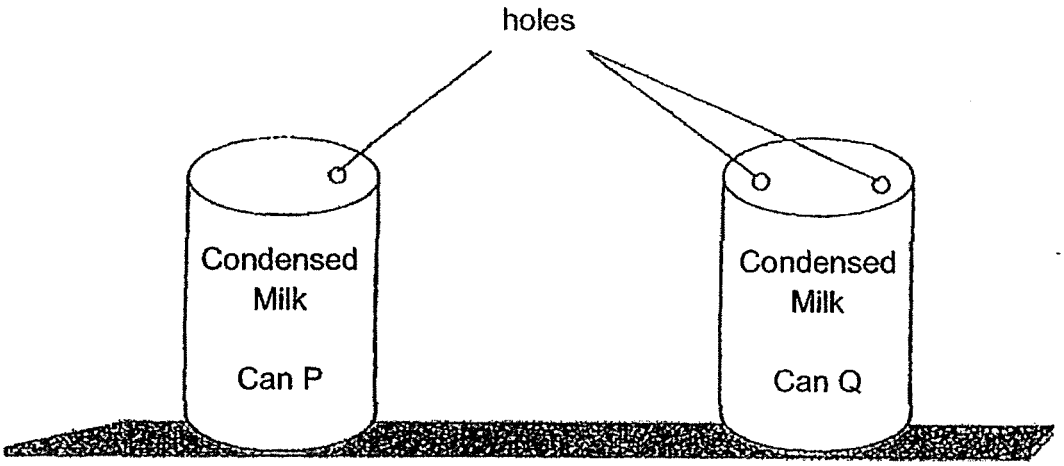
(3)



(4)



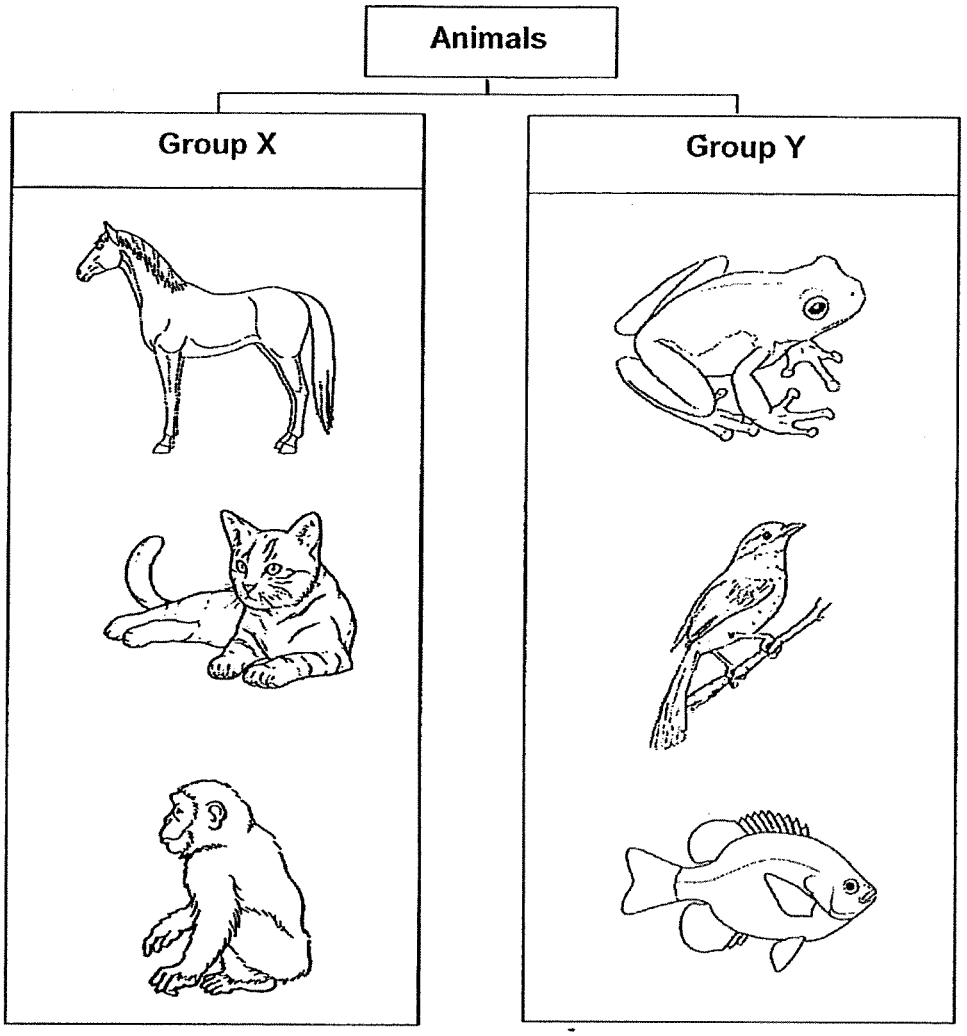
18. Small holes were made in the two cans of condensed milk P and Q as shown below.



Which of the following statements is correct?

(1) Air inside Can P pushes the milk out.
(2) There are two holes in Can Q for the milk to flow out.
(3) Air enters through the hole in Can P to push the milk out.
(4) Milk in Can Q can flow out through one hole and air can enter from the other hole to take up the space.

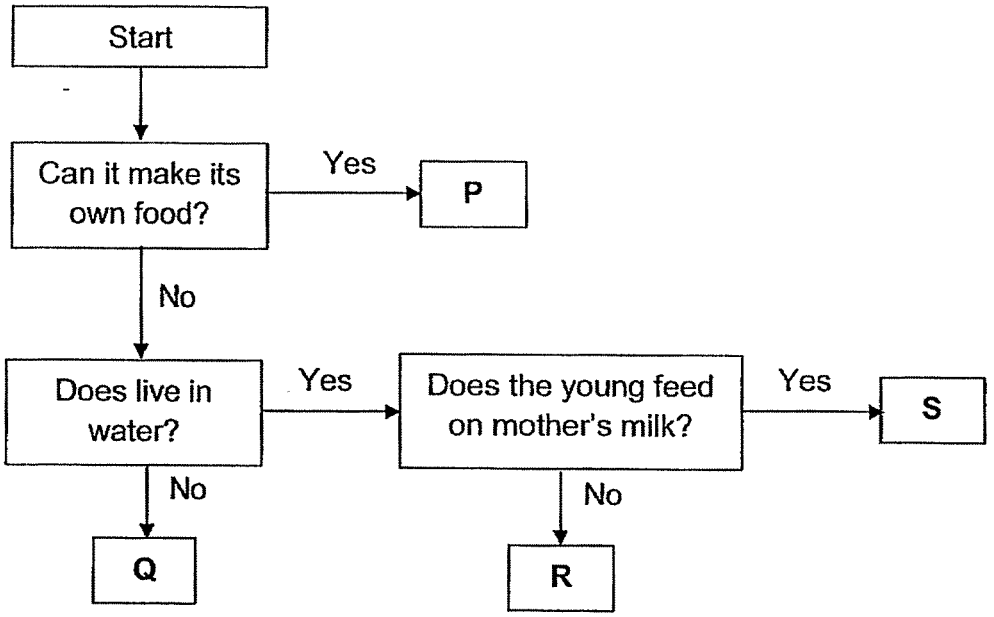
19. Study the classification diagram below.



Which of the following correctly represents headers X and Y?

	Group X	Group Y
(1)	have hair	have feathers
(2)	give birth	lay eggs
(3)	live on land	live in water
(4)	cannot swim	can swim

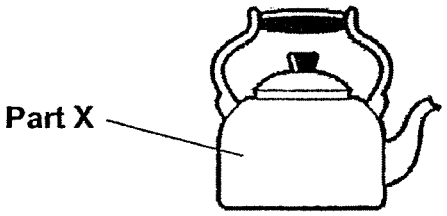
20. Study the flowchart below.



Which living things do P, Q, R and S represent?

	P	Q	R	S
(1)	plant	bird	fish	mammal
(2)	fungi	insect	reptile	mammal
(3)	fungi	mammal	bird	fish
(4)	plant	bird	mammal	fish

21. The diagram below shows a kettle.



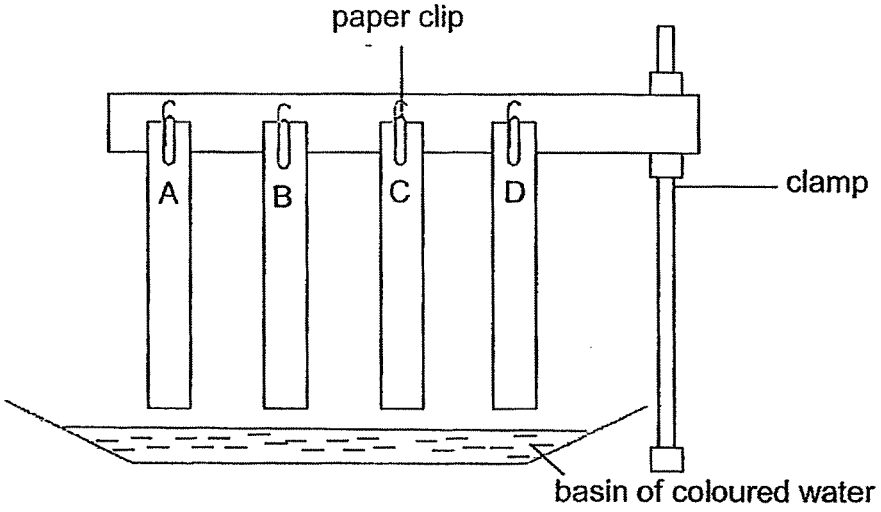
Study the properties of the four materials E, F, G and H shown below.

Material	Property of material		
	Can bend easily?	Can absorb water?	Can break easily?
E	Yes	Yes	Yes
F	No	Yes	No
G	Yes	No	Yes
H	No	No	No

Which material is most suitable for making part X of the kettle?

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

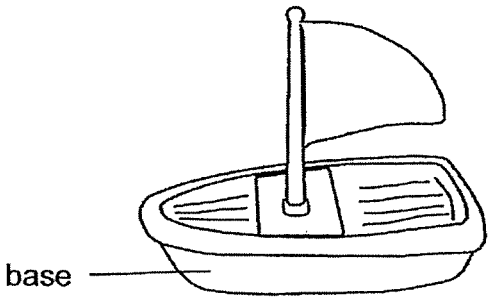
22. Four different materials, A, B, C and D, of equal length and thickness were used in an experiment set-up as shown below. The materials were then lowered into a basin of coloured water.



The lengths of the coloured water on the material were measured after 30 minutes and the results were shown in the table below.

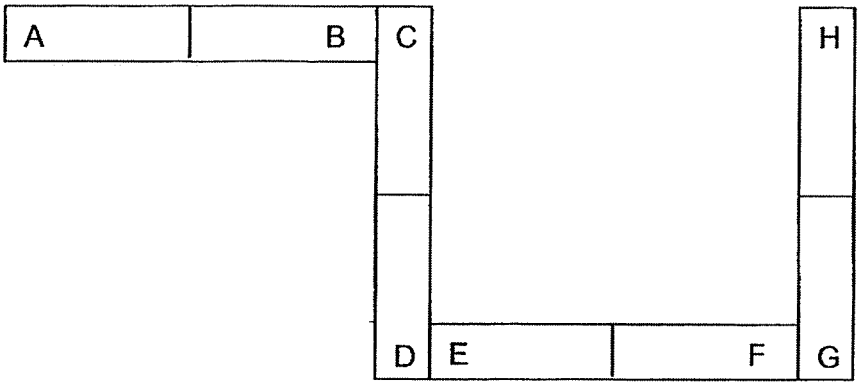
Material	Length of coloured water on material on material (cm)
A	8
B	3
C	6
D	0

Which material A, B, C or D, is the most suitable for making the base of a toy boat as shown in the diagram below?



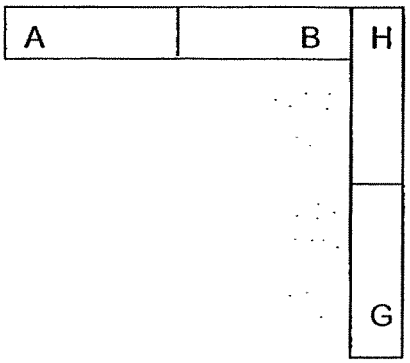
(1) Material A
(2) Material B
(3) Material C
(4) Material D

23. The diagram below shows the arrangement of four magnets that attract each other.

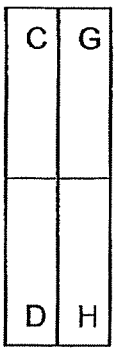


Which of the following arrangement(s) is/ are possible?

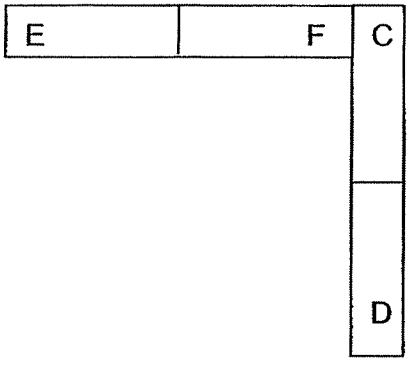
W:



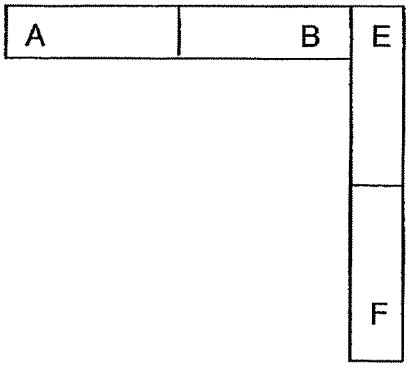
X:



Y:

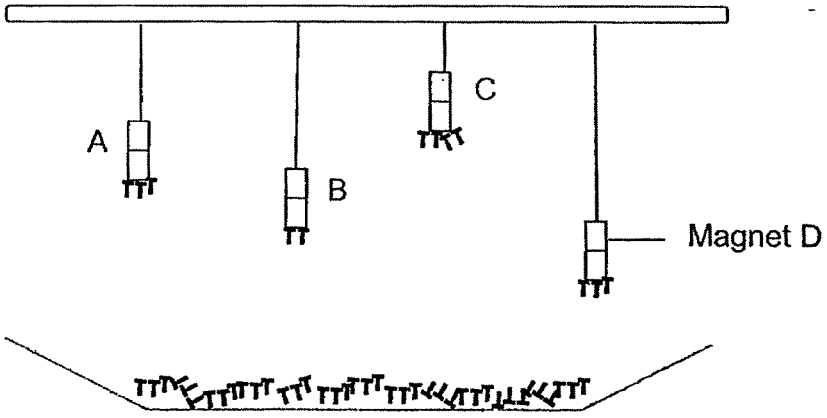


Z:



(1) W only
(2) Z only
(3) Y and Z only
(4) W and X only

24. Kenneth set up an experiment to find out which magnet is the strongest. He hung 4 bar magnets A, B, C and D at different lengths and placed a bowl of equal number of iron nails below each magnet as shown in the diagram below.



bowl of iron nails

Based on Kenneth's observation as shown in the diagram above, which magnet is the strongest?

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

END OF BOOKLET A

GO ON TO BOOKLET B

MAHA BODHI SCHOOL

2019 SEMESTRAL ASSESSMENT 1

PRIMARY FOUR SCIENCE

(BOOKLET B)

Name: _____ ( )

Class: Primary 4 _____

Date : 16 May 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		48
B		32
Total		80

Parent's signature: _____

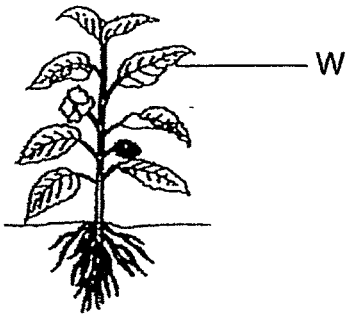
This booklet consists of 11 printed pages.

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BOOKLET 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 diagram below shows a plant.

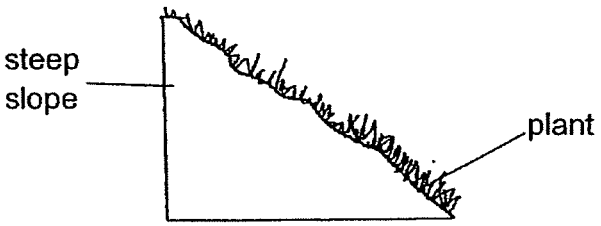


(a) State two functions of Part W of the plant. [2]

(i) _____

(ii) _____

(b) To prevent soil from being washed down a slope during heavy rain, some plants were planted on the slope.



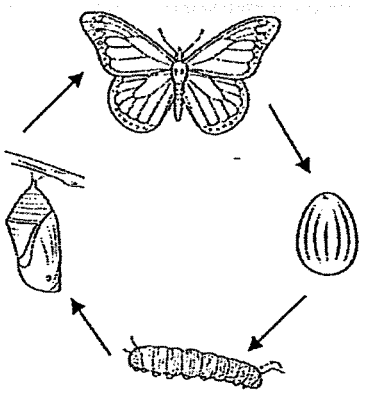
Which part of the plants helps to prevent the soil from being washed down the slope? Explain your answer. [2]

_____

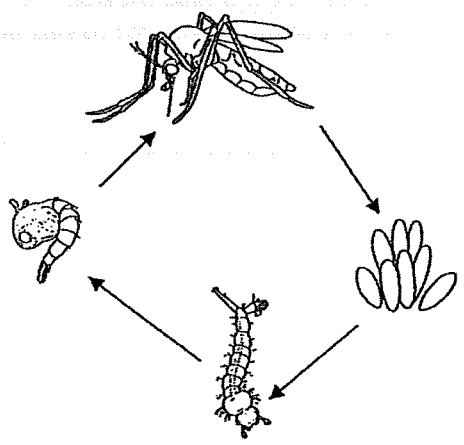
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Marks : / 4

26. The diagram below shows the life cycle of two insects P and Q.



Life cycle of Insect P



Life cycle of Insect Q

(a) State two similarities between the life cycles of both insects. [2]
(Do not name the stages in the life cycle)

(i) _____

(ii) _____

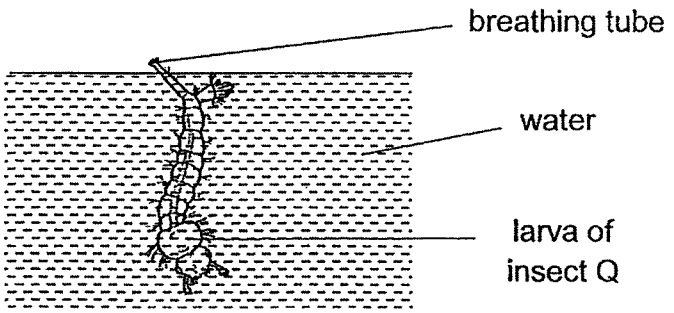
(b) At which stage of the life cycle is Insect P most harmful to farmers growing plants? Explain your answer. [1]

_____

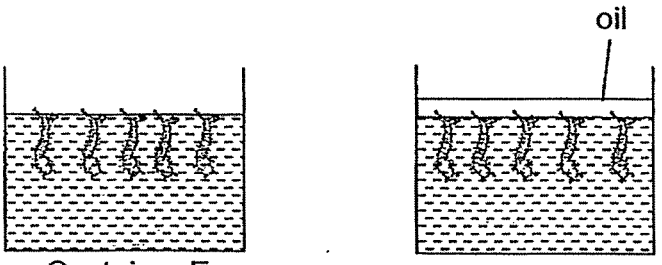
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Marks : / 3

(c) The larva of Insect Q lives in water and takes in air from above the water through a breathing tube as shown in the diagram below.



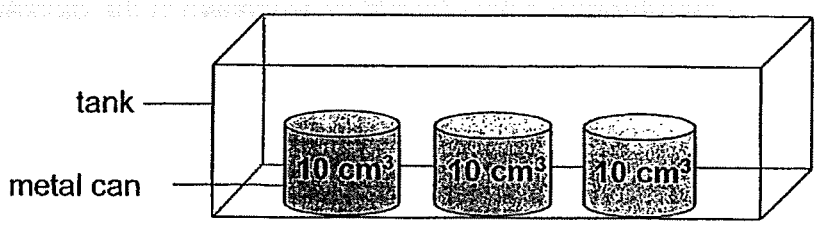
Thomas places some larvae of Insect Q into two containers with water. He pours a layer of oil into Container F as shown in the diagram below.



The larvae in container F all died after one day but the larvae in container E survived. Explain why. [1]

Marks : / 1

27. Joel placed three 10 cm^3 metal cans into a large 100 cm^3 tank as shown below. He then filled the tank with water.



(a) How much water would he need to fill the tank completely? [1]

_____ cm^3

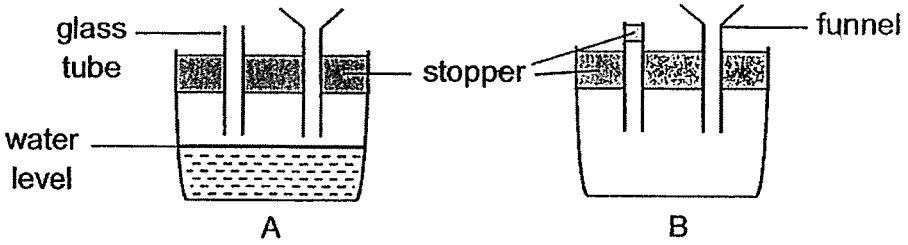
In another experiment, Joel filled the tank completely with water first and then put the three metal cans into the tank.

(b) What would he observe? Give a reason why. [1]

_____

_____

28. Two similar containers, A and B, are each fitted with a hollow glass tube and a funnel. An equal volume of water is poured into each container through the funnel. The water level in container A is shown below.



(a) Will the water level in container B be higher, lower or same as the water level in container A? [1]

_____

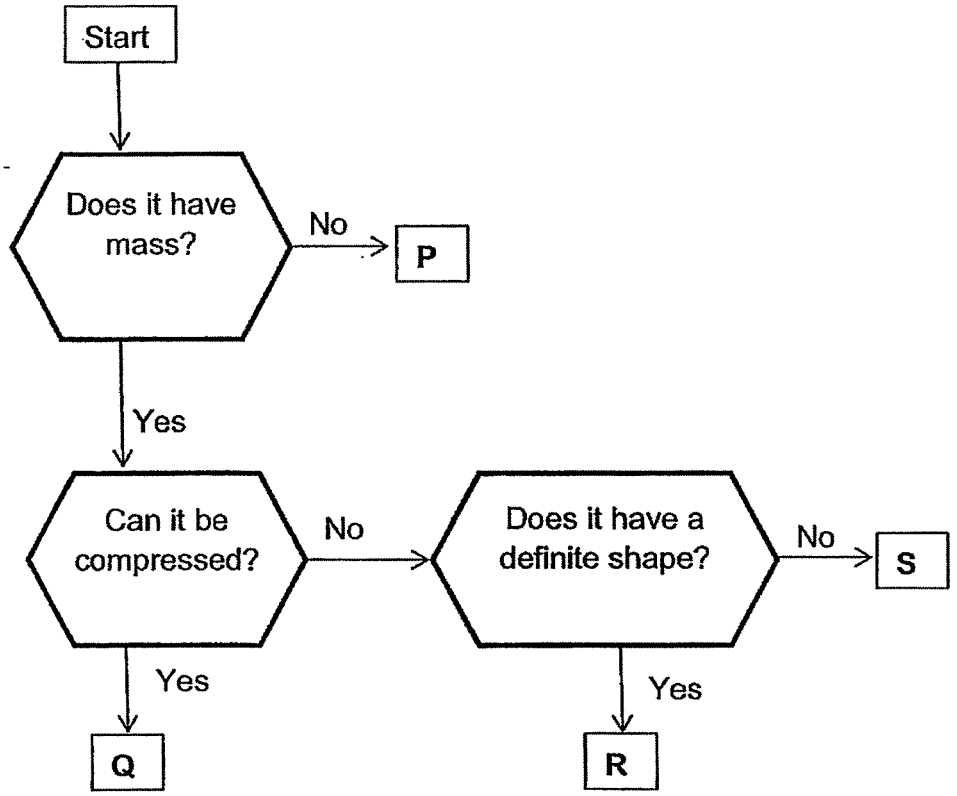
(b) Give a reason for your answer in (a). [1]

_____

_____

Marks : / 4

29. Study the flowchart below.

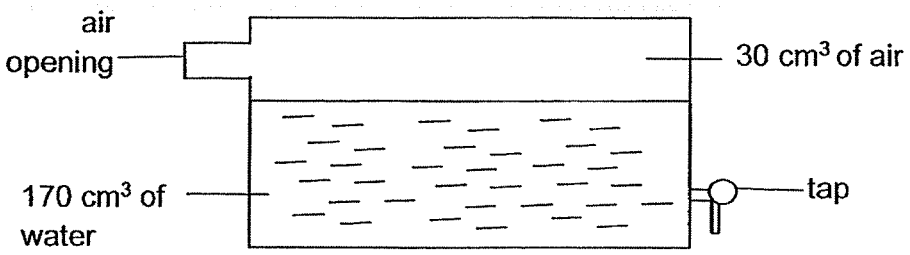


(a) (i) Based on the flowchart above, describe the characteristic(s) of Matter Q. [1]

(ii) Which state of matter is S in? [1]

Marks : / 2

29. (b) Ginny conducted an experiment as shown in the diagram below.



She removed 20 cm^3 of water. Then, she pumped 25 cm^3 of air into the tank through the air opening.

(i) What was the final volume of air in the container? [1]

_____ cm^3

(ii) What properties of air and water did you use to obtain your answer in b (i)? [1]

_____

_____

Marks : / 2

30. Kylie observed some animals and recorded her observation in the Table 1, shown below.

Table 1:

Animals	Has scales	Has wings	Has six legs	Breathes underwater	Breathes on land
P				✓	✓
Q	✓			✓	
R		✓	✓		✓
S	✓				✓

(a) Based on Table 1, match P, Q, R and S to the correct animal groups by drawing a straight line. [2]

Animal		Group
P	●	● Fish
Q	●	● Reptile
R	●	● Amphibian
S	●	● Insect

(b) The animals P, Q, R and S were classified into two groups X and Y.

Group X	Group Y
P R	Q S

Based on the information provided in Table 1, how are the animals classified? [1]

_____

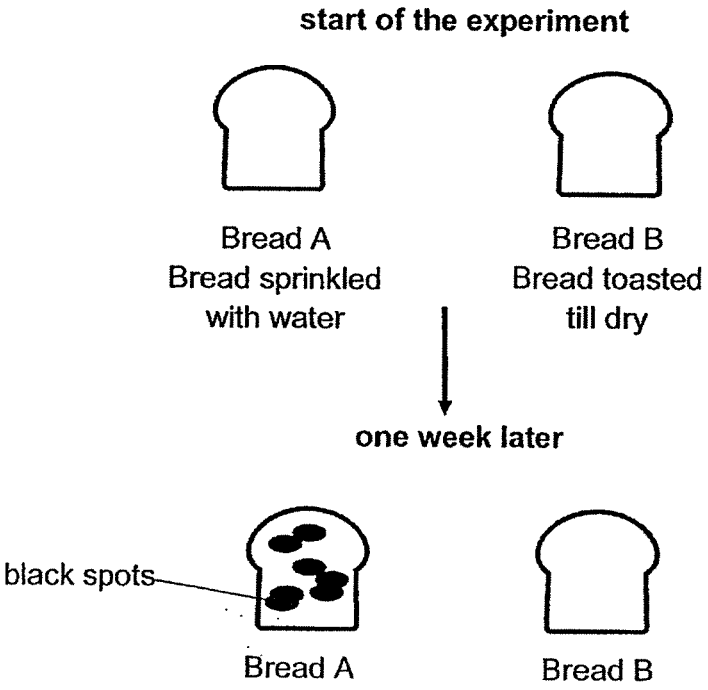
(c) State how Animal P breathes on land and in water. [1]

On land: _____

In water: _____

Marks : / 4

31. Jasmine conducted an experiment with two pieces of bread A and B. The diagram below shows the conditions of the bread at the start of the experiment and what she observed one week later.

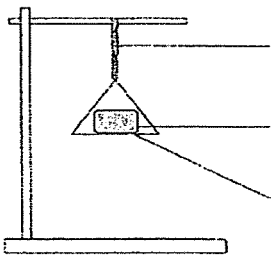


(a) Which group of living things could the black spots growing on Bread A belong to? [1]

(b) Explain why there were no black spots growing on Bread B. [1]

Marks : / 2

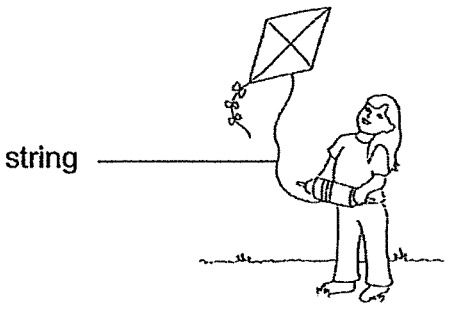
32. Stella set up the experiment as shown below. She added a 50g weight at each time on a metal pan until the string broke. She recorded the mass of the weights used in the table below.



String	Mass of weights before string breaks (g)
A	150
B	300
C	50

(a) What property of the strings is Stella testing for? [1]

(b) Stella wanted to tie one of the strings to her kite so that it can fly in strong wind.

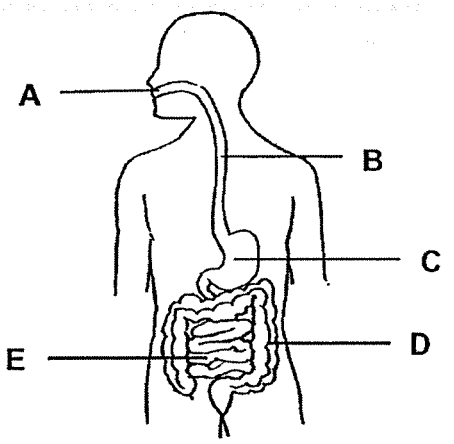


Based on the above results, which string A, B or C should she use? Explain your answer. [2]

(c) What is another important property of the string Stella should consider for her kite? [1]

Marks : / 4

33. The diagram below shows the human digestive system. A, B, C, D and E are parts in the digestive system.



(a) Match the part to its function by writing A, B, C, D or E in the correct boxes below. [2]

Part	Function
	To push food into the stomach
	To absorb food into the bloodstream

(b) The table below shows how much undigested food is present as it leaves each part of the digestive system.

Parts of the digestive system	Amount of undigested food (g)
mouth	500
stomach	400
small intestine	300
large intestine	300

Give a reason why the amount of undigested food remains the same as it leaves the small intestine and the large intestine. [1]

_____

_____

Marks : / 3

34. Luke wanted to find out if the number of strokes affects the strength of the temporary magnet. The table below shows the number of strokes he used for the four similar iron bars, W, X, Y and Z.

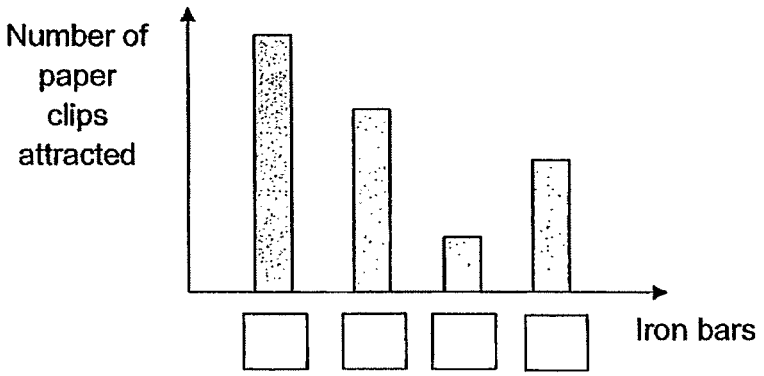
Iron bars	Number of strokes used
W	10
X	30
Y	40
Z	20

(a) What property of the iron bar allows it to be made into a temporary magnet? [1]

_____

Luke recorded the number of paper clips that each magnet could attract and drew a bar graph as shown below.

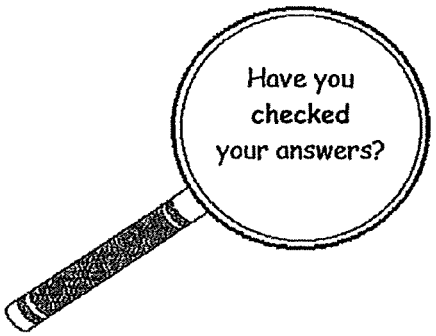
(b) Fill in the boxes of the bar graph with the letter representing the iron bar W, X, Y or Z that matches the result. [1]



(c) Based on his experiment, what could Luke conclude? [1]

_____

_____



Marks : / 3

~ END OF PAPER ~

SCHOOL : MAHA BODHI PRIMARY SCHOOL

LEVEL : PRIMARY 4
SUBJECT : SCIENCE
TERM : 2019 SA1

SECTION A

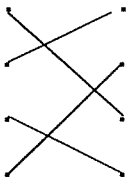
Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
3	3	1	2	3	2	2	4	4	1

Q 11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
1	1	3	4	4	1	1	4	2	1

Q 21	Q22	Q23	Q24
4	4	3	3

SECTION B

Q25)	a)i)Take in and give out gases. ii)Make food for the plant. b)The roots because it can hold the plant and the soil firmly to the ground.
Q26)	a)i)Both life cycle have four stages. ii)The young do not resemble the adult. b)At the larva stage because the larva eat the leaves of the plant. c)The oil blocks the breathing tube so the larvae in F could not take in any air.

Q27)	a)70cm³ b)The water will over flow because the can was put in the container so there are less space for the water so the water overflowed.
Q28)	a)The water level in container B would be the same as the water in container A. b)Air in the container can still escape through the funnel so the water can enter to occupy space.
Q29)	a)i)Matter Q have mass and can be compressed. ii)Liquid. b)i)50cm³ ii)Air has no definite volume and water has definite volume.
Q30)	a)  b)Whether they have scales. c)On land : Through lungs In water : Through moist skin
Q31)	a)Fungi. b)Break B does not have water and Fungi need water to grow.
Q32)	a)Strength. b)B, because it can support the most mass of weight before breaking. c)Flexibility

Q33)	a)B E b)The large intestine does not digest any food, so it remains the same when the amount of undigested food leaves the small intestine into the large intestine.
Q34)	a)Magnetic b)Y , X , W ,Z c)The more the number of strokes, the stronger the magnetism.