

MAHA BODHI SCHOOL
2015 SEMESTRAL ASSESSMENT 1
PRIMARY FOUR SCIENCE

Name: _____ ()

Date : 14 May 2015

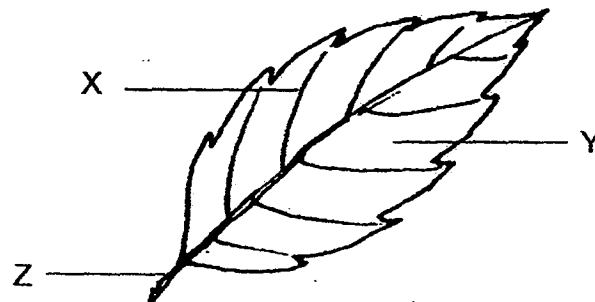
Class: Primary 4 ()

Duration: 1 h 30 min (Booklets A and B)

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.

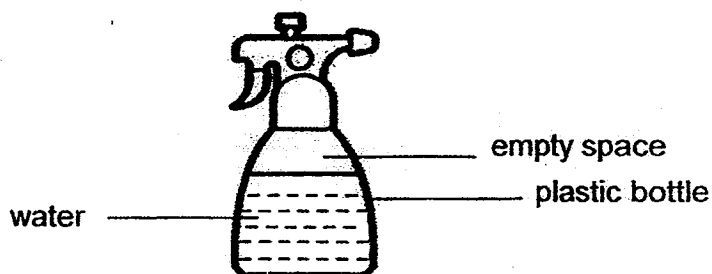
1. The diagram below shows a leaf.



Identify the parts of the leaf labelled X, Y and Z:

	X	Y	Z
(1)	blade	edge	stalk
(2)	blade	stalk	vein
(3)	vein	blade	stalk
(4)	edge	vein	blade

4. The diagram below shows a plastic bottle spray filled with some water.



Which of the following correctly represents the state of matter of the empty space, plastic bottle and water?

	Empty space	Plastic bottle	Water
(1)	liquid	liquid	gas
(2)	gas	solid	liquid
(3)	liquid	solid	gas
(4)	gas	liquid	liquid

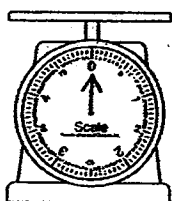
5. The diagrams below show some apparatus commonly used in Science experiment.

weighing scale

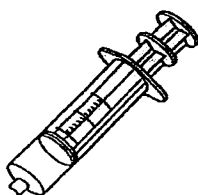
syringe

balance beam

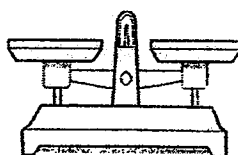
measuring cylinder



A



B



C



D

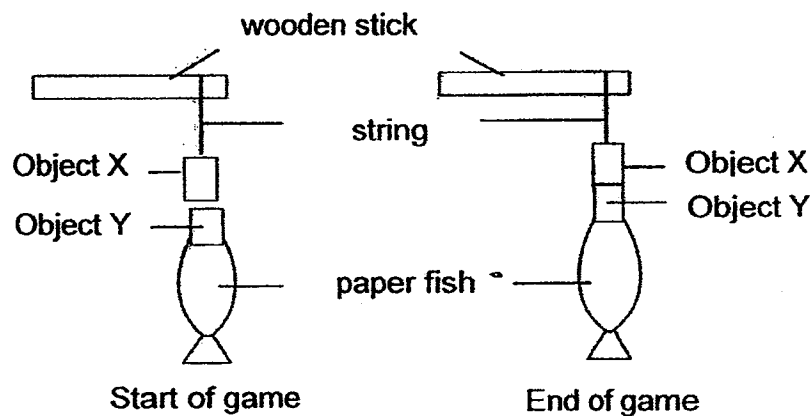
Which of the following can be used to measure volume?

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

10. What is the function of the muscular system?

- (1) It removes air from the body.
- (2) It helps different parts of the body to move.
- (3) It supports the body and gives the body shape.
- (4) It carries waste materials away from different parts of the body.

11. Leslie designed a fishing game where he had to use Object X to pick up a paper fish. Object Y was attached to the paper fish as shown in the diagram below.

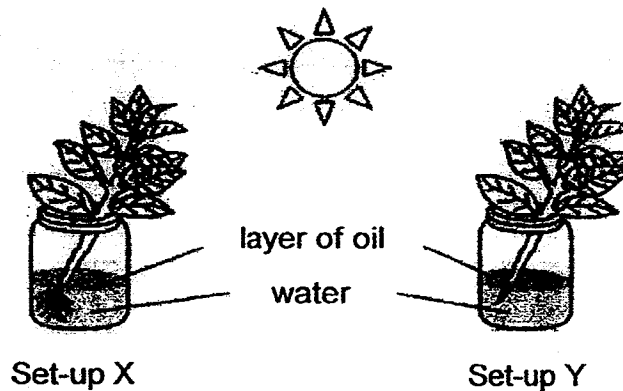


Which of the following correctly represents what Object X and Object Y could possibly be?

	Object X	Object Y
A	Magnet	Iron block
B	Iron block	Steel block
C	Magnet	Magnet

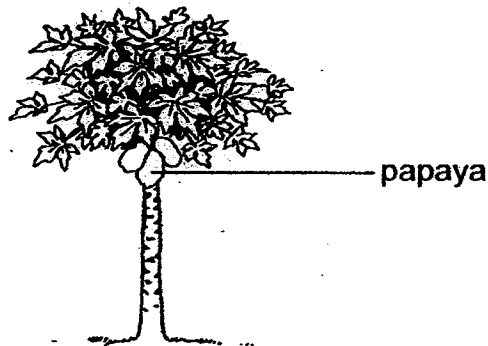
- (1) A only
- (2) A and C only
- (3) B and C only
- (4) A, B and C

14. Sally carried out an experiment where she placed two similar plants in the set-ups as shown in the diagram below.



Based on the experiment, Sally was trying to find out if _____.

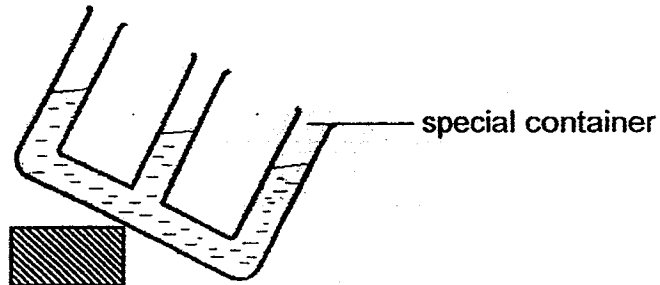
- (1) plants need roots to take in water
 - (2) oil will help the plants to grow better
 - (3) sunlight is needed for plants to survive
 - (4) the number of leaves will affect the growth of the plants
15. The diagram below shows a papaya plant.



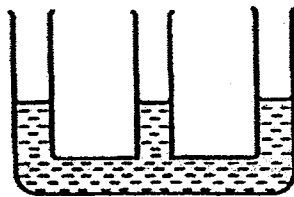
At which stage of its life cycle is the papaya plant at?

- (1) seed
- (2) adult
- (3) shoot
- (4) young

18. Peter poured some liquid into a special container and placed it in the freezer in the position as shown below.



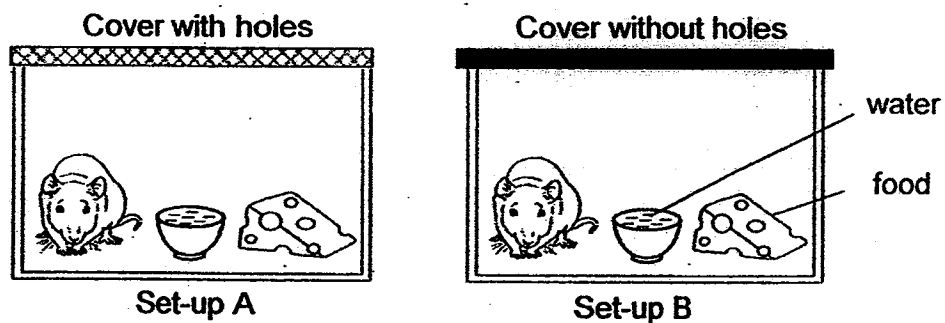
The next day, he took out the container and left it on the table for a few hours. He observed the container as shown in the diagram below.



Which of the following statement explains what Peter observed?

- (1) Liquid has definite shape.
- (2) Liquid has definite volume.
- (3) Liquid does not have definite shape.
- (4) Liquid does not have definite volume.

19. Jim conducted an experiment using the two set-ups as shown below.

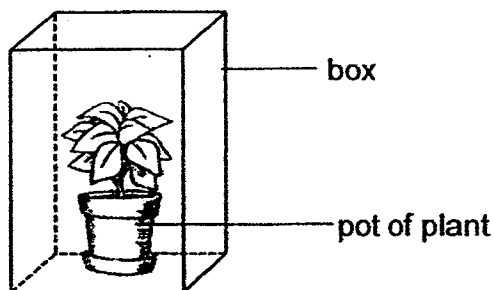


After a few days, he observed that the animal in Set-up B had died while the animal in Set-up A was still alive.

What can Jim conclude from this experiment?

- (1) Living things can reproduce.
- (2) Living things need air to stay alive.
- (3) Living things can move by themselves.
- (4) Living things need food and water to stay alive.

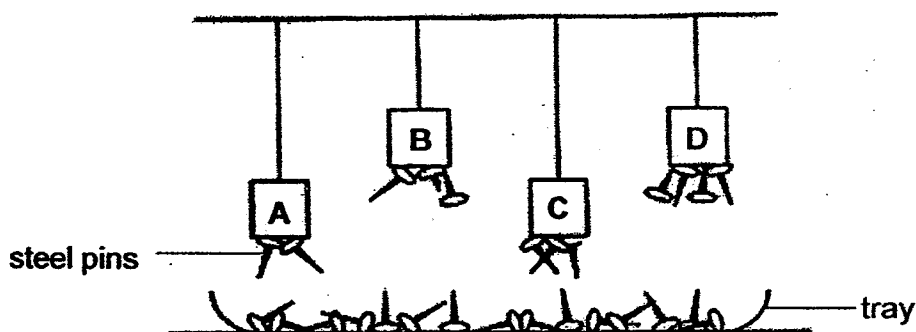
22. Kai En places a pot of plant in a box as shown below. He waters the plant every day. He carries the box to school to observe the growth of the plant with his friends every day. The table below shows the properties of materials used to make Boxes W, X, Y and Z.



Which box is most suitable for Kai En to keep the pot of plant in?

	Box	Is it waterproof?	Is it light?	Does it allow light to pass through?	Is it strong?
(1)	W	Yes	No	Yes	No
(2)	X	Yes	Yes	Yes	Yes
(3)	Y	No	Yes	Yes	No
(4)	Z	No	Yes	No	Yes

23. Kevin wanted to compare the magnetic strength of 4 magnets, A, B, C and D. He set up the experiment as shown below and observed the number of steel pins that were attracted by each magnet.



Which of the following correctly shows the arrangement of the strength of the magnets from the weakest to the strongest?

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



MAHA BODHI SCHOOL
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Name : _____ ()

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Date : 14 May 2015

Booklet A	48
Booklet B	32
Total	80

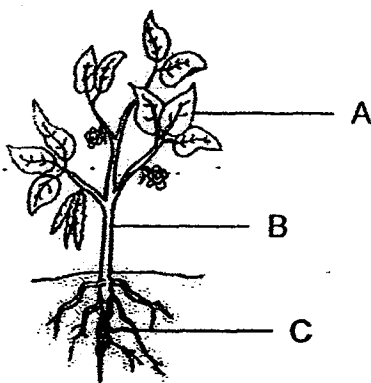
Parent's signature: _____

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 Plant Q with its parts.



(a) Identify the parts of the plant by writing A, B and C in the space given.

[1½]

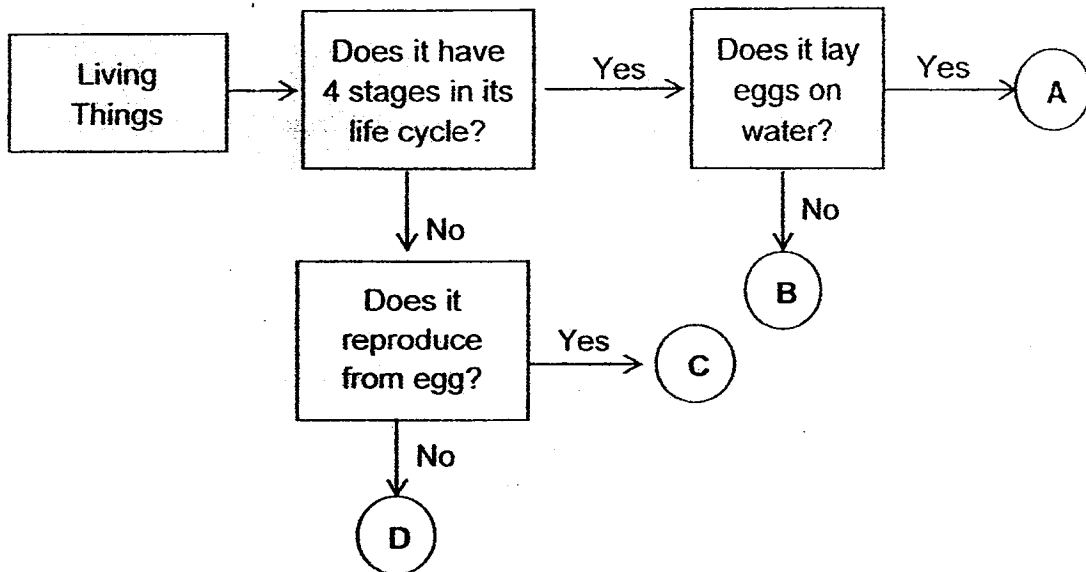
(i) Root : _____

(ii) Leaf : _____

(iii) Stem : _____

(b) Which part of the above plant helps it to take in and give out gases? [½]

26. Study the flowchart below.



(a) Based on the flowchart above, which of the letters (A, B, C and D) represent the following living things? [2]

- (i) Plant : _____
- (ii) Cockroach : _____
- (iii) Mosquito : _____
- (iv) Butterfly : _____

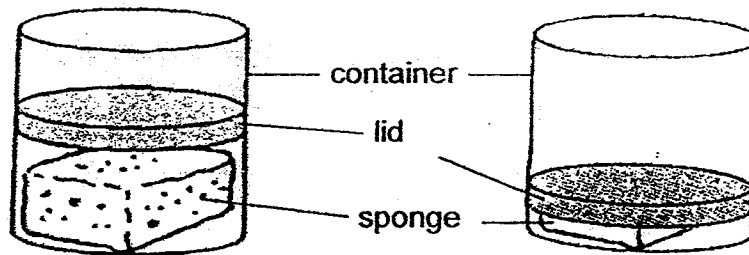
(b) (i) State one difference between C and D. [1]

(ii) State one similarity between A and B. [1]

Marks:

/ 4

28. Gary placed a sponge and a moveable lid into a container. He pushed the lid downwards and observed the following as shown in the diagram below.



- (a) State one property of air that was shown in the experiment. [1]

- (b) Explain Gary's observations as shown in the above diagram. [1]

Marks :

12

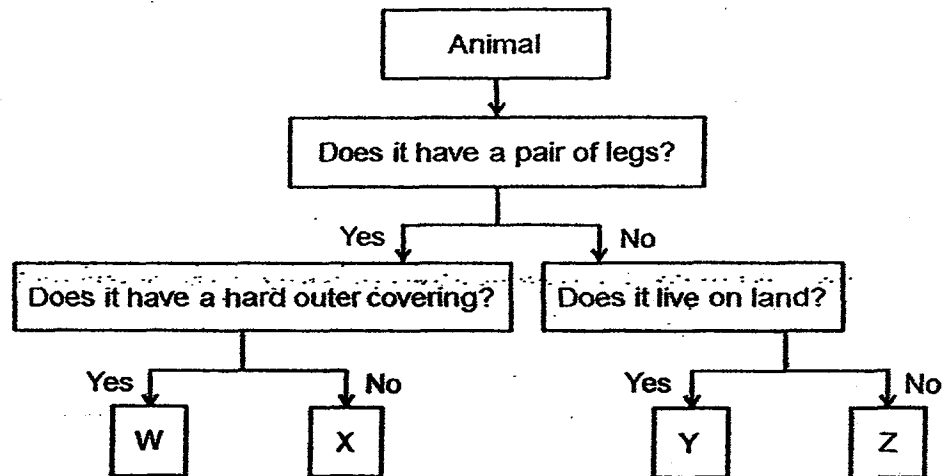
30. Study Animal P below.



- (a) (i) Base on your observations, which group of animals does Animal P belong to? [1]

- (ii) Explain your answer. [1]

(b) Study the flowchart below.

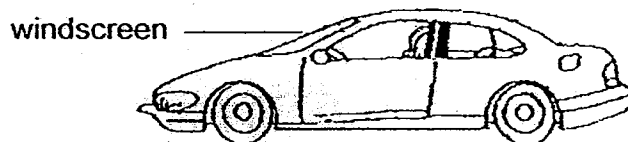


- (i) Animal P should be represented by the letter _____ [1]

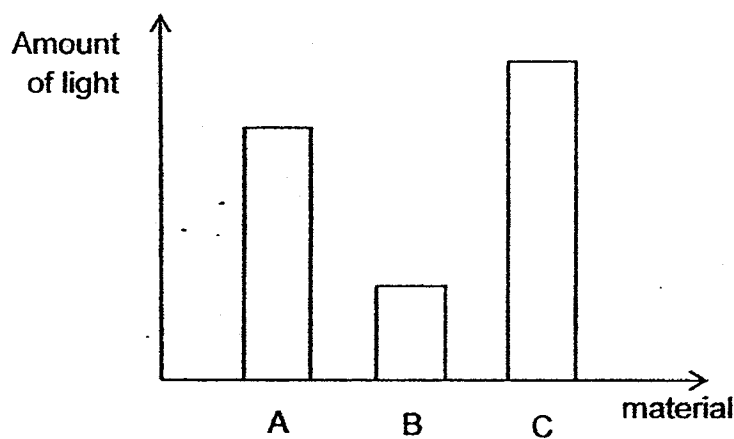
- (ii) A pupil said that an ant can be represented by the letter W. Explain why the pupil is wrong. [1]

Marks : / 4

32. A car maker wants to choose the most suitable material to make the windscreen of a car.



He tested three different materials A, B and C, and recorded the amount of light that passes through the materials in the graph shown below.



- (a) Which is the most suitable material to make the windscreen of a car?
Explain why. [2]

- (b) Other than the property stated in (a), state two other properties that the material of the windscreen should have. [2]

(i) Property 1: _____

(ii) Property 2: _____

Marks :

/ 4

34. (a) Circle TRUE or FALSE for each statement below. [1]

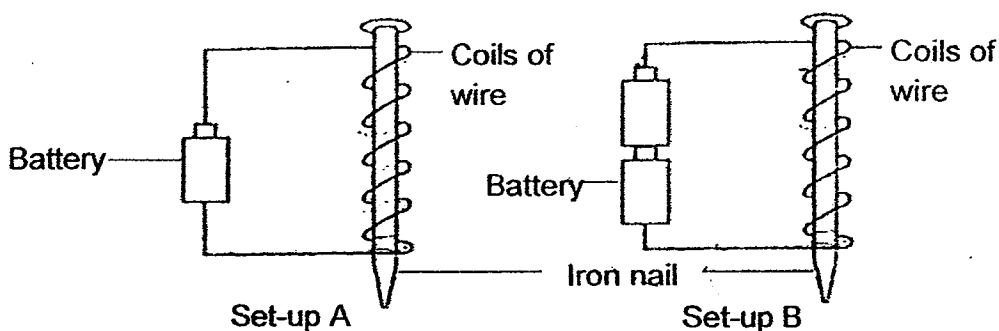
(i) An electromagnet will work for a short while after the battery or source of electricity is disconnected from it.

True / False

(ii) A temporary magnet will increase in strength with more strokes.

True / False

(b) Joshua wanted to test which electromagnet is stronger. The diagram below shows his two set-ups A and B.



He used the electromagnet in Set-up A and B to pick up some paper clips. The table below shows his findings.

Electromagnet in	Number of paper clips picked up
Set-up A	5
Set-up B	8

(i) Explain why the electromagnet in Set-up B picked up more paper clips. [1]

(ii) What can be done to Set-up A to enable the electromagnet to pick up more paper clips than the electromagnet in Set-up B? [1]

Marks :

/ 3

EXAM PAPER 2015

LEVEL : PRIMARY 4

SCHOOL : MAHA BODHI SCHOOL

SUBJECT : SCIENCE

TERM : SA1

Q 1	Q 2	Q 3	Q 4	Q 5	Q 6	Q 7	Q 8	Q 9	Q 10
3	4	2	2	3	1	4	2	3	2
Q 11	Q 12	Q 13	Q 14	Q 15	Q 16	Q 17	Q 18	Q 19	Q 20
2	4	2	1	2	1	3	3	2	1
Q 21	Q 22	Q 23	Q 24						
1	2	3	3						

Q25a (i) Root : C (ii) Leaf : A (iii) Stem : B

Q25b. Part A of the above plant helps to take in and give out gases.

Q25c. Plant T has a weak stem and it climbs up the pole for support and to reach out for more sunlight.

Q26a. (i) Plant : D (ii) Cockroach : C (iii) Mosquito : A (iv) Butterfly : B

Q26b (i) C reproduces from an egg but D does not reproduce from an egg.

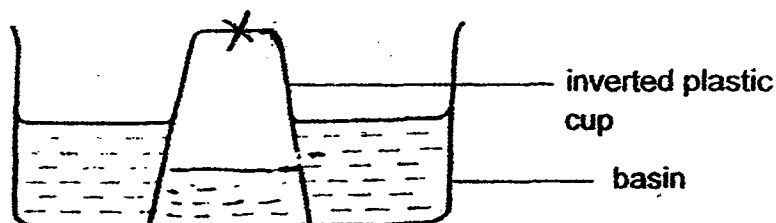
Q26b (ii) Both A and B have a four stage life cycle.

Q27. Water in syringe B has definite volume and it cannot be compressed. Air in syringe A has no definite volume and can be compressed.

Q28a. Air can be compressed.

Q28b. Air in the container had been compressed.

Q29a. SEE PICTURE



Q29b(ii) Air has escaped through the hole. The water has occupied the space.

Q29b (iii) Mary would observe that the water level in the cup would be the same as the water in the basin.

Q30a (i) Animal P belongs to the group called birds.

Q30a (ii) Animal P has feathers on its body and a beak. All birds have feathers and a beak.

Q30b (i) X Q30b (ii) An ant only has three pairs of legs and not a pair of leg.

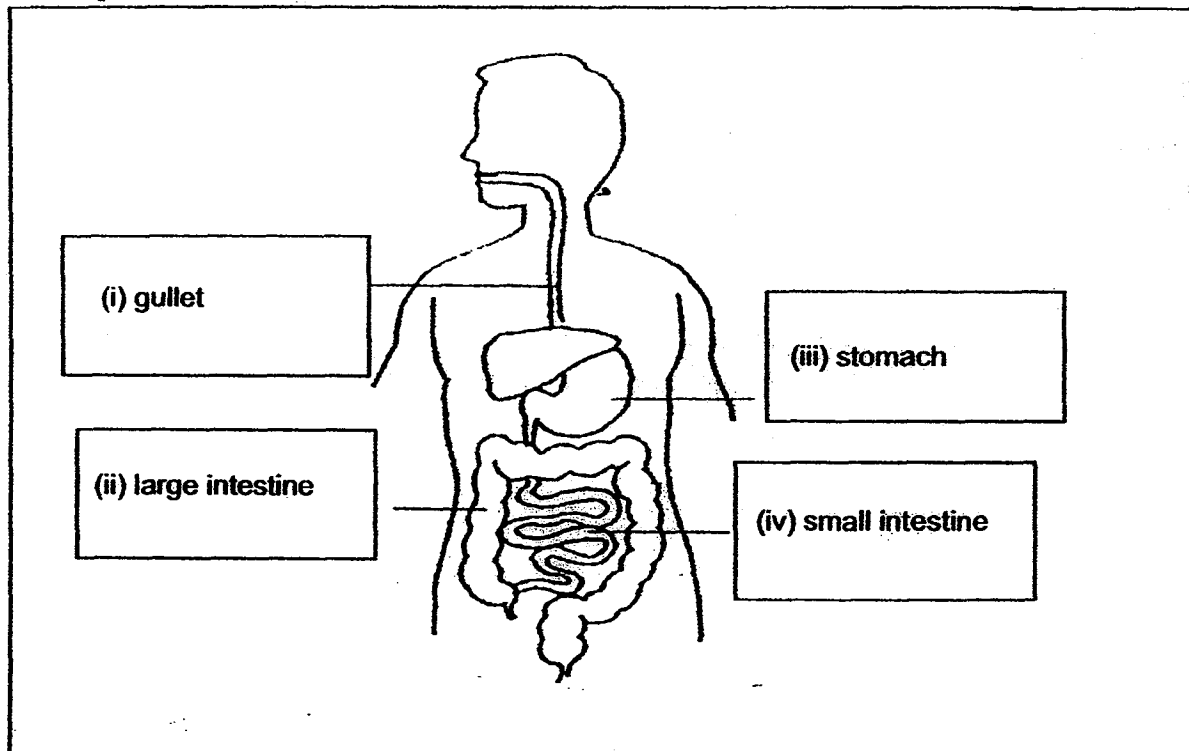
Q31a. Based on the diagram, the mushrooms obtain their food by breaking the log into smaller substances.

Q31b. A fern can make its own food but a mushroom cannot make its own food.

Q32a. Material C is the most suitable to make the windscreen of a car because material C allows most light to pass through it.

Q32b. (i) Property 1: Strong (ii) Property 2 : Waterproof

Q33a. **SEE PICTURE** Q33b. Jay is correct. The saliva is a digestive juice and it helps to soften the food to make it easier to chew.



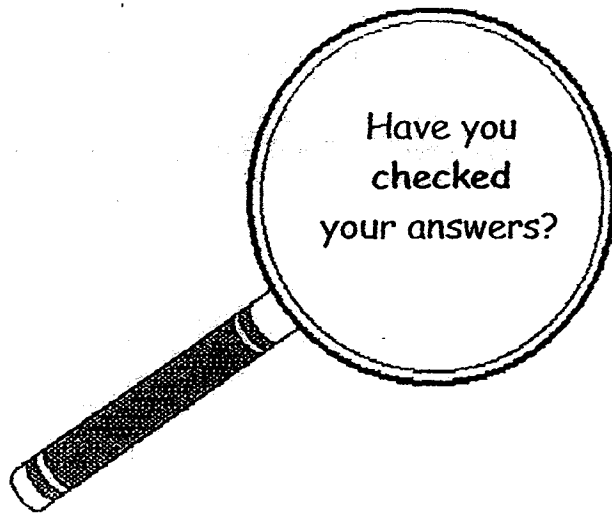
Q34a (i) FALSE

Q34a (ii) TRUE

Q34b(i) Electromagnet B is stronger as it has more batteries than the electromagnet in set up A.

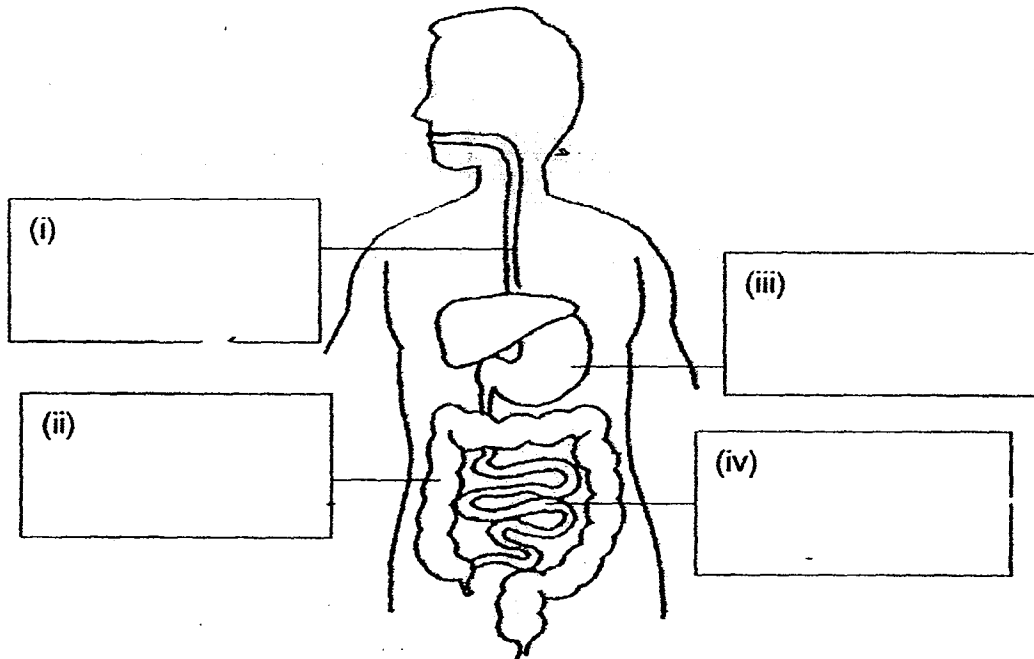
Q34b(ii) He should add more batteries in set – up A and more coils around the iron nail.

THE END



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33. The diagram below shows the human digestive system.

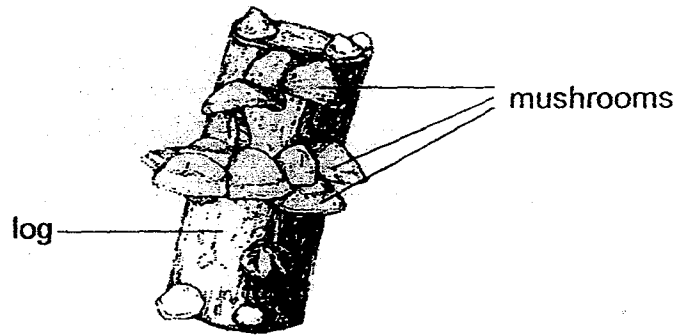


- (a) Name the parts of the digestive system in the diagram above. [2]
- (b) Jay said that saliva is important to the digestion of food, but Zachary said that saliva is not important to the digestion of food. Who is correct? Explain. [1]

Marks :

/ 3

31. Study the diagram below.



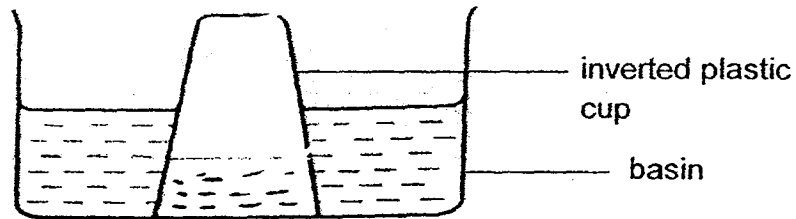
- (a) Based on the diagram, how do the mushrooms obtain food? [1]

- (b) State a difference between a fern and a mushroom. [1]

Marks :

12

29. Mary placed an inverted plastic cup into a basin of water as shown below.



- (a) Draw a straight line in the diagram above to show the water level that Mary is likely to observe in the inverted plastic cup. [1]

- (b) Mary poked a hole on the inverted plastic cup to allow more water to enter the inverted plastic cup.

- (i) In the above diagram, mark a 'X' to show where Mary should poke the hole. [1]

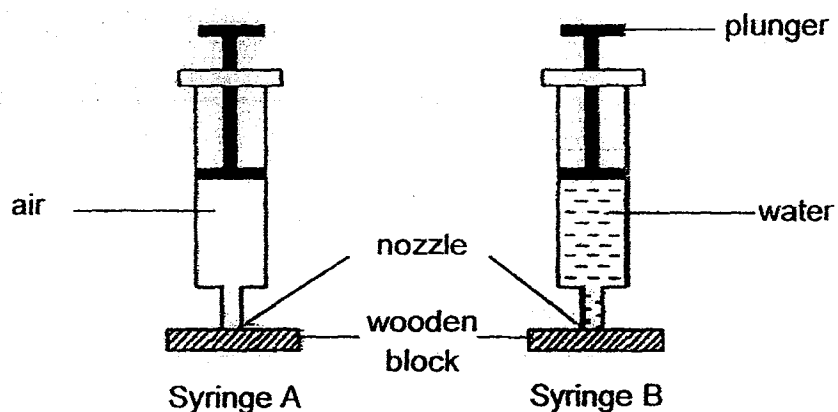
- (ii) Explain why poking a hole will allow more water to enter the cup. [1]

- (iii) What will Mary observe of the water level inside the inverted plastic cup as compared to the water level in the basin? [1]

Marks :

/ 4

27. The diagram below shows two syringes A and B containing air and water. The nozzle in each syringe is blocked by a piece of wooden block.

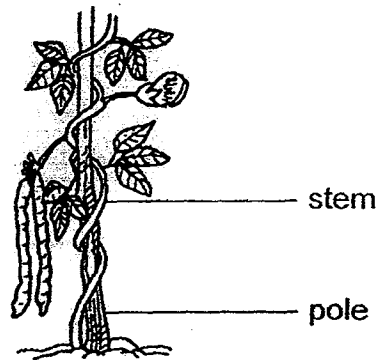


The plunger in syringe B could not be pushed down but the plunger in syringe A could be pushed down. Explain why. [2]

Marks :

/ 2

25 (c) The diagram below shows Plant T.

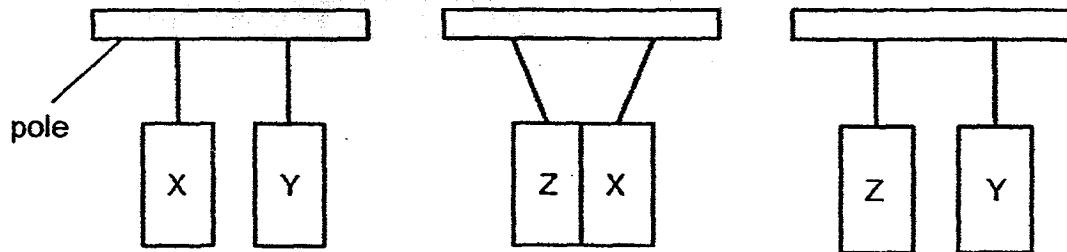


Based on the diagram, why does Plant T need to grow on the pole? [2]

Marks :

/2

24. Raju hung 3 different bars X, Y and Z on a pole using strings as shown in the diagram below. He was told that the bars X, Y and Z were a magnet, a magnetic object and a non-magnetic object.



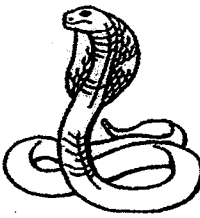
Based on the diagram, what can X, Y and Z possibly be?

	Magnet	Magnetic object	Non-magnetic object
(1)	X	Y	Z
(2)	Y	Z	X
(3)	X	Z	Y
(4)	Y	X	Z

END OF BOOKLET A

GO ON TO BOOKLET B

20. Study the classification table below.

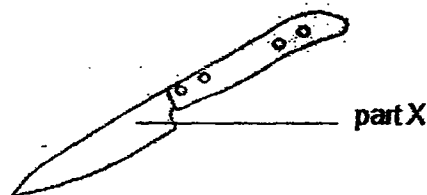
Group 1	Group 2
	
	

Which of the following shows the correct headings for Group 1 and Group 2?

	Group 1	Group 2
(1)	Have scales	Have hair
(2)	Live on land	Live in water
(3)	Breathe through lungs	Do not breathe through lungs
(4)	Reproduce by giving birth	Reproduce by laying eggs

21. The table below shows the properties of materials P, Q, R and S.

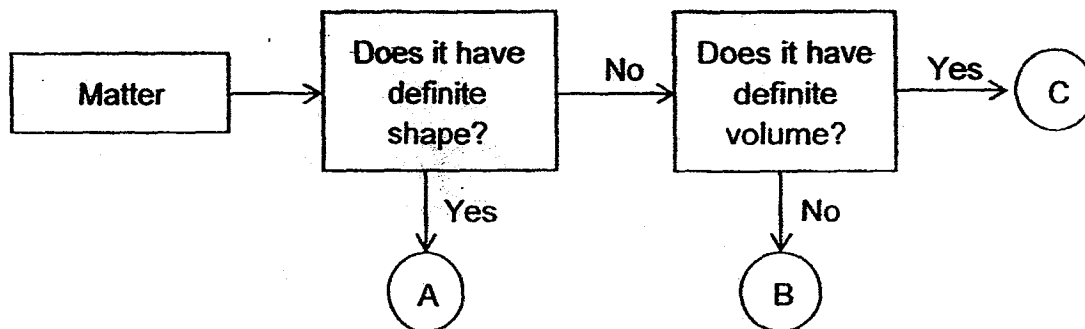
	Materials			
Properties	P	Q	R	S
It is flexible		✓	✓	✓
It is strong	✓	✓		
It is waterproof	✓	✓	✓	



Which material is most suitable for making part X of the knife to be used for cutting fruit?

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

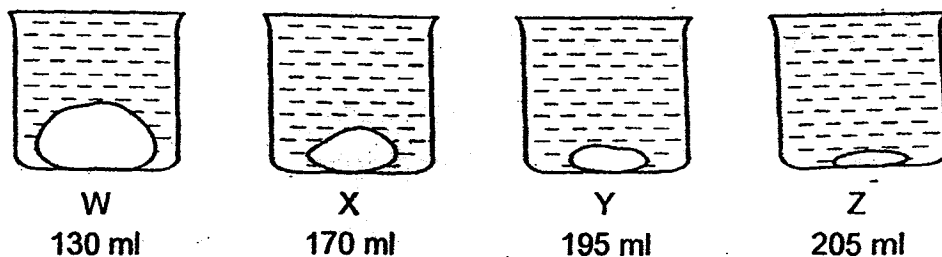
16. Study the flowchart below:



Which of the following best represents A, B and C?

	A	B	C
(1)	ice	air	water
(2)	water	air	ice
(3)	ice	water	ice
(4)	air	water	air

17. Andy placed four objects of similar mass but different sizes into four empty beakers W, X, Y and Z before filling up the beakers with water. The amount of water needed to fill the beakers completely was shown in the diagram below.

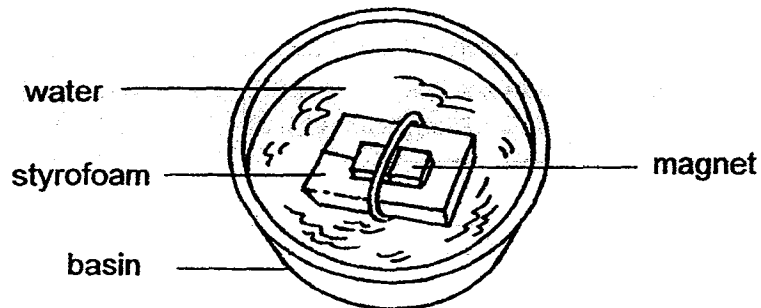


Based on his observation, what can Andy conclude about the objects?

- A. They have mass.
- B. They occupy space.
- C. Objects that are bigger in size occupy more space.
- D. Objects that have a greater mass occupy more space.

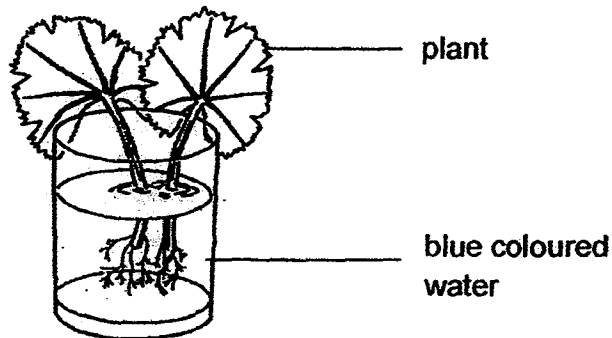
- (1) A and B only
- (2) A and D only
- (3) B and C only
- (4) C and D only

12. A magnet was secured onto a piece of styrofoam with a rubber band. It was then placed in a basin of water as shown below.

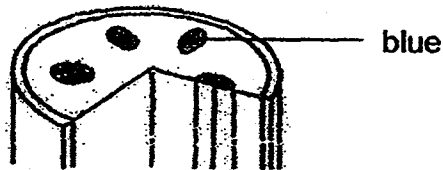


When the magnet came to rest, which direction was it pointing at?

- (1) East-West direction
 - (2) South-East direction
 - (3) North-West direction
 - (4) North-South direction
13. Alex placed two plants into a container of blue coloured water.



After a week, he cut the stem of one of the plants and observed some parts of the stem have turned blue.



Which of the following statements explains why some parts turned blue?

- (1) The stem absorbs water.
- (2) The stem transports water.
- (3) The stem holds the plant upright.
- (4) The stem makes food for the plant.

6. Which of the following statements are correct about matter?

- A. Matter has mass.
- B. Matter occupies space.
- C. Matter has a definite shape.
- D. Matter has a definite volume.

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

7. John observed Animal X which lives on land and in water.
Animal X can breathe through its lungs and moist skin.
Animal X reproduces by laying eggs.

Which animal group is Animal X from?

- (1) Fish
- (2) Birds
- (3) Reptiles
- (4) Amphibians

8. Which of the following is true about both fungi and bacteria?

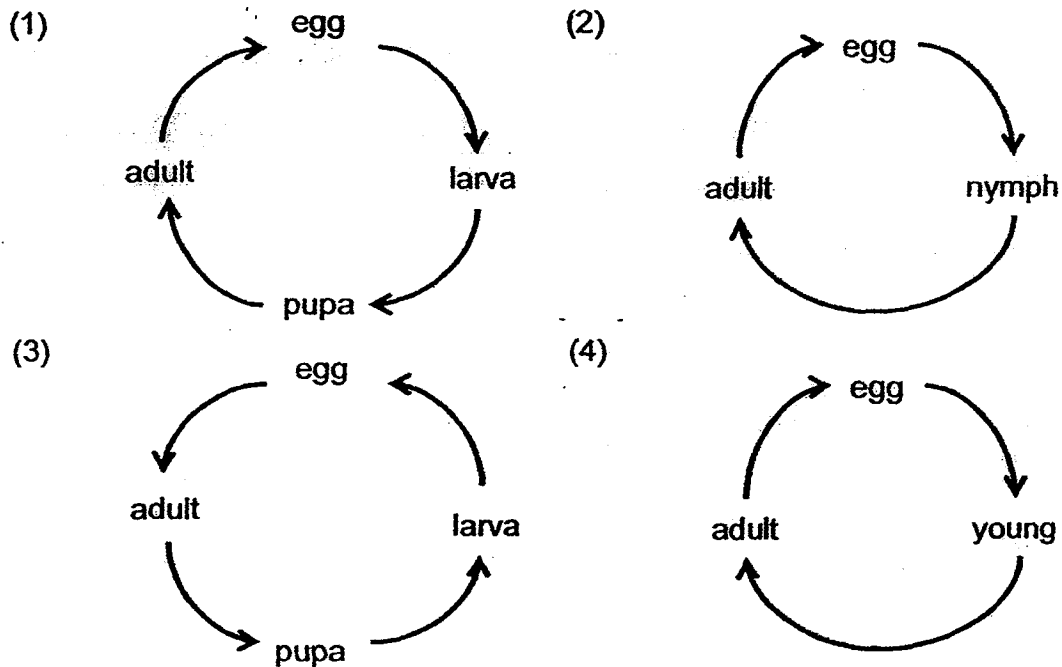
- (1) They reproduce by spores.
- (2) They can be useful or harmful to us.
- (3) They make their own food to stay alive.
- (4) They can only be seen under a microscope.

9. A raincoat is usually made of plastic.
Which of the following properties of plastic make it a suitable material for raincoats?

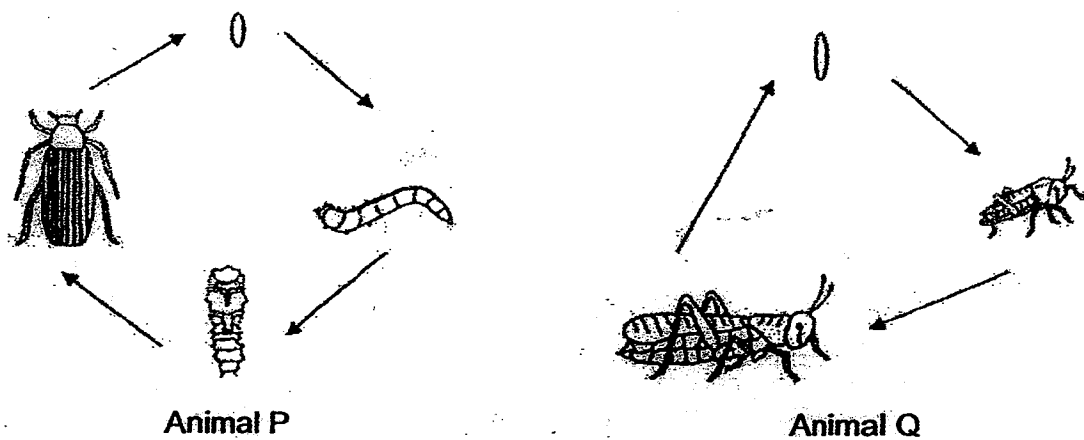
- A. It is light.
- B. It is flexible.
- C. It is waterproof.
- D. It can float on water.

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

2. Which of the following shows the life cycle of a frog?



3. Study the two life-cycles shown below.



Which of the following statements is correct based on the life cycles shown above?

- (1) Animal P gives birth to young alive but Animal Q does not.
- (2) Animal P has a larval stage in its life cycle but Animal Q does not.
- (3) Animal P has an egg stage in its life cycle but Animal Q does not.
- (4) Animal P has young that looks like the adult but Animal Q does not.