



PRIMARY 3 END-OF-YEAR EXAMINATION 2015

Name : _____

Date: 30 October 2015

Class : Primary 3 ()

Time: 7.50 a.m. to 9.15 a.m.

Parent's Signature : _____

Marks: _____ / 50

SCIENCE BOOKLET A

INSTRUCTIONS TO CANDIDATES

Write your name, register number and class.

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

Follow all instructions carefully.

Answer all questions.

Booklet A (25 x 2 marks = 50 marks)

For each question, choose the most suitable answer and shade its corresponding oval (1, 2, 3 or 4) in the optical answer sheet.

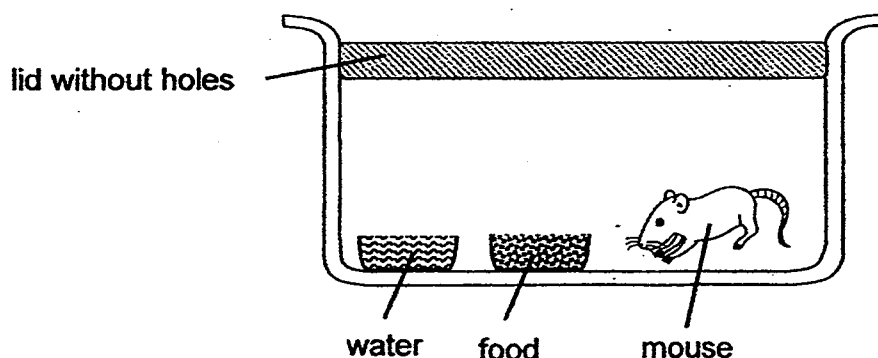
1. Study the classification table below.

Group A	Group B
guppy butterfly mimosa plant	shirt kettle basketball

Which of the following could be placed in Group B?

- (1) moss
- (2) orchid plant
- (3) chimpanzee
- (4) handkerchief

2. Jonathan put a mouse in a sealed container as shown in the diagram below.



A week later, he found that the mouse had died. Which of the following is most likely to have caused the mouse to die?

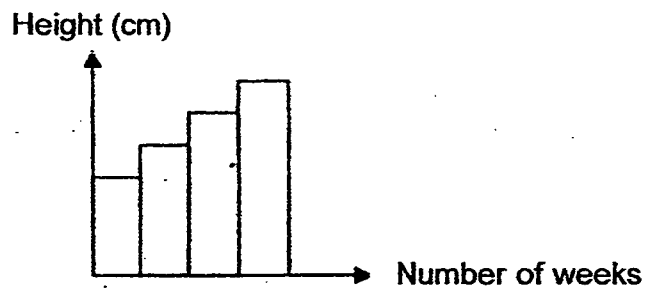
- (1) There is not enough air in the container.
- (2) There is not enough food in the container.
- (3) There is not enough water in the container.
- (4) There is not enough space in the container.

3. Chloe accidentally touched a kettle of hot water. She immediately removed her hand. This shows that living things _____.



- (1) grow
- (2) reproduce
- (3) respond to changes around them
- (4) need air, food and water to stay alive

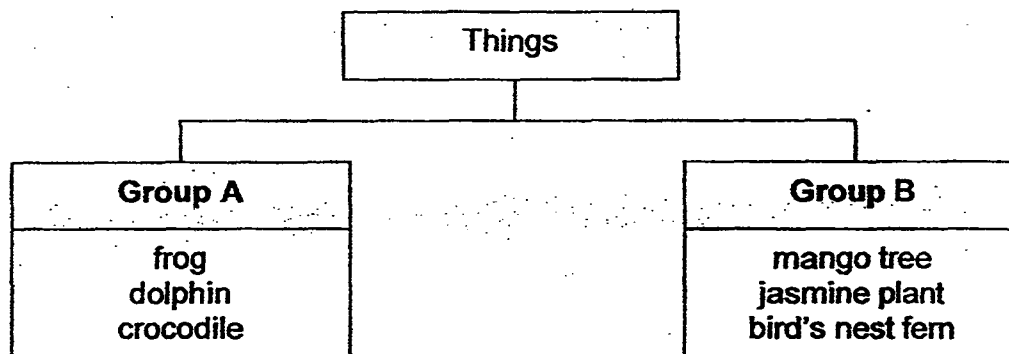
4. The graph below shows how the height of an orchid plant changed over 4 weeks.



What can you conclude from the results of the graph?

- (1) The plant grew.
- (2) The plant reproduced.
- (3) The plant needed air, food and water to stay alive.
- (4) The plant responded to changes in the environment.

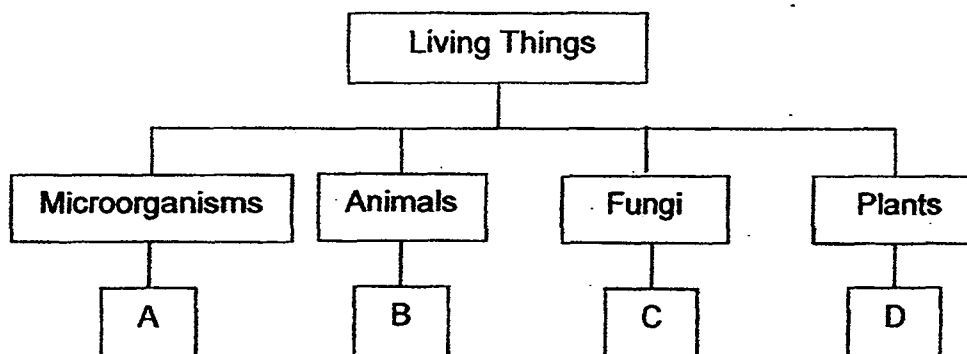
5. Study the classification diagram below.



Which of the following represents the headings for Group A and Group B correctly?

	Group A	Group B
(1)	fungi	plants
(2)	animals	plants
(3)	microorganisms	animals
(4)	animals	microorganisms

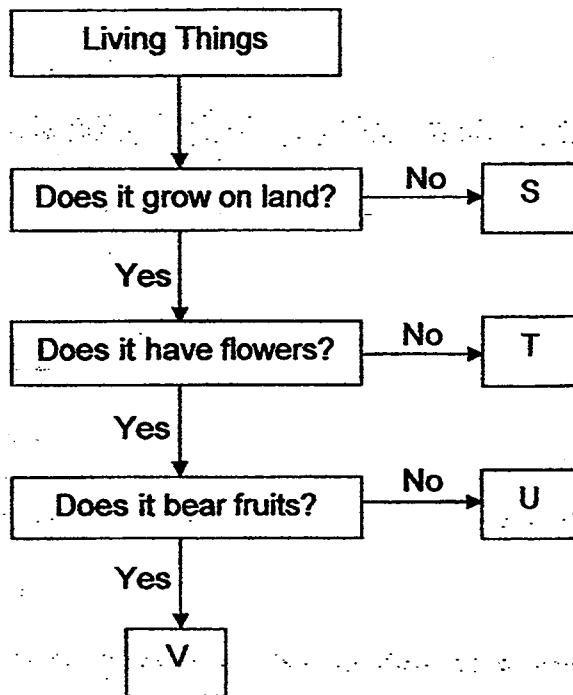
6. Study the classification diagram below.



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

	A	B	C	D
(1)	mould	hibiscus	bacteria	penguin
(2)	hibiscus	mould	penguin	bacteria
(3)	bacteria	penguin	mould	hibiscus
(4)	penguin	bacteria	hibiscus	mould

7. Study the flowchart below.



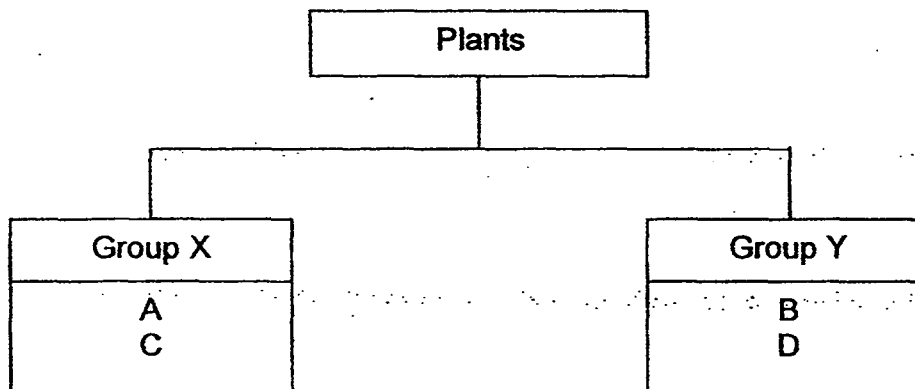
Which of the following best represents the durian tree?

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

8. The table below shows the characteristics of four plants, A, B, C and D. A tick (✓) shows that the plant has the characteristic.

Characteristic	Plant			
	A	B	C	D
found on land		✓		✓
reproduces by spores		✓		
bears flowers	✓			✓

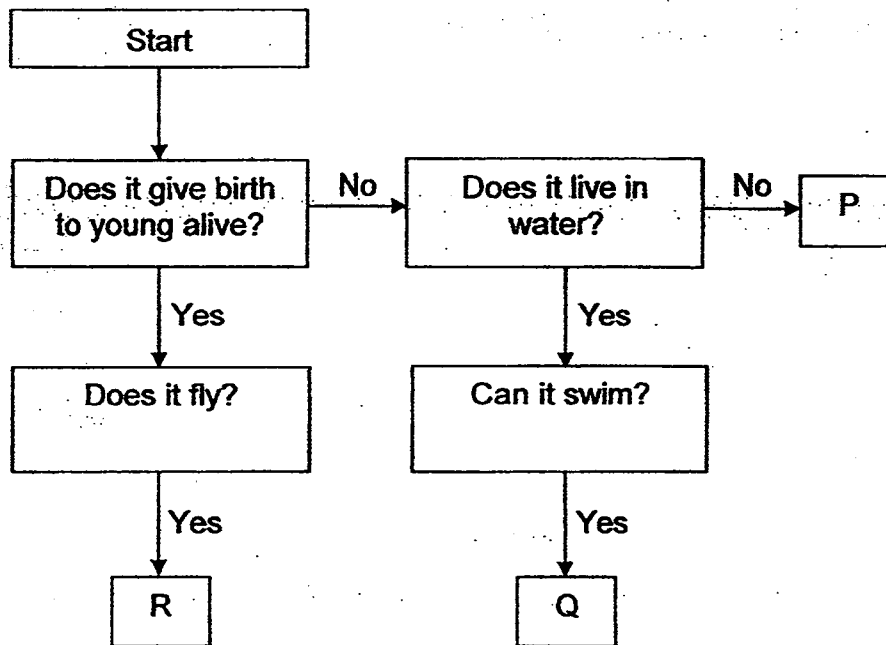
Using the information above, Desmond drew the following chart to classify them.



Which of the following best represents the headings for Group X and Group Y?

	Group X	Group Y
(1)	water plants	land plants
(2)	land plants	water plants
(3)	flowering plants	non-flowering plants
(4)	non-flowering plants	flowering plants

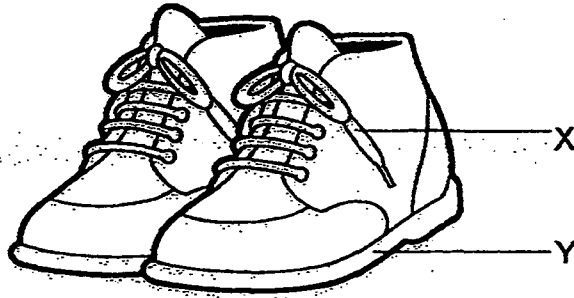
9. Study the flowchart below.



Which of the following could P, Q and R be?

	P	Q	R
(1)	elephant	goldfish	owl
(2)	platypus	guppy	eagle
(3)	chicken	clownfish	bat
(4)	monkey	dolphin	parrot

10. The diagram below shows a pair of school shoes.

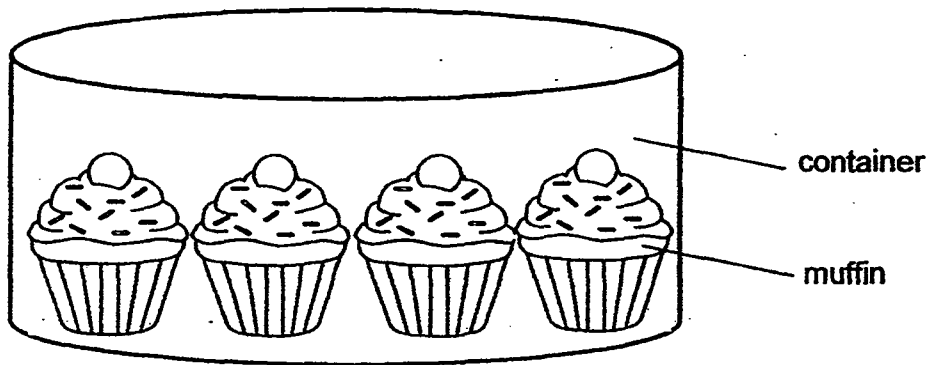


Which of the following correctly shows the material used for parts X and Y?

	Part X	Part Y
(1)	plastic	rubber
(2)	fabric	metal
(3)	fabric	rubber
(4)	plastic	metal

11. Eric needs to keep some muffins in a container. His mother reminds him to keep them in a container which has the following properties.

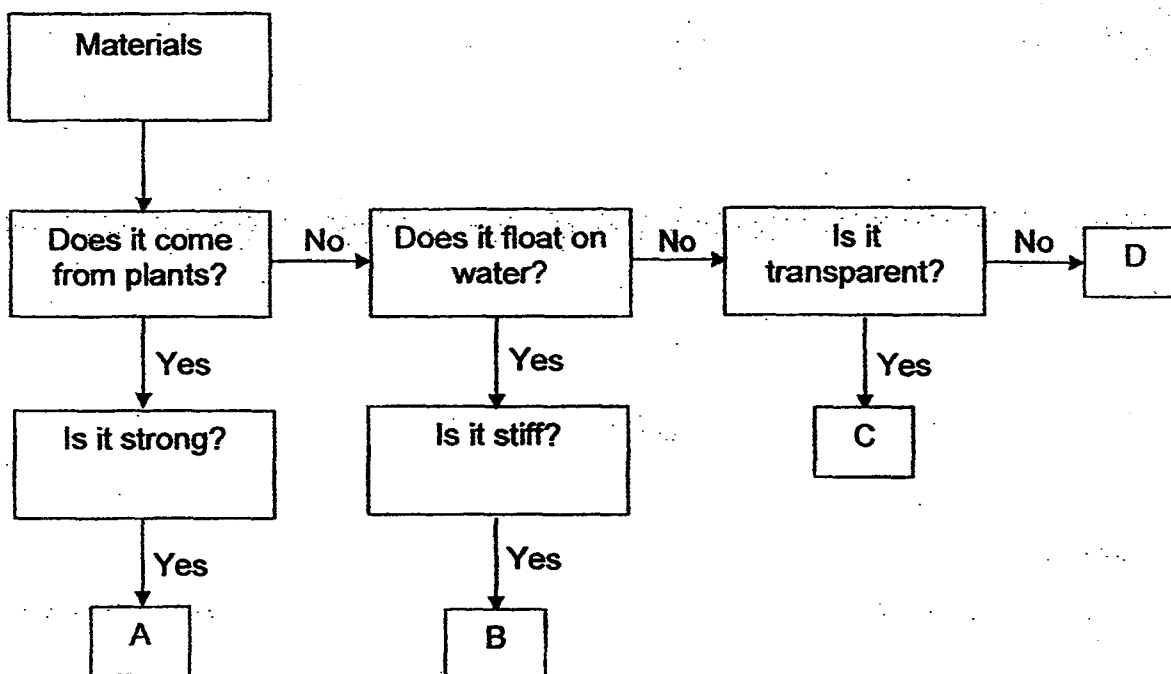
Properties of the container	
▪	Light
▪	Transparent
▪	Does not break easily



Which material should the container be made of?

- (1) glass
- (2) metal
- (3) plastic
- (4) ceramic

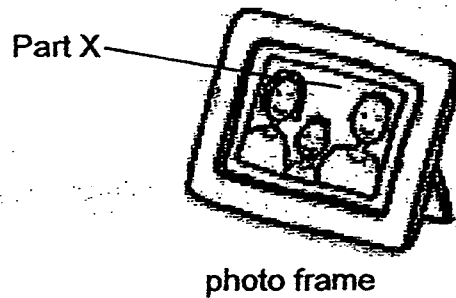
12. Study the flowchart below.



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

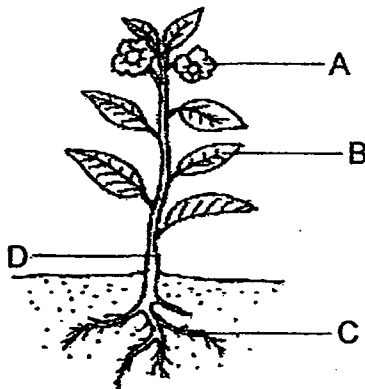
	A	B	C	D
(1)	car tyre	styrofoam ball	glass marble	metal key
(2)	metal key	styrofoam ball	glass marble	car tyre
(3)	car tyre	glass marble	styrofoam ball	metal key
(4)	styrofoam ball	car tyre	metal key	glass marble

13. The picture below shows a photo frame. Part X of the photo frame can be made of either plastic or glass so that Mandy can look at the photograph.



Which of the following properties of the glass and plastic makes them most suitable for making Part X of the photo frame?

- (1) Both are light.
 - (2) Both are strong.
 - (3) Both are flexible.
 - (4) Both are transparent.
14. The picture below shows a flowering plant.



Which of the following represents the part which holds the plant firmly to the soil?

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

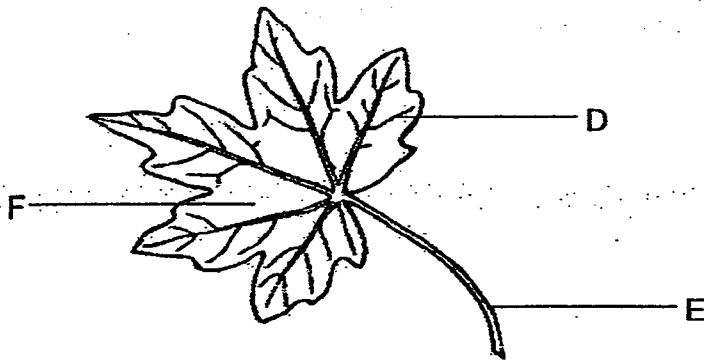
15. The picture below shows a papaya tree.



Based on the picture above, which statement best describes the papaya tree?

- (1) It is a flowering plant with a weak stem.
- (2) It is a flowering plant with a strong stem.
- (3) It is a non-flowering plant with a weak stem.
- (4) It is a non-flowering plant with a strong stem.

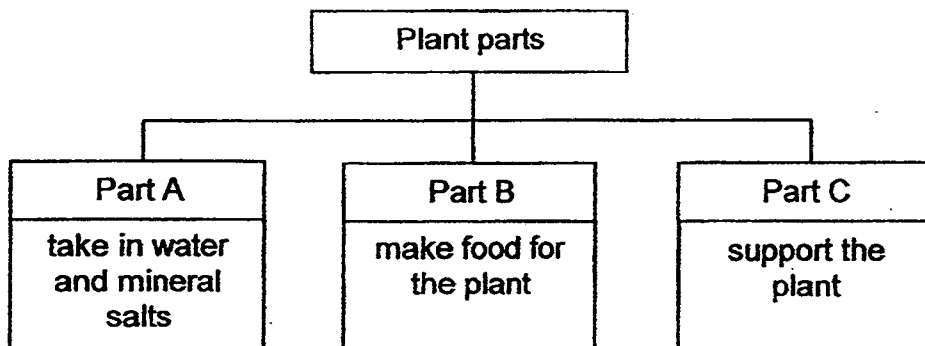
16. Study the leaf below.



Which of the following best represents D, E and F respectively?

	D	E	F
(1)	leaf vein	leaf blade	leaf stalk
(2)	leaf vein	leaf stalk	leaf blade
(3)	leaf stalk	leaf blade	leaf vein
(4)	leaf stalk	leaf vein	leaf blade

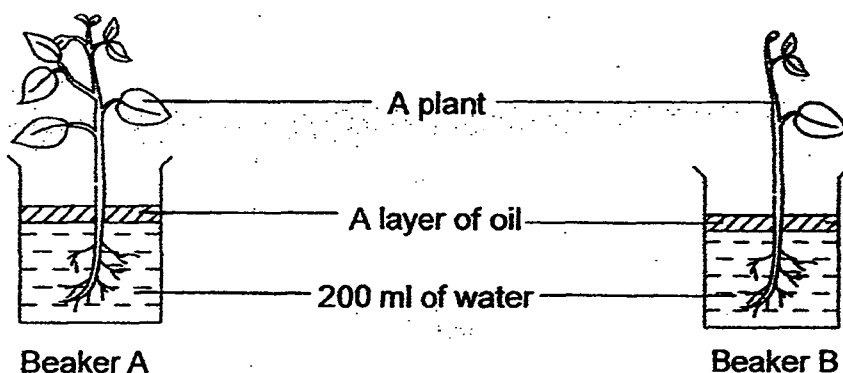
17. Study the classification table below.



Which of the following represents the plant parts correctly?

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

18. Carol set up an experiment to find out if the number of leaves affects the amount of water taken in by a plant. She filled two beakers with 200 ml of water and placed a plant in each beaker. She left the plants near an open window for two weeks.



She recorded the amount of water left in both beakers after two weeks as shown in the table below.

Amount of water left in Beaker A (ml)	Amount of water left in Beaker B (ml)
60	75

What can she conclude from the results of the experiment?

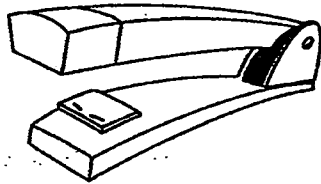
- (1) The greater the number of leaves the plant has, the lower the amount of water taken in by the plant.
- (2) The greater the number of leaves the plant has, the larger the amount of water taken in by the plant.
- (3) The smaller the number of leaves the plant has, the larger the amount of water taken in by the plant.
- (4) The number of leaves which the plant has does not affect the amount of water taken in by the plant.

19. Which of the following is not a system?

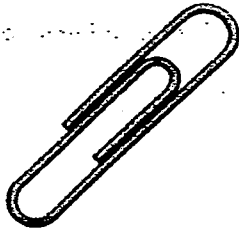
(1) laptop



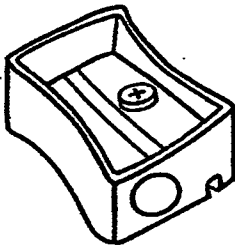
(2) stapler



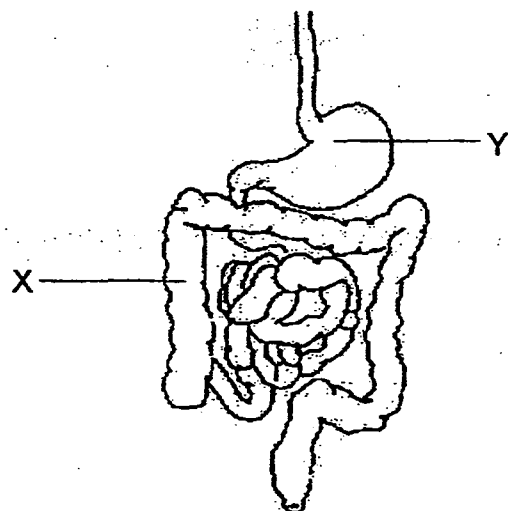
(3) paper clip



(4) sharpener



20. Study the diagram of the human digestive system below.



What are parts X and Y?

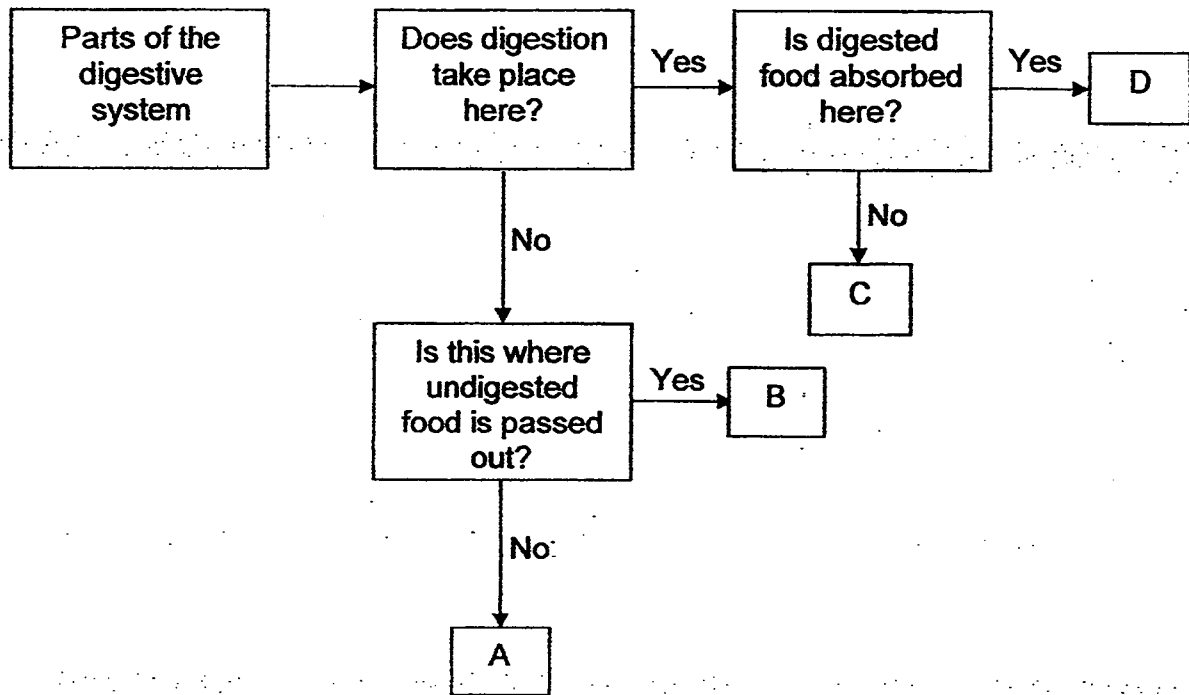
	Part X	Part Y
(1)	small intestine	stomach
(2)	small intestine	gullet
(3)	large intestine	stomach
(4)	large intestine	gullet

21. In the human digestive system, which parts contain digestive juices?

- A: Mouth
- B: Gullet
- C: Stomach
- D: Small intestine
- E: Large intestine

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

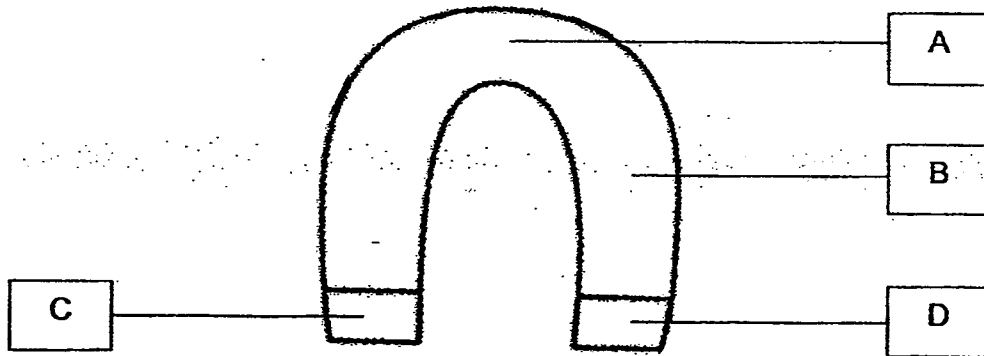
22. Study the flowchart below.



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

	A	B	C	D
(1)	stomach	large intestine	small intestine	anus
(2)	large intestine	anus	stomach	small intestine
(3)	large intestine	stomach	small intestine	anus
(4)	stomach	small intestine	anus	large intestine

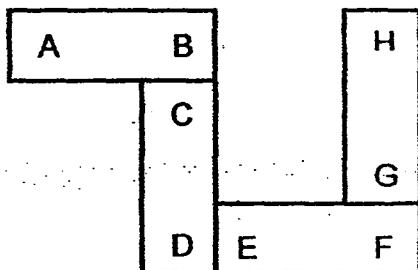
23. Celine lowered the magnet below into a container filled with iron pins.



Which parts of the magnet are most likely to attract the highest number of iron pins?

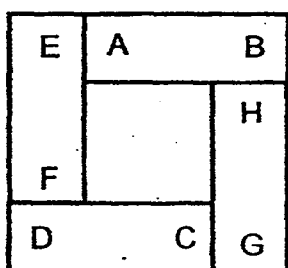
- (1) A and B
- (2) A and C
- (3) B and C
- (4) C and D

24. Study the arrangement of the 4 magnets as shown below.

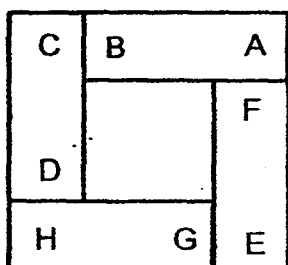


Which of the following arrangements is possible?

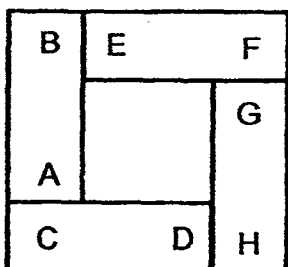
(1)



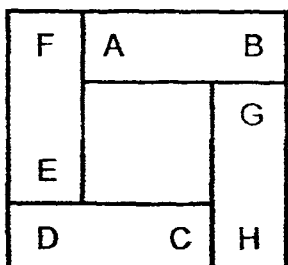
(2)



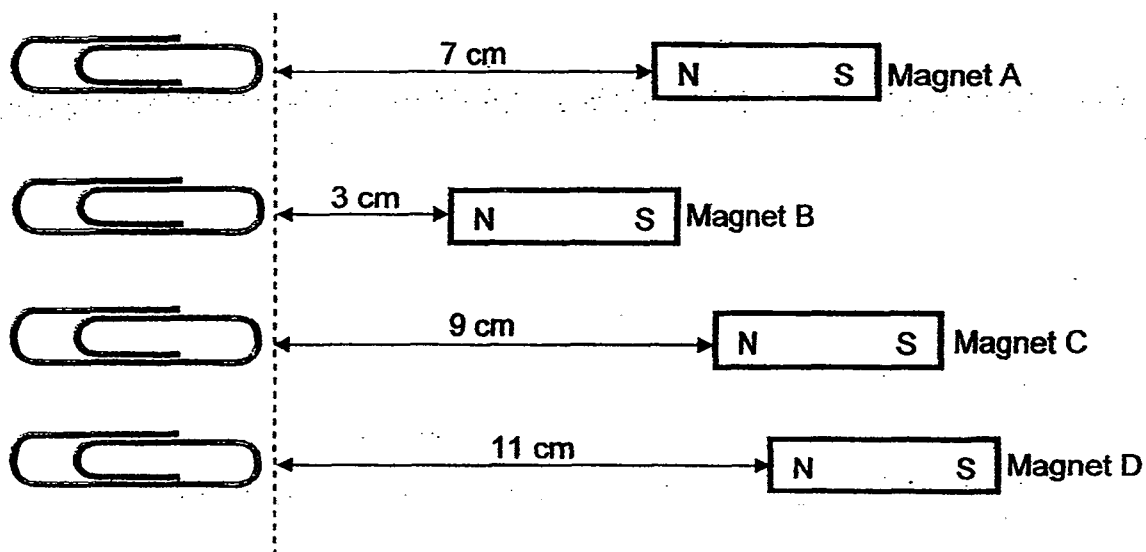
(3)



(4)



25. The diagram below shows the greatest distance at which the four magnets, A, B, C and D, will attract each identical paper clip.



Which of the following shows the magnets being arranged according to their magnetic strength, starting from the weakest magnet?

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



PRIMARY 3 END-OF-YEAR EXAMINATION 2015

Name : _____ () Date: 30 October 2015

Class : Primary 3 ()

Time: 7.50 a.m. to 9.15 a.m.

Parent's Signature : _____ Marks: _____ / 30

SCIENCE BOOKLET B

INSTRUCTIONS TO CANDIDATES

Write your name, register number and class.

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

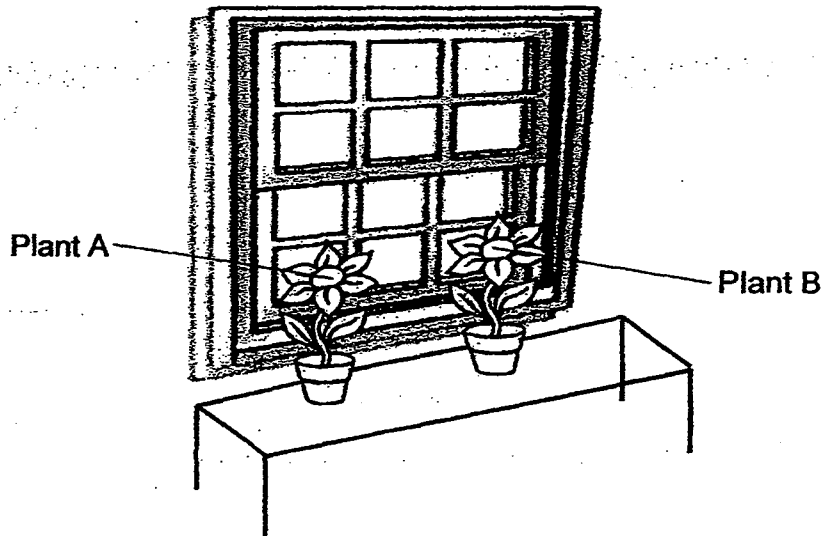
Follow all instructions carefully.

Answer all questions.

Booklet B (30 marks)

For the questions, 26 to 35, write your answers in the spaces provided.

26. Karen placed 2 similar potted plants, Plant A and Plant B, near a window. For a period of three weeks, she watered Plant B daily but did not water Plant A at all.



- (a) What will happen to Plant A after three weeks? Explain your answer. (1m)

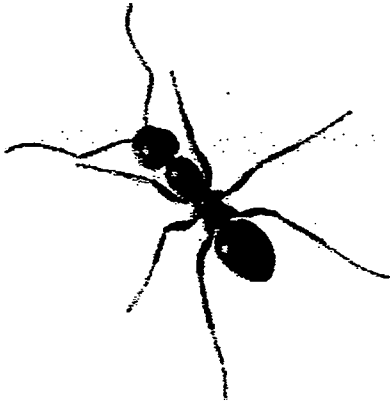
- (b) Match the following observations to the correct characteristics of the living things.

(2m)

Observations	
A frog lays many eggs in the pond.	■
A bird feeds on the worms on the ground.	■
A rabbit runs away quickly when it sees a tiger.	■
A female chick becomes a hen after three months.	■

Characteristics of living things	
■	Living things respond to changes.
■	Living things grow.
■	Living things need food to stay alive.
■	Living things reproduce.

27. Study the pictures below.



Ant



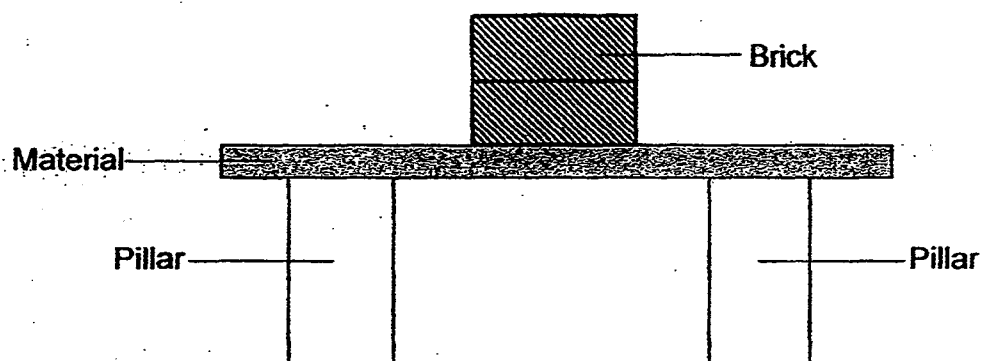
Dragonfly

- (a) Which animal group do the ant and the dragonfly belong to? (1m)

- (b) Based on the pictures, write down one similarity between the two animals. (Do not compare colour, shape and size.) (1m)

- (c) Based on the pictures, write down one difference between the two animals. (Do not compare colour, shape and size.) (1m)

28. Jenson set up an experiment to test the strength of four different materials, E, F, G and H. A piece of material was placed over two pillars. Bricks were added onto each piece of material till it broke.



The table below shows the number of bricks the material could hold before it broke.

Material used	Number of bricks it could hold before breaking
E	6
F	1
G	9
H	7

- (a) Which material is the strongest? Explain your answer. (1m)

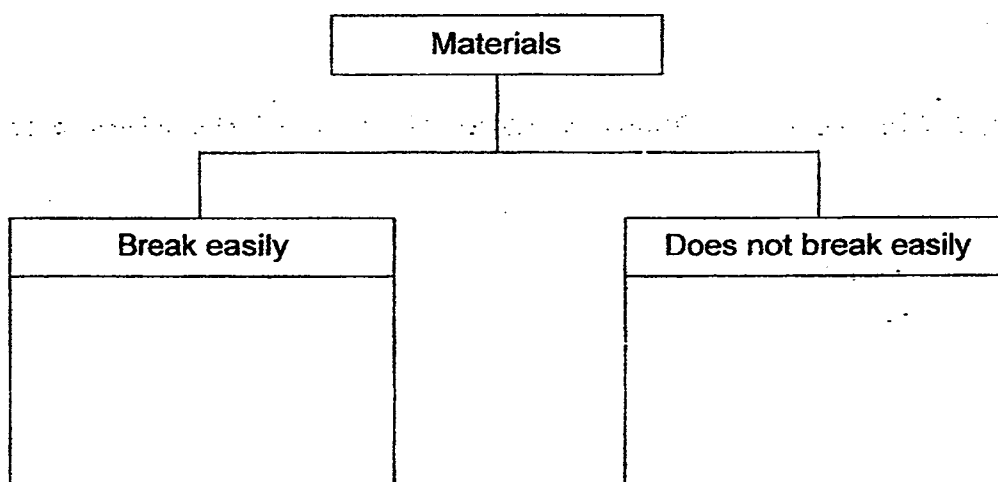
- (b) Tick (✓) the variables that must be kept the same in order for this experiment to be a fair test. (2m)

Variable	Variable that must be kept the same
Mass of each brick	
Material of the pillar	
Thickness of the material	
Type of the material used	

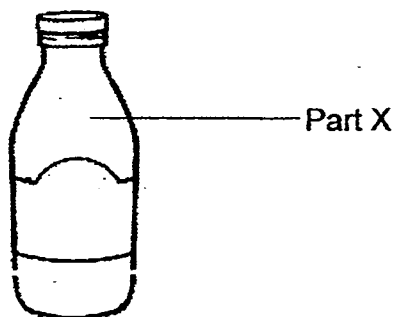
29. The table below shows the characteristics of four materials, A, B, C and D. A tick (✓) shows that the material has the characteristic.

Characteristic	Materials			
	A	B	C	D
It is strong.	✓	✓	✓	✓
It is flexible.	✓			✓
It is waterproof.		✓	✓	✓
It is transparent.		✓		✓
It breaks easily.		✓		

- (a) Use the information above to complete the classification diagram below by placing the four materials A, B, C or D under the correct heading. (2m)



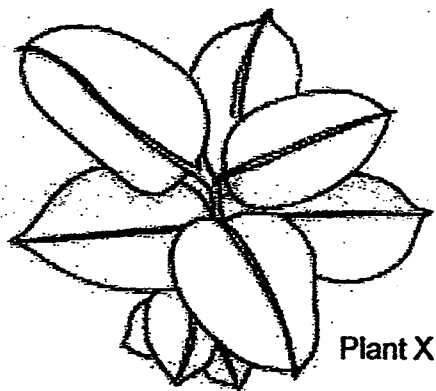
- (b)



Waterbottle

Why is Material C more suitable than Material A in making Part X of the waterbottle? (1m)

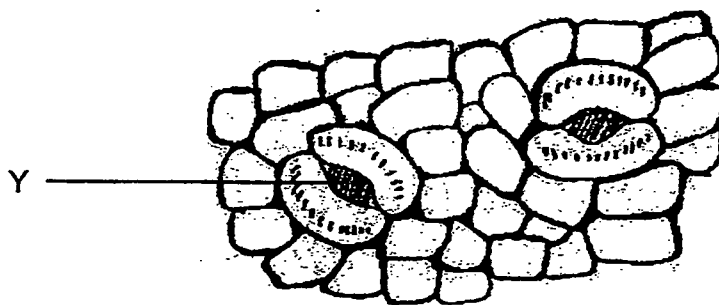
30. (a) The diagram below shows how the leaves of Plant X look like.



Explain why the leaves of Plant X are spread out in this way.

(1m)

- (b) The diagram below shows a magnified image of a part of a leaf.



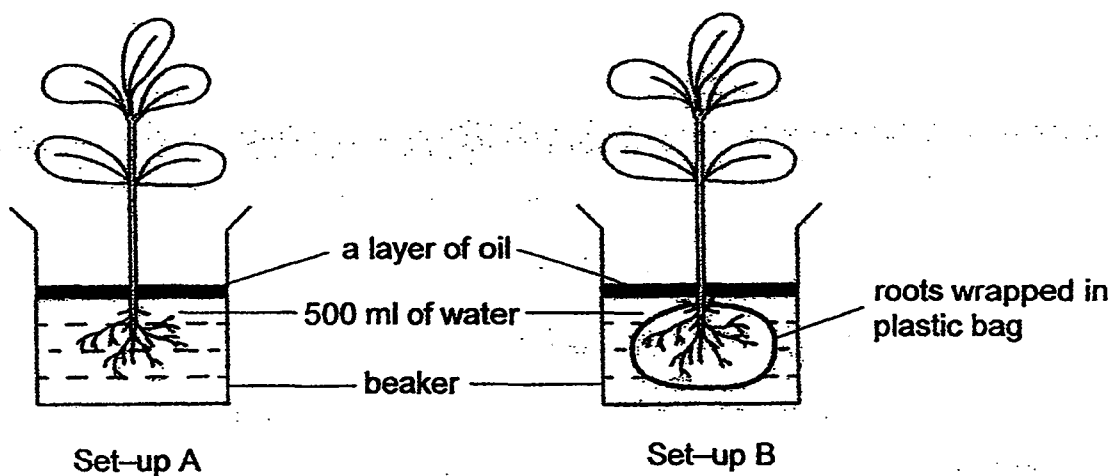
- (i) Name Part Y of the plant as shown in the picture above.

(1m)

- (ii) What is the function of Part Y?

(1m)

31. Kenneth wanted to find out if plants need water to survive. He set up an experiment shown in the diagram below.



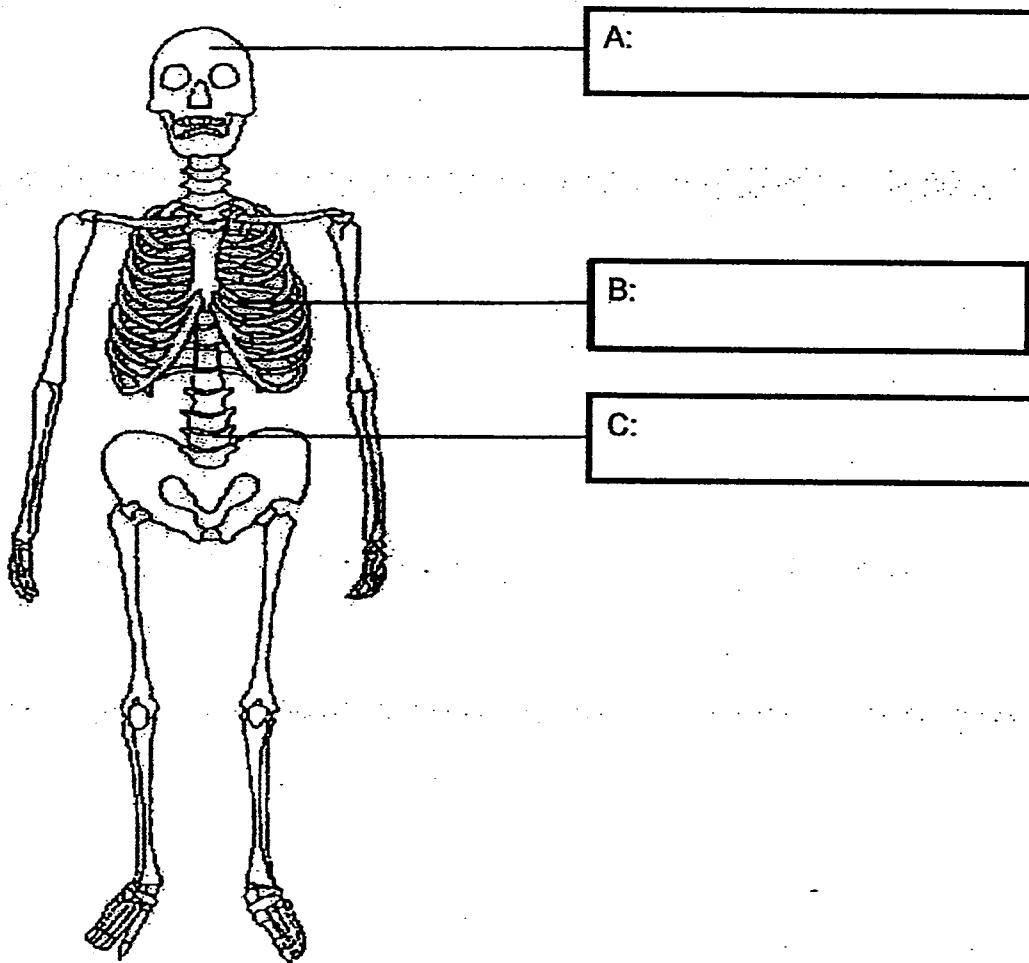
- (a) Kenneth then put the two beakers near a window and recorded the amount of water in each beaker every 3 days from Day 1 to Day 7 in the table below. Fill in the possible missing volumes of water in Day 4 and Day 7 by completing the empty spaces in the table. (1m)

Day	Volume of water (ml)	
Day 1	500	500
Day 4	(i)	500
Day 7	200	(ii)

- (b) Two weeks later, Kenneth realised that a plant in one of the set-ups had died. Which set-up, A or B, would that be? Explain why. (2m)

32. (a) Study the diagram below carefully. Identify the parts A, B and C.

(1½m)



- (b) Which part, A, B, or C, of the diagram above protects the brain?

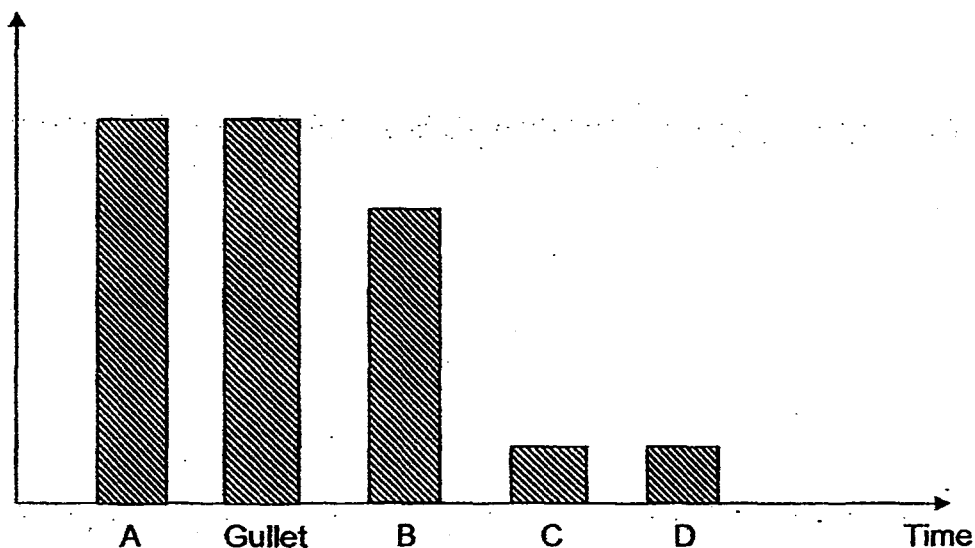
(½m)

- (c) Name the other system which needs to work with the skeletal system to enable a body to move.

(1m)

33. Belinda just ate a pear. The bar graph below shows the amount of undigested pear as it leaves each organ (A, B and C and D) of her digestive system over 4 hours.

Amount of undigested food



- (a) Identify the organs A, B, C and D of the digestive system.

(2m)

A: _____

B: _____

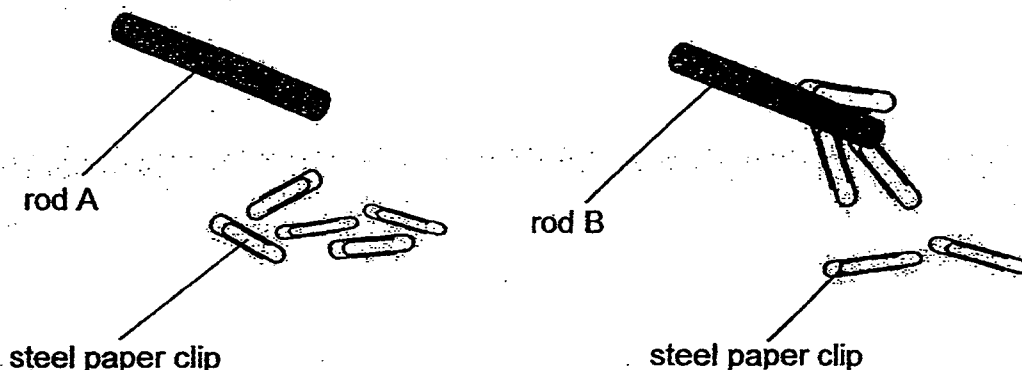
C: _____

D: _____

- (b) Explain why the amount of undigested food in gullet and organ A was the same

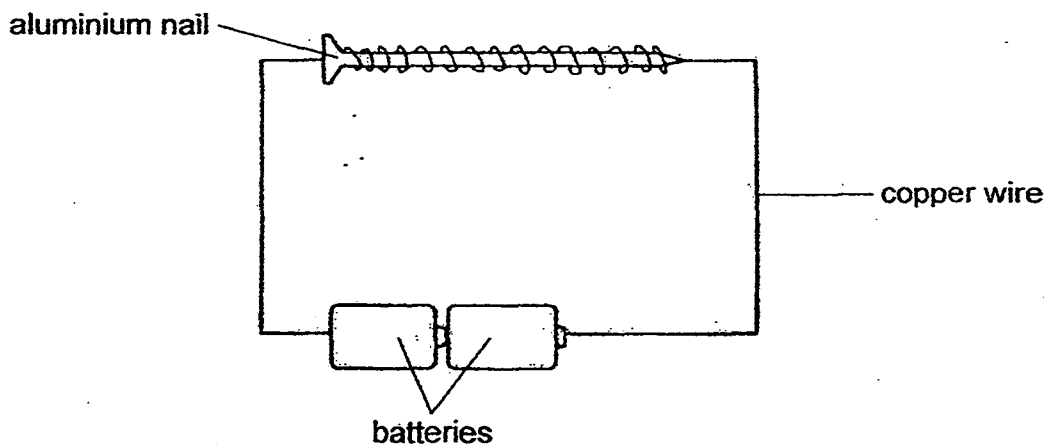
(1m)

34. (a) Bryan had two similar rods, A and B. He stroked both rods with a bar magnet and placed each rod above some steel paper clips. The diagram below shows the result of his test.



Which rod, A or B, could be made from a magnetic material? Explain your answer. (1m)

- (b) Bryan then arranged the set-up as shown below to make an electromagnet.

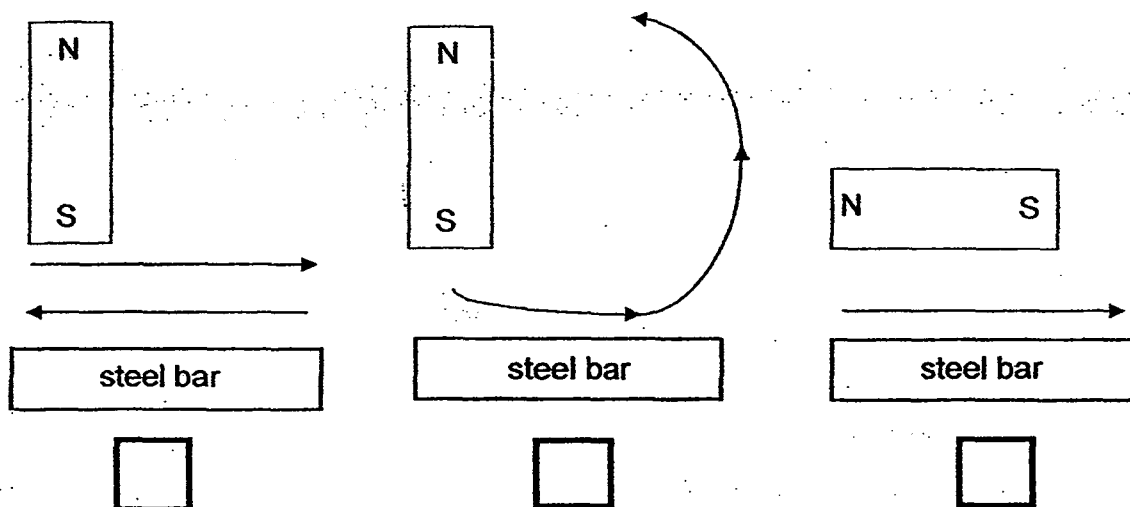


- (i) The nail was then brought near the steel paper clips. However, the nail could not attract any steel paper clips. Explain why. (1m)

- (ii) What must Bryan do to his set-up so that the nail could attract the steel paper clips? (1m)

35. Regina used the stroke method to magnetise a piece of steel bar.

- (a) Which stroking method below allows the steel bar to be magnetised? Put a tick (✓) for the correct method in the box provided. (1m)



- (b) She repeated the same experiment a few times but varied the number of strokes on the bar. The table below shows the number of iron pins the magnetised bar attracted.

Number of strokes	Number of iron pins attracted
30	3
40	5
50	6
60	9

- (i) What is the relationship between the number of strokes and the magnetic strength of the bar? (1m)

- (ii) What must Regina do to the bar in order to attract 15 iron pins?

– End of Paper –

EXAM PAPER 2015**LEVEL : PRIMARY 3****SCHOOL : TAO NAN SCHOOL****SUBJECT : SCIENCE****TERM : SA2**

Q 1	Q 2	Q 3	Q 4	Q 5	Q 6	Q 7	Q 8	Q 9	Q 10
4	1	3	1	2	3	4	1	3	3
Q 11	Q 12	Q 13	Q 14	Q 15	Q 16	Q 17	Q 18	Q 19	Q 20
3	1	4	4	2	2	4	2	3	3
Q 21	Q 22	Q 23	Q 24	Q 25					
1	2	4	4	3					

Q26a. Plant A will die, there is no water for the plant to stay alive.

Q26b. **SEE CHART** - next page

Q27a. The insects group. Q27b. Both have six legs.

Q27c. The ant has no wings while the dragonfly has wings.

Q28a. Material G. It can hold the most number of bricks until it broke:

Q28b. Mass of each brick / Material of the pillar / Thickness of the material

Q29a. Break easily – B Q29a. Does not break easily – A , C , D

Q29b. Material C is waterproof.

Q30a. The leaves can trap more sunlight to make more food for the plant.

Q30b. (i) Stomata (ii) It helps to exchange gases.

Q31a. (i) 400 (ii) 500

Q31b. Set up B. The roots were wrapped with plastic bag which is waterproof so the plant cannot take in water.

Q32a. A: skull B : rib cage C: back bone

Q32b. Part A protects the brain.

Q32c. The muscular system.

Q33a. A: Mouth B: Stomach C: Small intestine D: Large intestine.

Q33b. The gullet does not have any digestive juices to digest food.

Q34a. Rod B. It can attract the steel paper clips but rod A did not attract anything.

Q34b. (i) The nail is not made up of a magnetic material.

Q34b. (ii) Change the aluminum nail to a steel nail.

Q35a. Steel bar

Q35b (i) The higher the number of strokes, the stronger the magnetic strength of the bar.

Q35b (ii) She can use the magnet to stroke more than 60 times on the bar.

Q26 b.

Observations		Characteristics of living things
A frog lays many eggs in the pond.	■	Living things respond to changes.
A bird feeds on the worms on the ground.	■	Living things grow.
A rabbit runs away quickly when it sees a tiger.	■	Living things need food to stay alive.
A female chick becomes a hen after three months.	■	Living things reproduce.

35. Regina used the stroke method to magnetise a piece of steel bar.

(a) Which stroking method below allows the steel bar to be magnetised? Put a tick (✓) for the correct method in the box provided. (1m)

