



# RED SWASTIKA SCHOOL

## SCIENCE 2015 SEMESTRAL EXAMINATION 2 PRIMARY 3

Name : \_\_\_\_\_ (      )

Class : Primary 3/ \_\_\_\_\_

Date : 2 November 2015

### BOOKLET A

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

Booklet A: 24 questions (48 marks)

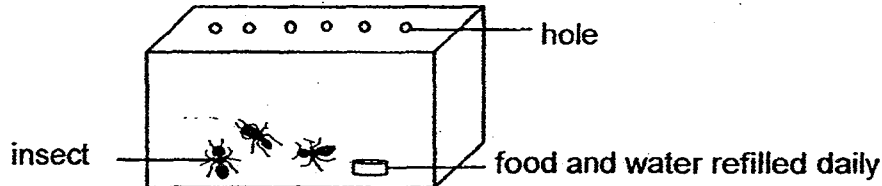
Note:

1. Do not open the booklet until you are told to do so.
2. Read carefully the instructions given at the beginning of each part of the booklet.
3. Do not waste time. If the question is too difficult for you, go on to the next question.
4. Check your answers thoroughly and make sure you attempt every question.
5. In this booklet, you should have the following:
  - a. Page 1 to Page 14
  - b. Questions 1 to 24

### Section A:

For Questions 1 to 24, choose the most suitable answer and shade its number in the OAS provided.

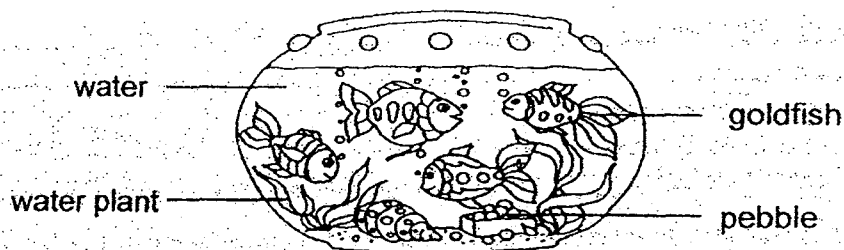
1. Thomas kept three insects in a box. The box was placed in the Science room. He recorded his observation in the table below.



| Day | Number of insects |
|-----|-------------------|
| 0   | 3                 |
| 5   | 1                 |
| 10  | 0                 |

Based on his observation, what characteristic of living things is shown by the insects at the end of day 10?

- (1) Living things die.
  - (2) Living things grow.
  - (3) Living things reproduce.
  - (4) Living things respond to changes.
2. Mark bought some goldfish and placed them inside a tank as shown below.



Which of the following is correctly classified?

|     | Living things            | Non-living things        |
|-----|--------------------------|--------------------------|
| (1) | goldfish and water       | water plant and pebble   |
| (2) | goldfish and pebble      | water plant and water    |
| (3) | water plant and goldfish | pebble and water         |
| (4) | pebble and water         | water plant and goldfish |

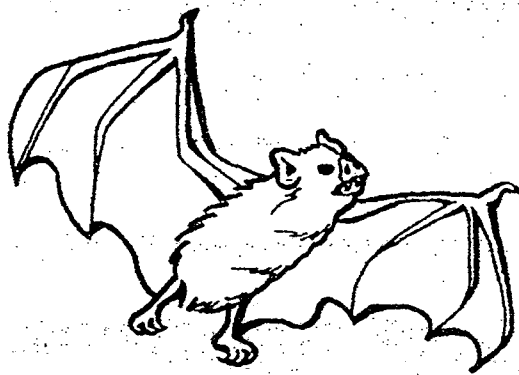
3. The table below shows the characteristics of four things.

|         | needs air, food and water to survive | responds to changes | reproduces |
|---------|--------------------------------------|---------------------|------------|
| chicken | yes                                  | yes                 | no         |
| clock   | no                                   | yes                 | yes        |
| fern    | yes                                  | yes                 | no         |
| yeast   | yes                                  | yes                 | yes        |

Which one of the following things in the table is correctly described?

- (1) chicken
- (2) clock
- (3) fern
- (4) yeast

4. The picture below shows a bat.



A bat is not classified in the same group of animals as a bird. Some students made the following statements to try and explain why.

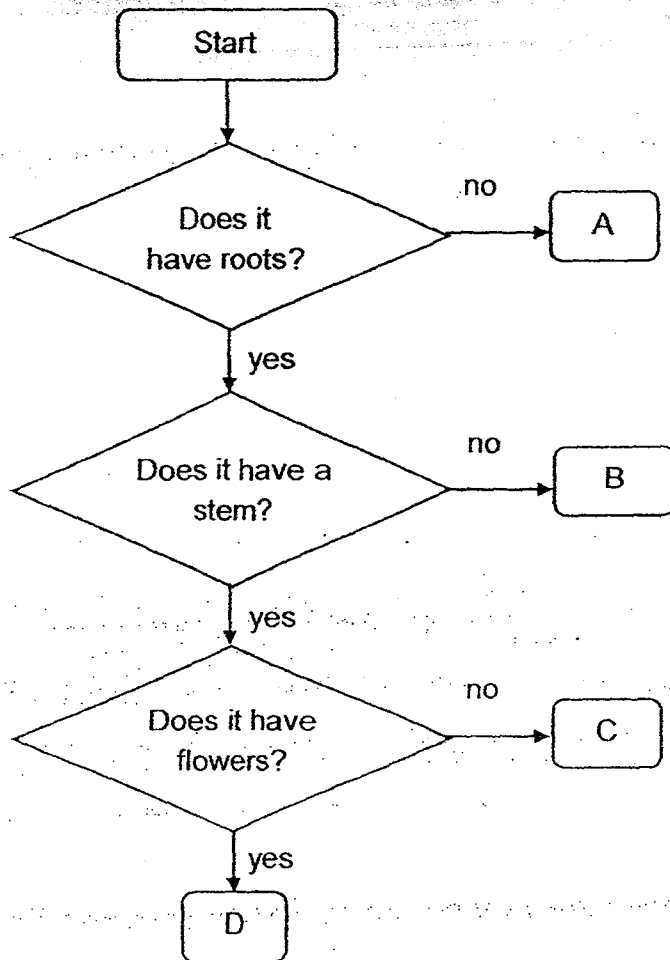
- A: A bat has tiny wings but a bird has large wings.
- B: A bat has hair as its body covering but a bird has feathers.
- C: A bat has short legs but a bird has long legs.

Which of the statement(s) is/are the correct explanation?

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

5. Study the flow chart below carefully.

The letters A, B, C and D represent four different organisms.



Which of the following best represents a mushroom?

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

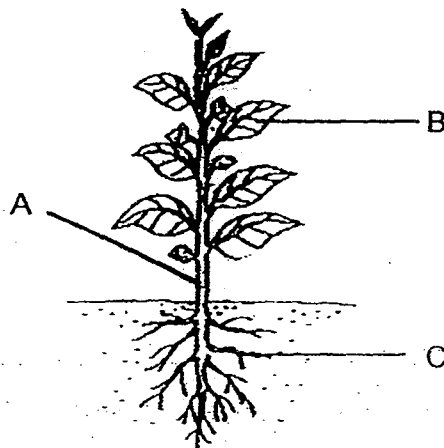
6. Which of the following best describes the function of the teeth?

- (1) It breaks down food into smaller pieces.
- (2) It absorbs water from the undigested food.
- (3) It allows digested food to be absorbed into the blood stream.
- (4) It connects the stomach to the small intestine.

7. Which of the following is not part of the circulatory system?

- (1) heart
- (2) brain
- (3) blood
- (4) blood vessels

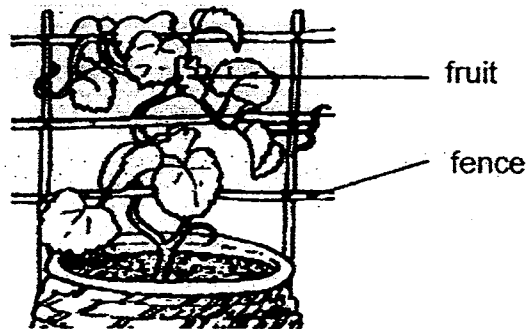
8. Study the picture below carefully.



What do A, B and C represent?

|     | A    | B    | C    |
|-----|------|------|------|
| (1) | leaf | root | stem |
| (2) | root | leaf | stem |
| (3) | stem | leaf | root |
| (4) | root | stem | leaf |

9. Lebron discovered plant Y growing up the school fence as seen below.

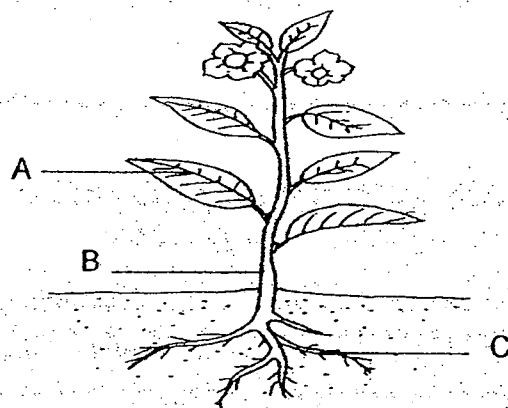


Which of the following statements are true about this plant?

- A: Plant Y can make food.
- B: Plant Y has a weak stem.
- C: Plant Y is a flowering plant.

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

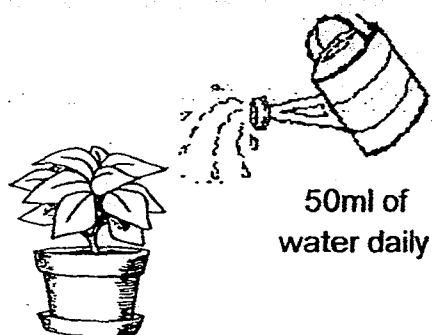
10. Study the diagram shown.



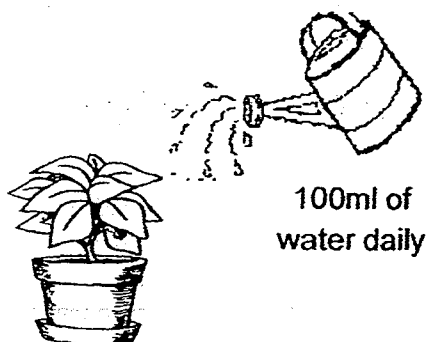
Which of the following is correct?

|     | Absorbs water | Keeps the plant upright | Makes food for the plant |
|-----|---------------|-------------------------|--------------------------|
| (1) | B             | C                       | A                        |
| (2) | C             | A                       | B                        |
| (3) | C             | B                       | A                        |
| (4) | B             | A                       | C                        |

11. Lee Sin has two similar potted plants with a height of 20 cm. She placed them in the same location in a garden but watered them with different amount of water daily.



Plant A



Plant B

At the end of two weeks, she measured the height of each plant and recorded them in the table below.

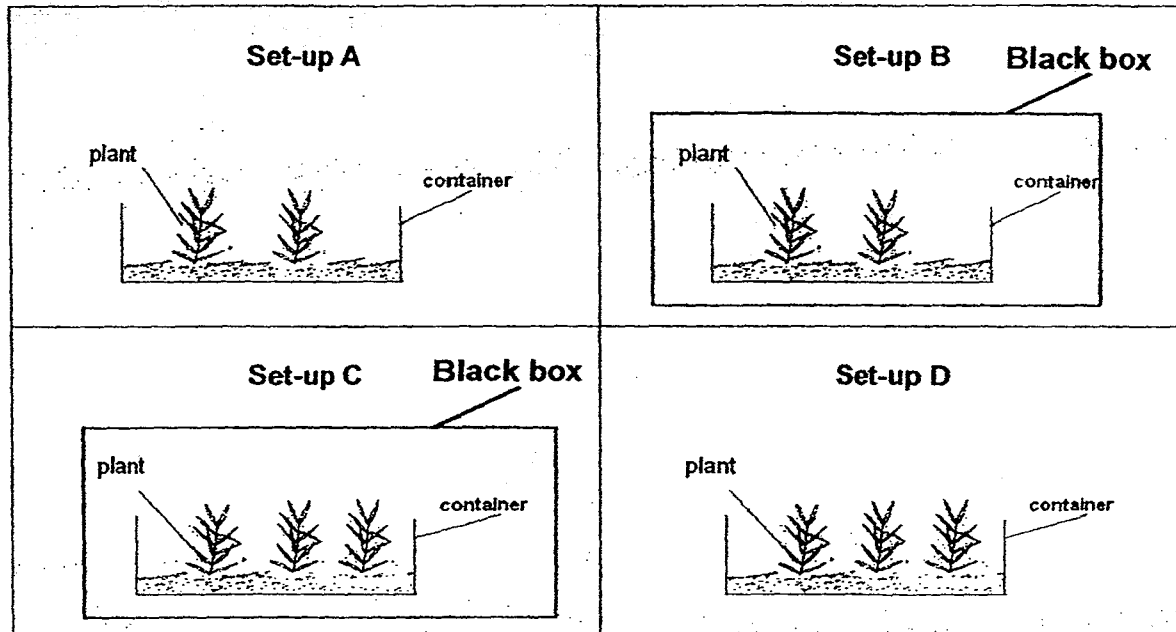
|         | Height of plant |
|---------|-----------------|
| Plant A | 25 cm           |
| Plant B | 30 cm           |

What is the aim of Lee Sin's experiment?

To find out if the \_\_\_\_\_ affects the growth of the plant.

- (1) amount of fertiliser used
- (2) amount of water used
- (3) location of the plants
- (4) type of plant

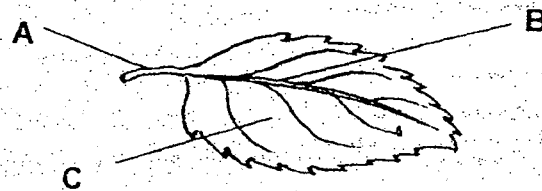
12. Sammy wanted to find out if the amount of light affects the growth of the plant.



Which two set-ups should Sammy use to ensure it is a fair test?

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

13. Four pupils are tasked to identify the different parts of the leaf as shown below.

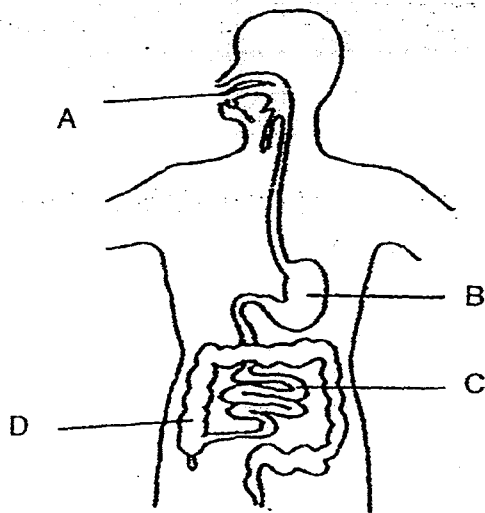


Which of the following correctly identify the different parts of the leaf?

|     | A     | B     | C     |
|-----|-------|-------|-------|
| (1) | vein  | blade | stalk |
| (2) | stalk | vein  | blade |
| (3) | stalk | blade | vein  |
| (4) | blade | vein  | stalk |

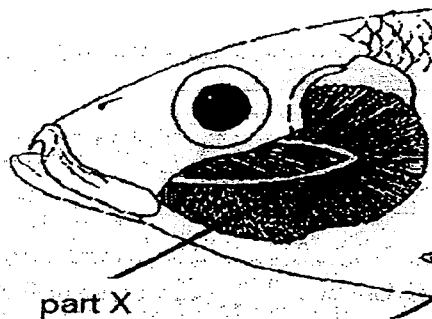


14. The diagram below shows the human digestive system.



At which parts of the system are digestive juices added?

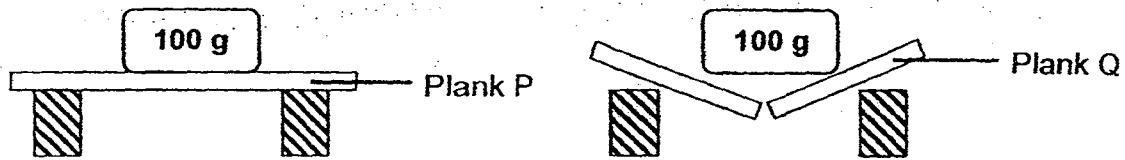
- (1) A and B only
  - (2) B and C only
  - (3) C and D only
  - (4) A, B and C only
15. The diagram shows the head of a fish. Part X is classified in the same body system as the lungs in the human body system.



Which of the following correctly identify part X and the body system part X is classified under?

|     | Part X | Body System |
|-----|--------|-------------|
| (1) | Gills  | Circulatory |
| (2) | Gills  | Respiratory |
| (3) | Fins   | Muscular    |
| (4) | Fins   | Skeletal    |

16. James conducted an experiment with two planks. Each plank is made of a different material. The length and thickness of each plank is the same. The diagrams show what happened after a 100g load was placed on each plank.

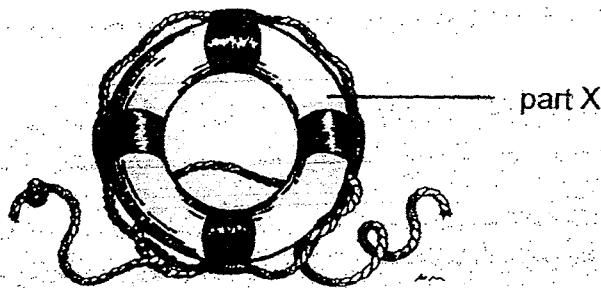


What can James conclude about plank P and Q?

Plank P is \_\_\_\_\_ than Plank Q.

- (1) heavier
- (2) lighter
- (3) weaker
- (4) stronger

17. The diagram shows a life buoy which is used to save people from drowning in the swimming pool.

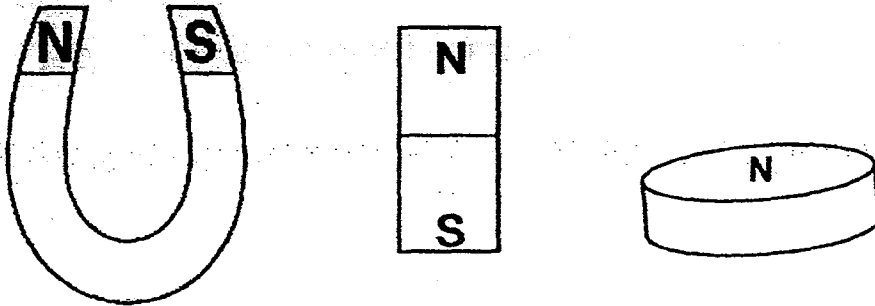


For the material used to make part X, what is the most important property it must have?

The material must be \_\_\_\_\_.

- (1) heavy
- (2) transparent
- (3) waterproof
- (4) able to sink in water

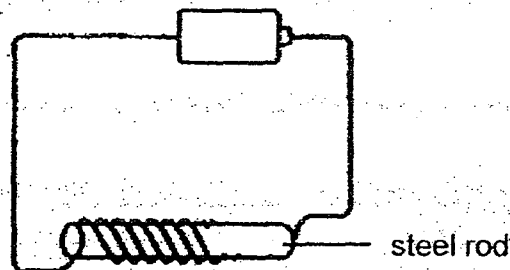
18. Bernice is given a box containing the magnets shown.



Which one of the following types of magnets is not found in the box?

- (1) bar magnet
- (2) ring magnet
- (3) button magnet
- (4) horseshoe magnet

19. Olivia has a set-up as shown.



What can she do to increase the magnetic strength of the steel rod?

- A: Add one more battery to the set-up.
- B: Coil the wires around the battery.
- C: Increase the number of coils of wire around the steel rod.

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

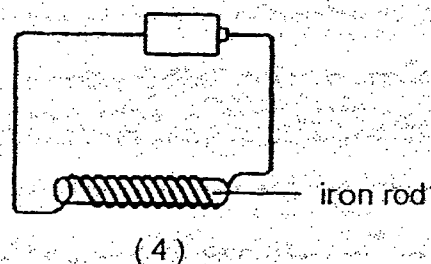
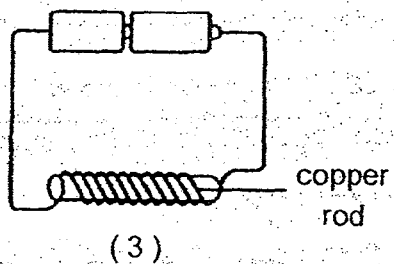
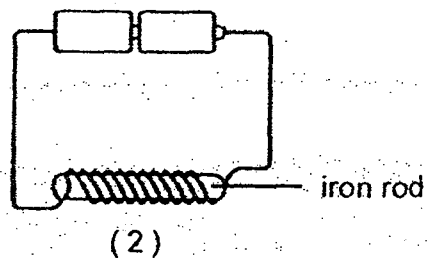
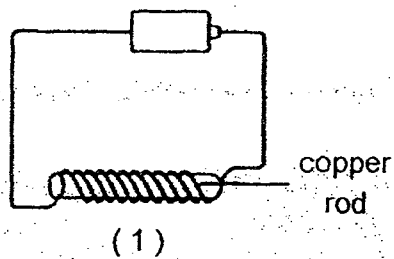
20. Ali recorded the interactions a magnet has with three different objects in the table shown.

| Object | Attracted by the magnet | Repelled by the magnet |
|--------|-------------------------|------------------------|
| A      | √                       | √                      |
| B      | √                       | X                      |
| C      | X                       | X                      |

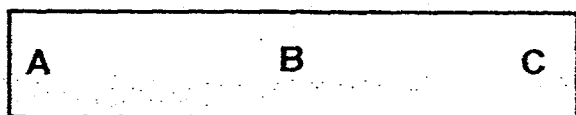
Which of the objects are made of magnetic materials?

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

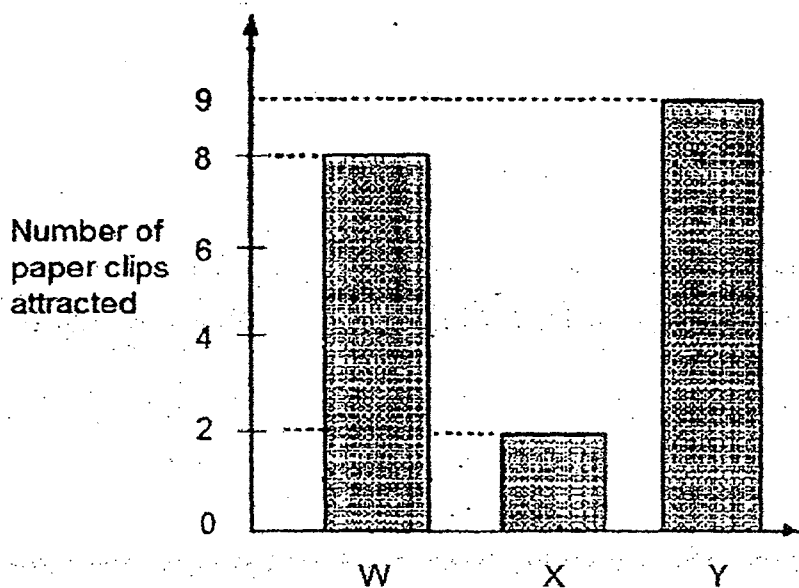
21. Which of the following electromagnet has the greatest magnetic strength?



22. Minah bought a new bar magnet. She tested the magnetic strength of the bar magnet by putting some steel paper clips at parts A, B and C of the magnet respectively.



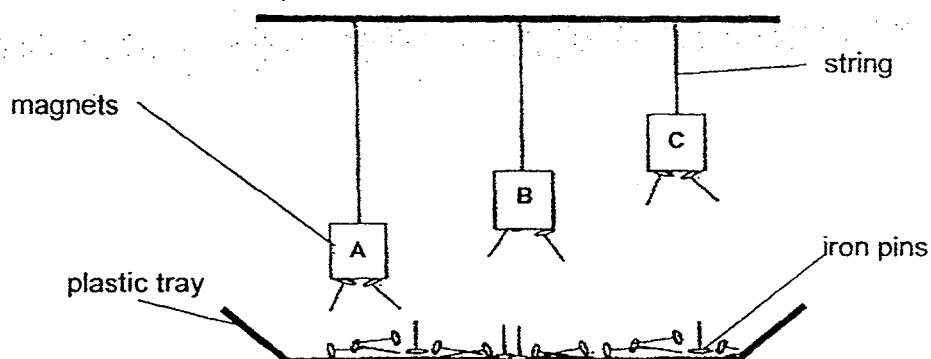
She then recorded the number of steel paper clips attracted to each part of the magnet in the graph below. However, she mixed up the results.



Which one of the following shows the most likely number of paper clips attracted by each part of the magnet?

|     | Part A | Part B | Part C |
|-----|--------|--------|--------|
| (1) | W      | X      | Y      |
| (2) | X      | W      | Y      |
| (3) | Y      | W      | X      |
| (4) | W      | Y      | X      |

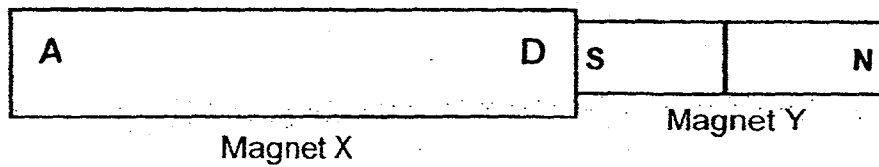
23. Jacqueline wanted to find out whether the distance between the magnet and the iron pins affect the number of iron pins attracted by the magnets. She placed three different types of magnets, A, B and C, at different heights as shown below.



What should Jacqueline do to ensure her set-up is a fair one?

- (1) She must use strings of equal length.
- (2) She must change the iron pins to silver pins.
- (3) She must replace the plastic tray with a wooden tray.
- (4) She must use the same type of magnets.

24. Magnet X has two unknown poles A and D. The diagram shows the result when magnet Y was placed near magnet X.



Jane then cut magnet X into two pieces as seen below. When it is cut, it became two separate magnets.



Which one of the following arrangements of the magnets is correct?

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

**End of Section A**

**Please check your answers.**







# RED SWASTIKA SCHOOL

## SCIENCE 2015 SEMESTRAL EXAMINATION 2 PRIMARY 3

Name : \_\_\_\_\_ (      )

Class : Primary 3/ \_\_\_\_\_

Date : 2 November 2015

### BOOKLET B

10 Questions  
32 Marks

In this booklet, you should have the following:

- a. Page 15 to Page 26
- b. Questions 25 to 34

### MARKS

|           | OBTAINED | POSSIBLE |
|-----------|----------|----------|
| BOOKLET A |          | 48       |
| BOOKLET B |          | 32       |
| TOTAL     |          | 80       |

Parent's Signature : \_\_\_\_\_

**Section B:**

**Answer all questions in the space provided.**

25. Charlie accidentally left two donuts in a sealed bag before he went for a one week vacation. When he came back home, he saw some black spots growing on the donuts as seen in diagram 1.

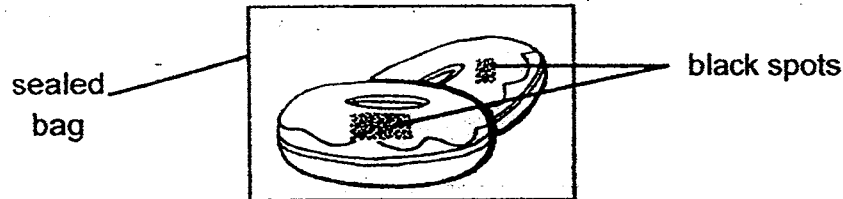


Diagram 1

- (a) From reading his Science textbook, Charlie knows that the black spots contain bread mould. What other living things can be found on the black spots? (1m)

Charlie left the donuts on the table for another week to observe what would happen to them.

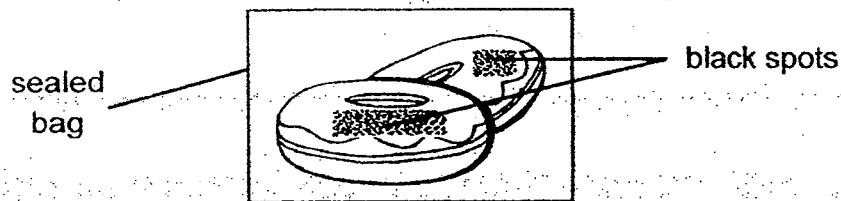
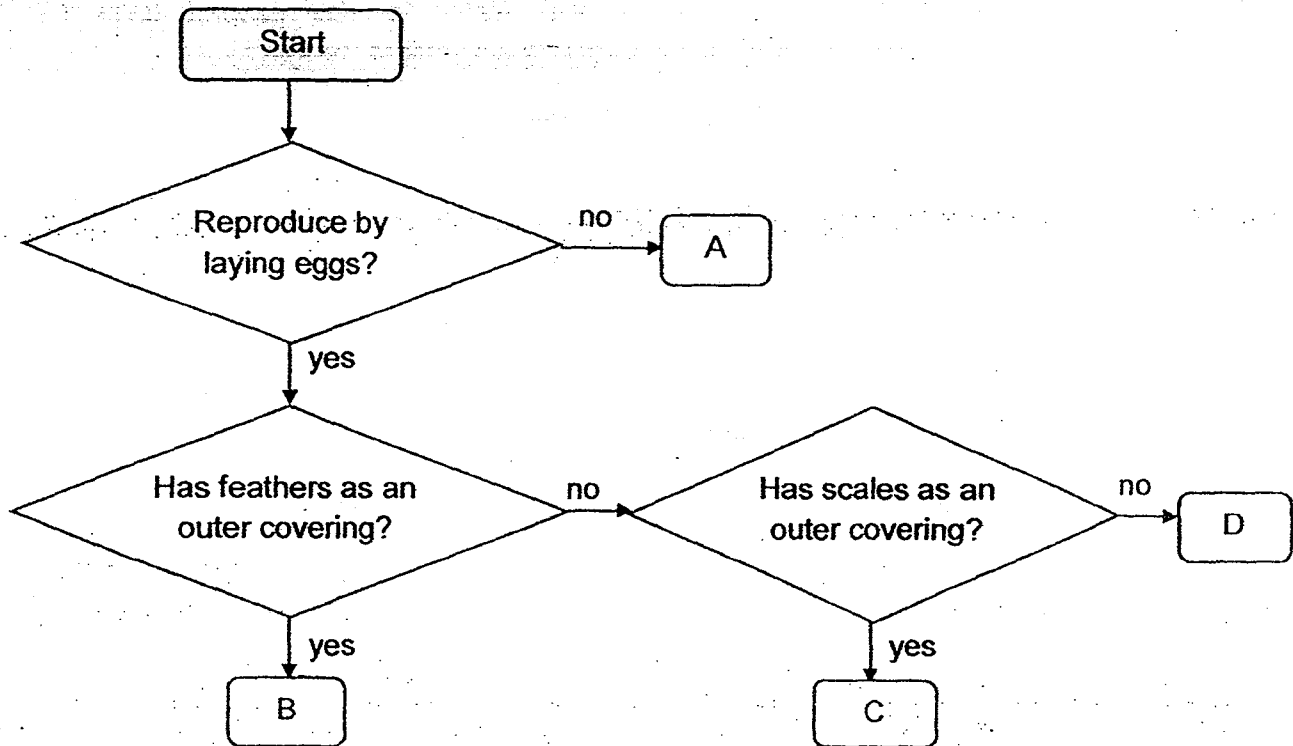


Diagram 2

- (b) Based on diagram 2, describe the change in the amount of bread mould on the donuts after one more week. (1m)

- (c) What characteristic of living things is shown by the change in the amount of bread mould? (1m)

26. Study the flow chart.



(a) Based on the flow chart, identify the characteristics of animal B. (1m)

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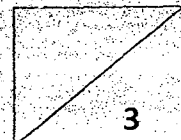
(b) State a difference between animal A and animal D. (1m)

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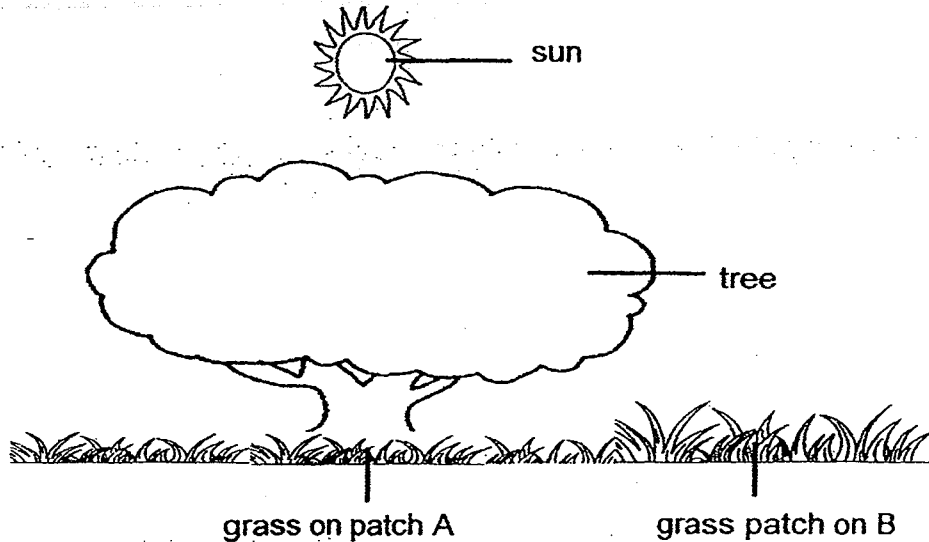
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(c) Which animal (A, B, C or D) would best represent a goldfish? (1m)

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27. One month ago, Ahmad cut all the grass in the garden to the same height. He added the same amount of fertilisers and water to the ground daily. One month later, he observed the following during his walk in the garden.



- (a) He observed that the grass on patch A under the tree were shorter than the grass on patch B. Explain why. (2m)

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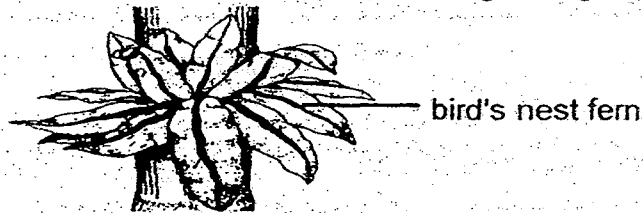


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He took a closer look at the tree and saw a bird's nest fern growing on its trunk.

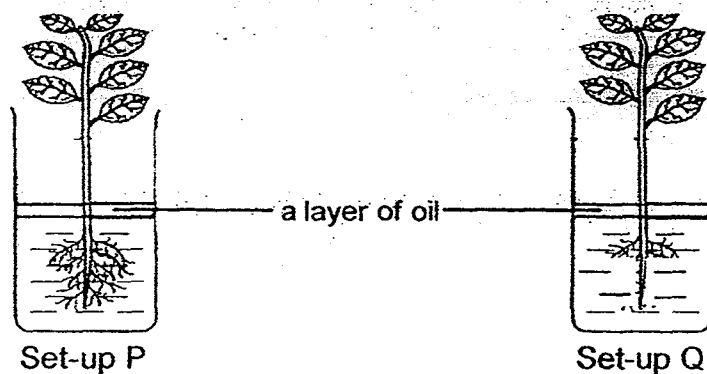


- (b) Study the two statements Ahmad made about the bird's nest fern.

Tick ( ✓ ) the correct box for both parts (i) and (ii). (1m)

|  | True | False |
|--|------|-------|
| (i) Bird's nest fern is not able to make its own food. |      |       |
| (ii) Bird's nest fern reproduces by seeds.             |      |       |

28. Hassan has two set-ups, P and Q. He placed them at the same location.



He observed the set-ups for the next three days and recorded the amount of water absorbed by the plants in both set-ups.

| Day                              | 0   | 1   | 2   | 3   |
|----------------------------------|-----|-----|-----|-----|
| Volume of water in Set-up P (ml) | 300 | 260 | 220 | 180 |
| Volume of water in Set-up Q (ml) | 300 | 280 | 260 | 240 |

- (a) What can be observed about the volume of water in set-up P compared to set-up Q at the end of 3 days? (1m)

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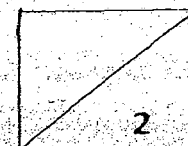
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- (b) What can he conclude about the experiment? (1m)

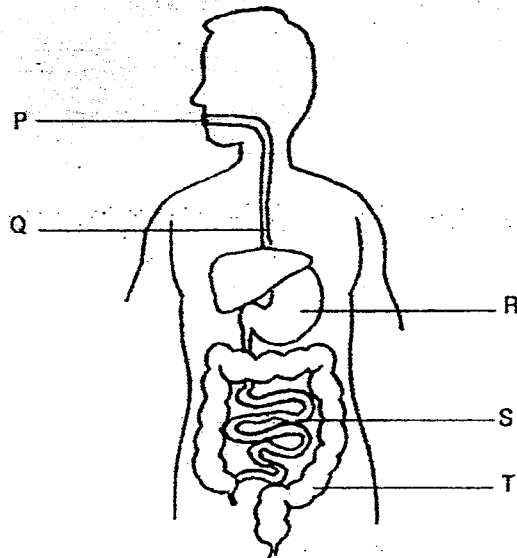
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29. Study the human body system shown.



(a) Name the part labelled R. (1m)

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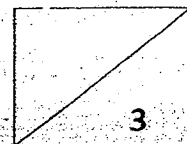
(b) At which part, P, Q, R, S or T, is digestion of food completed? (1m)

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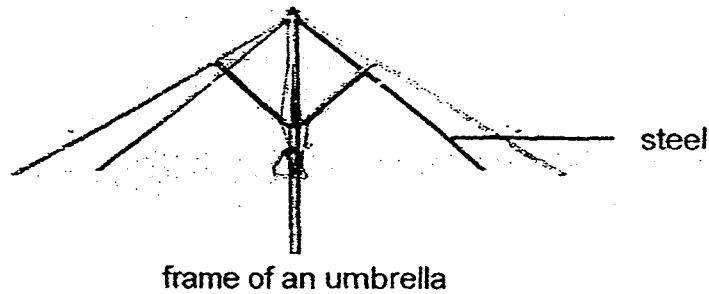
(c) What is the function of the part labelled T? (1m)

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30. During the production of an umbrella, it is important to make the frame of the umbrella using steel before covering it with waterproof fabric.



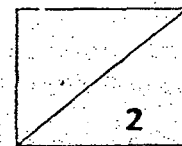
- (a) Name the human body system that has a similar function as the frame of the umbrella. (1m)

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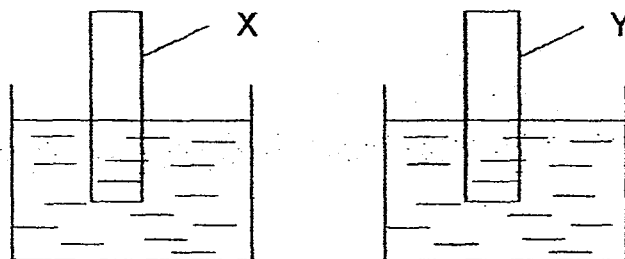
- (b) State a similarity between the function of the frame of the umbrella and the system identified in part (a). (1m)

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31. Edwin placed strips of two materials, X and Y, into two identical beakers of water for two minutes and recorded their masses.



| Time (minutes) | Mass of Material X (g) | Mass of Material Y (g) |
|----------------|------------------------|------------------------|
| 0              | 10                     | 10                     |
| 1              | 13                     | 10                     |
| 2              | 16                     | 10                     |

- (a) What can he conclude about material Y? (1m)

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- (b) His friend asked him to repeat the experiment a few more times. How is this helpful to the results of the experiment? (1m)

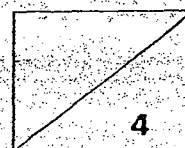
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- (c) He accidentally spilled his orange juice on the table. Which material should he use to dry up the table? Explain your answer. (2m)

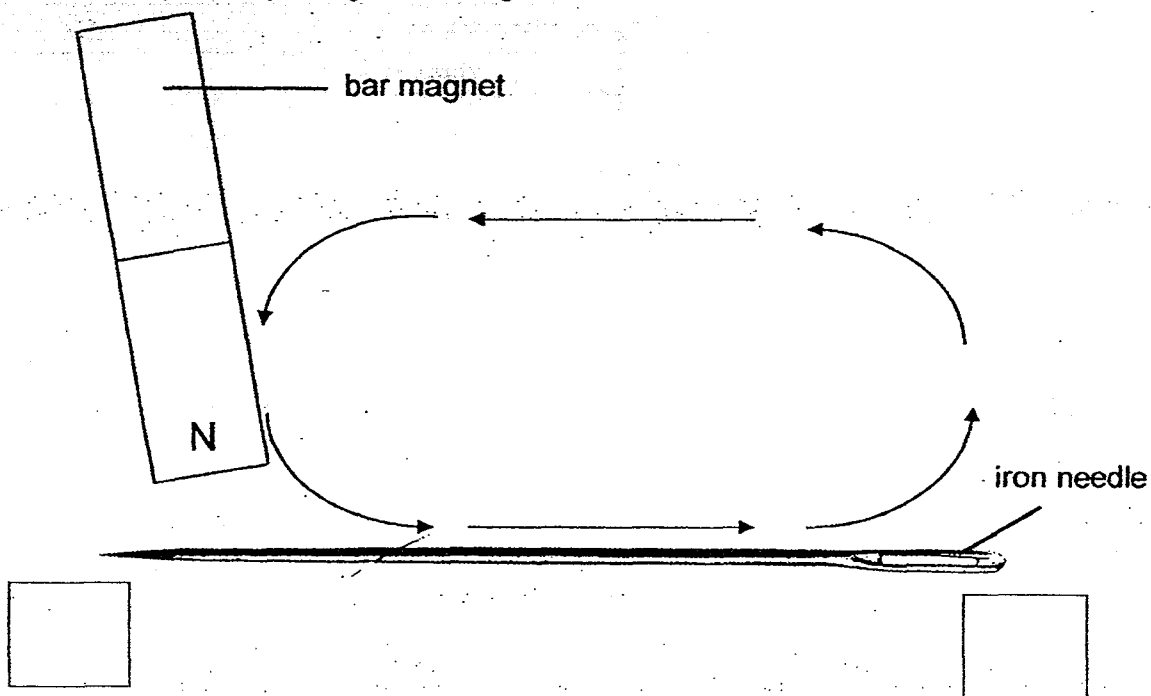
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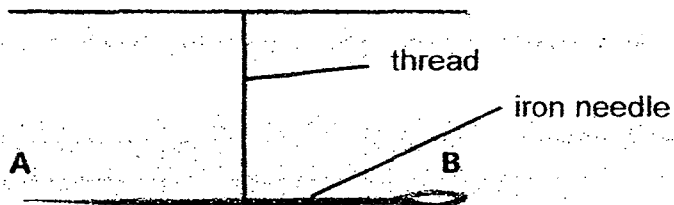


32. Martha is trying to create a magnet by stroking an iron needle in the direction shown repeatedly using a bar magnet.

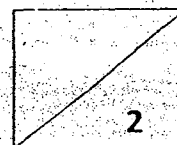


- (a) Identify the two poles of the iron needle when it is magnetised by writing 'N' as the North-seeking pole and 'S' as the South-seeking pole in the boxes above. (1m)

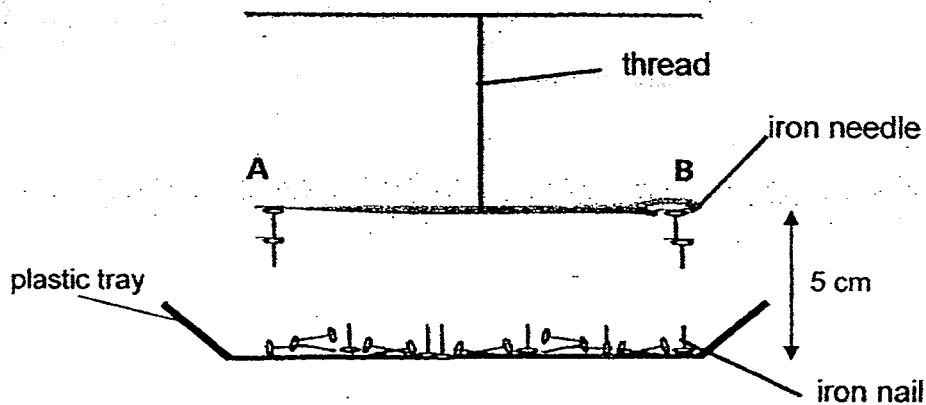
She tied the magnetised iron needle on a thread and left it hanging freely.



- (b) At which direction will the magnetised iron needle come to a rest after it stops moving? (1m)



She placed the magnetised iron needle 5 cm away from the plastic tray as seen below.



- (c) State one property of the iron nails which enables them to be attracted by the magnetised needle. (1m)

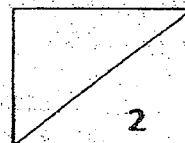
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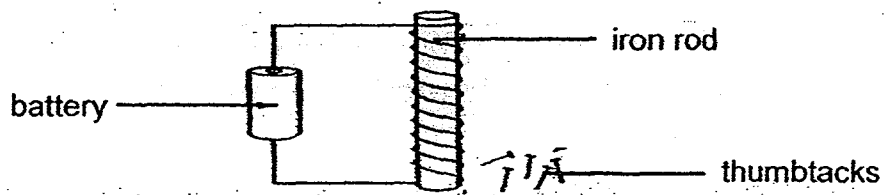
- (d) Using only a bar magnet, what can Martha do to increase the magnetic strength of the needle? (1m)

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33. Deva set up the experiment as shown.



She has 3 set-ups, A, B and C. Each of the set-ups consists of a similar iron rod and has the same number of coils of wire around the iron rod.

She recorded her observations in the table below.

| Set-up | Number of batteries used | Number of thumbtacks attracted by the iron rod |
|--------|--------------------------|--|
| A      | 1                        | 3  |
| B      | 2                        | 6  |
| C      | 3                        | 8  |

(a) What is the aim of Deva's experiment? (1m)

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(b) Give an example of a material that the thumbtack is most likely made of. (1m)

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(c) By replacing the iron rod with an aluminium rod, will the experiment still work? Explain why. (1m)

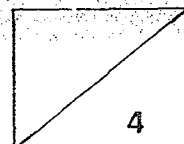
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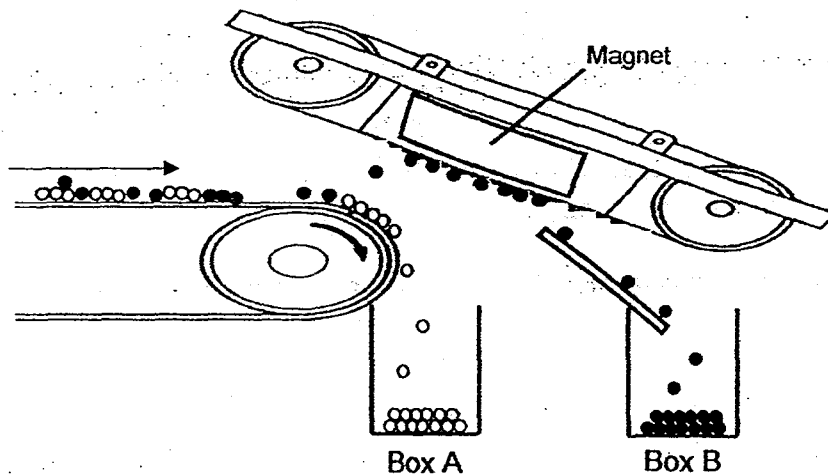
(d) Based on the table, what is the relationship between the number of batteries used and the number of thumbtacks attracted? (1m)

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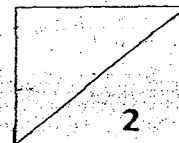


34. A factory makes use of a machine with a magnet to separate the objects into different boxes as shown in the diagram below.

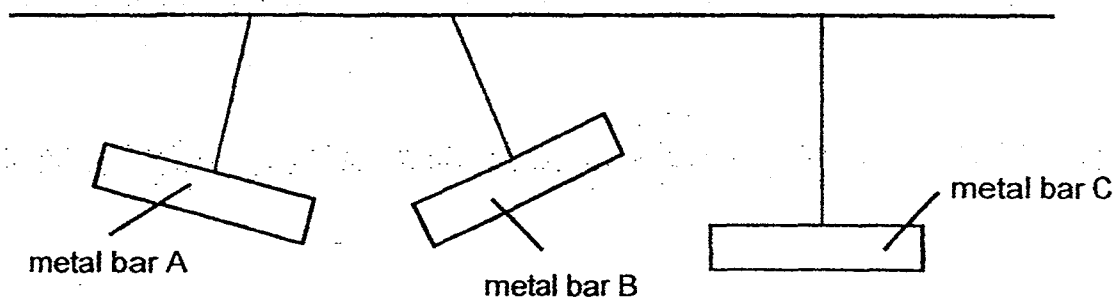


- (a) The table shows a list of objects which are sent through the machine. Tick (✓) the correct boxes to identify whether the objects will drop into box A or box B. (2m)

| Objects             | Tick ( ✓ ) in the correct box(es) |                  |
|---------------------|-----------------------------------|------------------|
|                     | Drop into Box A?                  | Drop into Box B? |
| Glass marbles       |                                   |                  |
| Nickel coins        |                                   |                  |
| Copper rings        |                                   |                  |
| Steel ball bearings |                                   |                  |



- (b) Three unknown metal bars are hung side by side from the ceiling. The diagram below shows the interaction that took place among the metal bars.



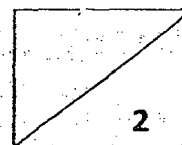
- (i) Which two of the metal bars, A, B or C, are definitely magnets? (1m)

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- (ii) Explain your answer in part (i). (1m)

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**End of Booklet B**

**Please check your answers.**



**EXAM PAPER 2015****LEVEL : PRIMARY 3****SCHOOL : RED SWASTIKA 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 |
| 1    | 3    | 4    | 1    | 1    | 1    | 2    | 3    | 4    | 3    |
| Q 11 | Q 12 | Q 13 | Q 14 | Q 15 | Q 16 | Q 17 | Q 18 | Q 19 | Q 20 |
| 2    | 4    | 2    | 4    | 2    | 4    | 3    | 2    | 3    | 1    |
| Q 21 | Q 22 | Q 23 | Q 24 |      |      |      |      |      |      |
| 2    | 1    | 4    | 3    |      |      |      |      |      |      |

Q25. a) bacteria

b) There would be more bread mould on the donuts.

c) Living things reproduce.

Q26. a) Animal B reproduce by laying eggs and has feathers as an outer covering.

b) Animal A does not reproduce by laying eggs but Animal D does.

c) C

Q27. a) Grass on Patch A has less sunlight and will make less food. Hence, the grass on Patch A will grow more slowly than the grass on Patch B.

b) i) False ii) False

Q28. a) The volume of water in set-up would be in set-up Q.

b) A plant with more roots would absorb more water.

Q29. a) Stomach

b) Part S

c) Water is absorbed from the undigested food.

Q30. a) Skeletal System

b) Both give the object their shape.

Q31. a) Material Y is waterproof, so it does not absorb water.

b) It ensures that the results of the experiment are reliable.

c) Material X. It is not waterproof and will be able to absorb the orange juice to dry up the table.

Q32. a) N (*on the left*) , S (*on the right*)

b) It would be facing the North-South direction.

c) The iron nail are made of magnetic material.

d) She can stroke the iron needle using the North-seeking pole of the bar magnet more times in the same direction.

Q33. a) To find out how the number of batteries affect the magnetic strength of the electromagnet.

b) Steel, Iron, Copper etc.

c) No. Aluminum is a non-magnetic material which cannot be magnetised.

d) As the number of batteries used increases, the number of thumbtacks attracted increases.

Q34. a) *Glass Marbles: Box A, Nickel Coins: Box B*

*Copper Rings: Box A, Steel ball bearings: Box B*

b) i) Metal Bar A and Metal Bar B.

ii) Metal Bars A and B repel each other as the like poles are facing each other.

**THE END**