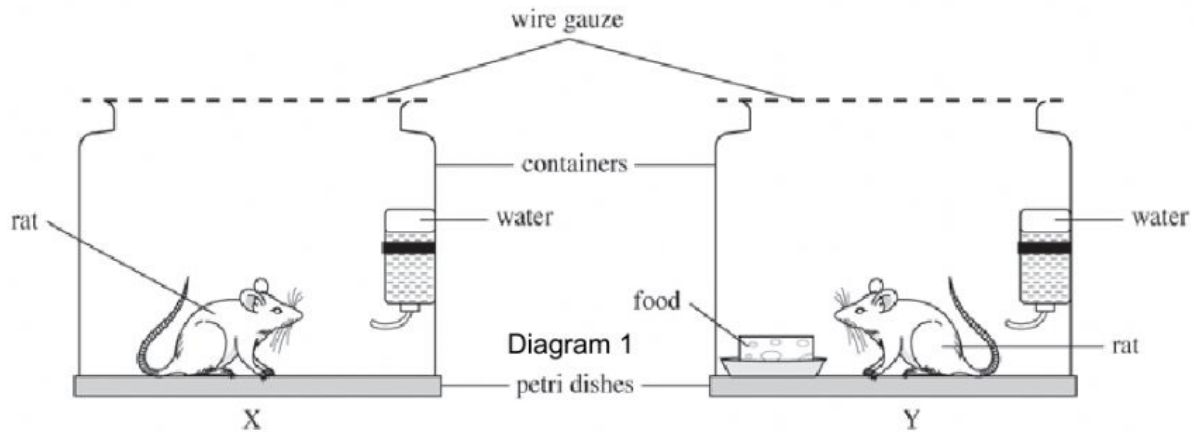


## SECTION B

Answer **all** the questions.

A group of pupils carry out an activity. Two rats are kept separately in two containers as shown in Diagram 1. Both containers are left for four days.



- (a) What do they want to find out?

\_\_\_\_\_

\_\_\_\_\_ [1 mark]

- (b) State the following.  
i. What must be changed?

\_\_\_\_\_

ii. What must be kept the same?

\_\_\_\_\_ [2 marks]

- (c) Predict what will happen to the rats in both containers after four days.

\_\_\_\_\_

- (d) Give **one** reason for your answer in (c). [1 mark]

\_\_\_\_\_ [1 mark]

The graph in Diagram 2 shows the results of an experiment to study the volume of water produced from ice in a measuring cylinder when ice melts and time.

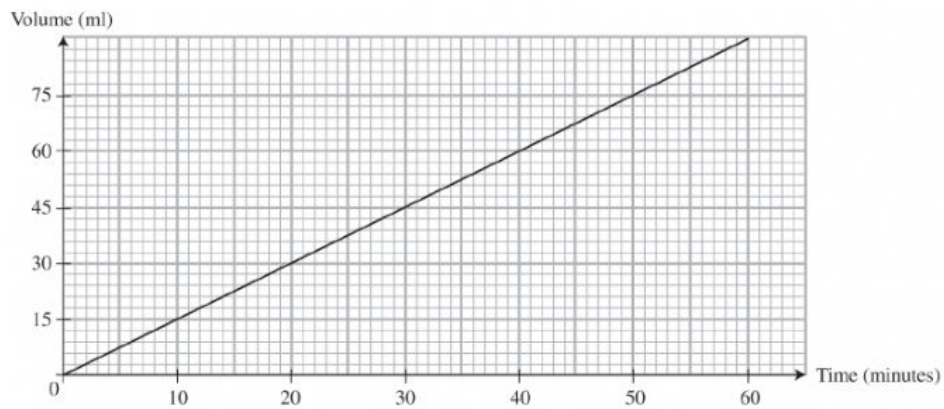


Diagram 2

- (a) What is the relationship between the changes of volume of water with time?

[1 mark]

- (b) What happens if the ice is heated?

[1 mark]

- (c) State the following.  
i. What must be changed?

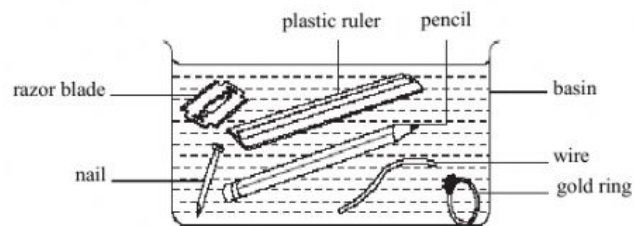
- ii. What must be measured?

[2 marks]

- (d) Predict the volume of water after 60 minutes.

[1 mark]

## 18.1 Rusty Objects and Non-rusty Objects



**Diagram 1**

1. Diagram 1 shows an investigation carried out by a group of pupils. The apparatus is left aside for one week.

(a) State the aim of the investigation.

\_\_\_\_\_

(b) Classified the objects above into two group.

i. Group 1: \_\_\_\_\_

ii. Group 2: \_\_\_\_\_

(c) State the characteristic used for your classification.

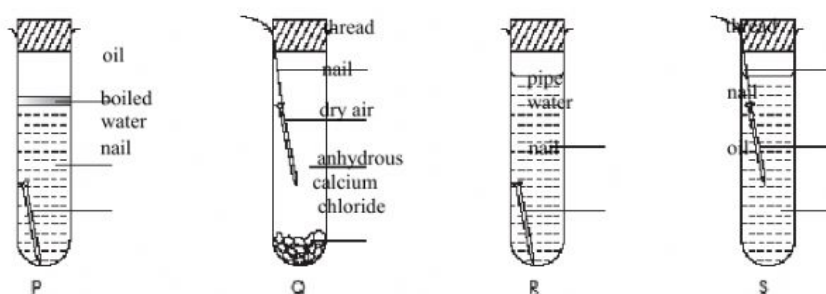
i. Group 1: \_\_\_\_\_

ii. Group 2: \_\_\_\_\_

(d) What conclusion can you made?

\_\_\_\_\_

## 18.2 The Factors that Cause Rusting



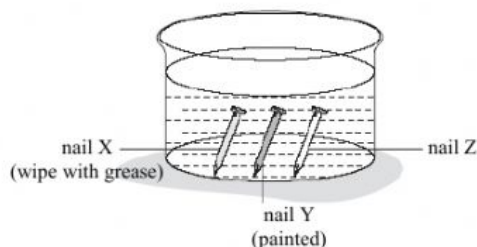
**Diagram 2**

2. Diagram 2 shows an investigation. The apparatus is left aside for one week.
- (a) Put a (✓) to show the presence of water and air and (✗) to show the absence of water and air. Write the condition of nail whether it is rusty or non-rusty.

Apparatus	Water	Air	Condition
P			
Q			
R			
S			

- (b) State the thing to...
- i. change: \_\_\_\_\_
- ii. observe: \_\_\_\_\_
- (c) What is the function of the following material?
- i. anhydrous calcium chloride : \_\_\_\_\_
- ii. Oil : \_\_\_\_\_
- (d) What is your conclusion about this investigation.
- 

### 18.3 The Different Ways and the Advantages of Preventing Rusting



**Diagram 3**

3. Diagram 3 shows three nails under different condition immersed in water for one week.
- (a) What will happen to nails X, Y and Z after one week?

Nail	X	Y	Z
After one week observation			

(b) State the reason for your observation.

---

(c) i. What do you expect to change?

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ii. What do you expect to observe?

---

(d) What is the function of the paint and the grease in this investigation?

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(e) What conclusion can you made from the investigation?

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