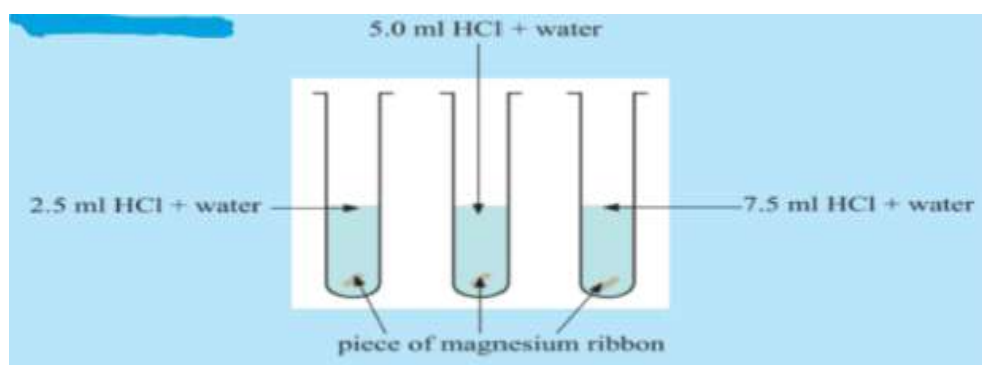




### Rate of Reaction

01).Below activity is arranged to find out how the concentration of reactants affects the rate of reactions. The volume of water in each test tube is equal.



- i. Write the increasing order of acid concentration in the above test tubes.
  - ii. Which test tube has the highest rate of gas bubbles evolution?
  - iii. What is the conclusion you can arrive after doing this activity?
- 02) i) What is a **catalyst** ?
- ii) Activity 17.4(page no.120) in your text book, highlights the effect of a catalyst on the rate of a chemical reaction, what is the **chemical substance** used in it as the catalyst?
  - iii) When the above reaction is over, the solution was filtered with  $\text{MnO}_2$  and dried the residue and weigh it.What is the noticeable difference in its mass?
  - iv) Write few applications of catalyst in industrial processes

03) Write down the observations of the following chemical changes.

Chemical reaction	Observations
i. $\text{CaCO}_3 \longrightarrow \text{CaO} + \text{CO}_2$	
ii. $2\text{HCl} + \text{Mg} \longrightarrow \text{MgCl}_2 + \text{H}_2$	
iii $2\text{H}_2\text{O}_2 \longrightarrow 2\text{H}_2\text{O} + \text{O}_2$	
iv. Reaction between Fe and acidified $\text{KMnO}_4$	