

Name of the Student: \_\_\_\_\_

Max. Marks : 13 Marks

Time : 13 Minutes

Q1.

Sodium thiosulfate reacts with dilute hydrochloric acid as shown.



- (a) Give the simplest ionic equation for this reaction.

\_\_\_\_\_

(1)

- (b) The gas  $\text{SO}_2$  is a pollutant.

State the property of  $\text{SO}_2$  that causes pollution when it enters rivers.

Give an equation to show the reaction of  $\text{SO}_2$  with water.

Property \_\_\_\_\_

Equation \_\_\_\_\_

(2)

- (c) Draw a diagram to show the shape of a molecule of  $\text{H}_2\text{O}$   
Include any lone pairs of electrons.

State the H-O-H bond angle.

Explain this shape and bond angle.

Diagram

Bond angle \_\_\_\_\_

Explanation \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(4)

- Describe an experiment to investigate the effect of temperature on the initial rate of this reaction.

Include

- [illegible]

**(6)**

**(Total 13 marks)**