

# CHLORINE AND ITS COMPOUNDS

NAME: .....

SCHOOL:.....

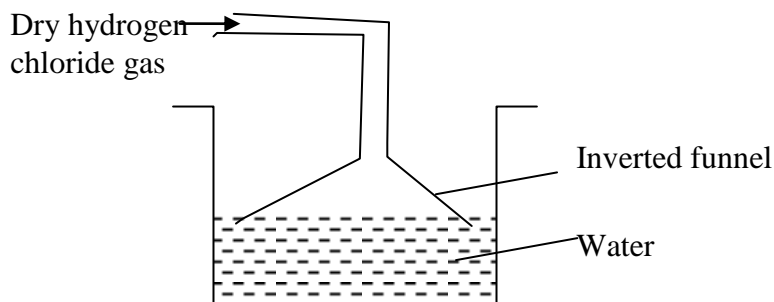
DATE: .....

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## INSTRUCTIONS TO CANDIDATES

Answer **ALL** questions in this paper in the spaces provided.

1. Hydrogen chloride gas was passed into water as shown below:

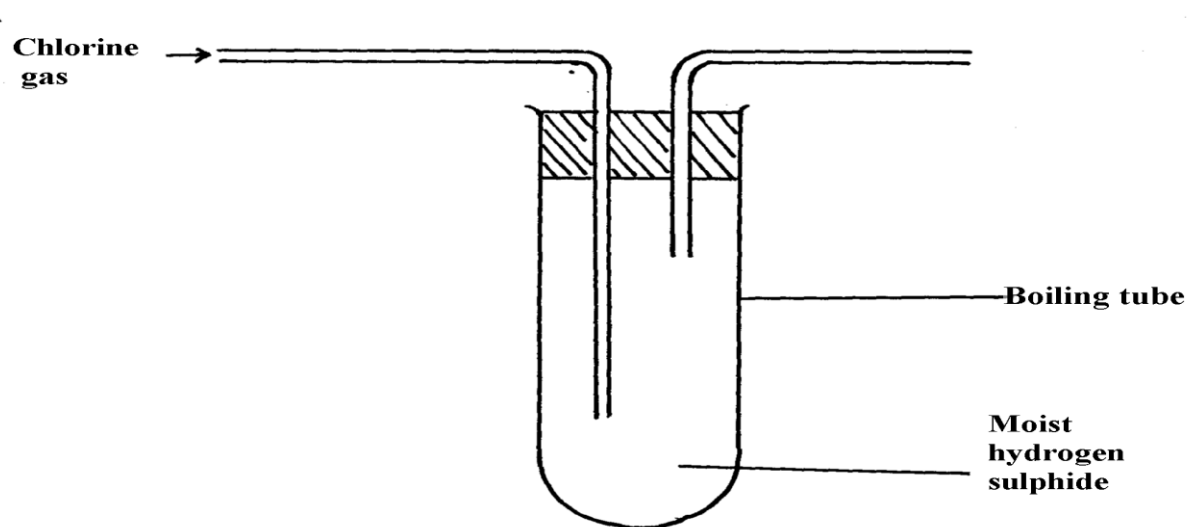


- (a) When a blue litmus paper was dropped into the resulting solution, it turned red. Give a reason for this observation
- (b) What is the function of the funnel?
2. A group of compounds called chlorofluoro-carbons have a wide range of uses but they also have harmful effects on the environment. State one:-
- a) Use of chlorofluoro carbons

b) Harmful effect of chlorofluoro carbons on the environment.

3. a) Water from a town in Kenya is suspected to contain chloride ions but not sulphate ions. Describe how the presence of the chloride ions in the water can be shown.

4. In an experiment, chlorine was passed into moist hydrogen sulphide in a boiling tube as shown below:



(a) What observation was made in the boiling tube?

(b) Write an equation of the reaction that took place in the boiling tube

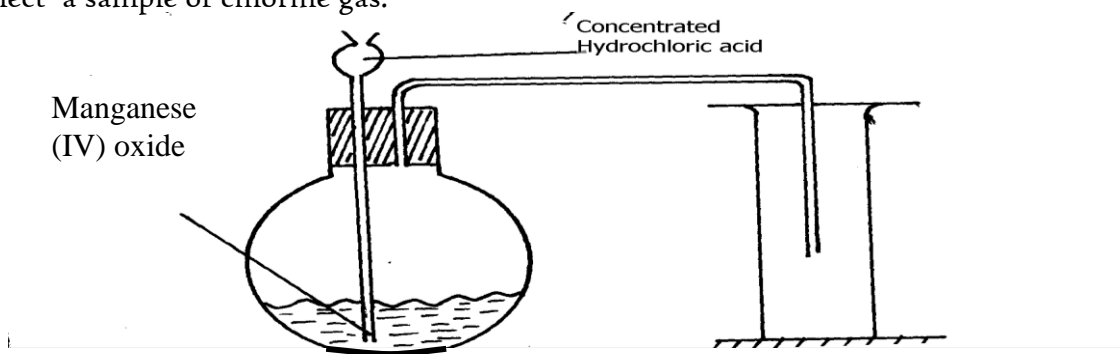
(c) What precaution should be taken in carrying out this experiment? Give a reason

5. Heated iron can react with both chlorine gas and hydrogen chloride gas

i) Write equations for the reactions

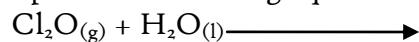
ii) Chlorine gas has no effect on dry blue litmus paper. Explain

6. The following diagram represents a set-up that can be used in the laboratory to prepare and collect a sample of chlorine gas:



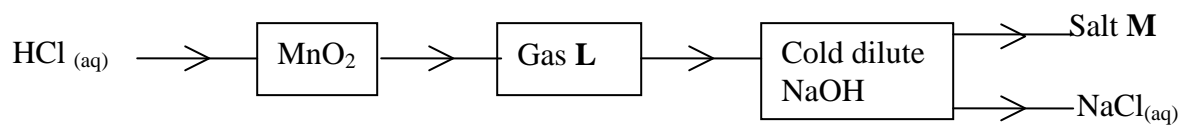
(a) No gas bubbles were produced in the above experiment. Explain the observation

(b) Complete the following equation



(b) Describe the bleaching property of chlorine water

7. Study the flow diagram below and answer the questions that follow:



(a) Name gas L .....

(b) Write a balanced equation for the reaction between hydrochloric acid and manganese (IV) oxide

(c) Explain what happens to coloured petals when dropped into a solution of **M**