

Chemistry - 10th Class Chemistry English Medium Chapter 15 Preparation

Q1. What is capillary action?

Ans 1: Capillary action is the process by which water rises up from the roots of plants to leaves. This process is vital for the survival of the land plants.

Q2. Give the reaction of formation of ammonia in the process ?

Ans 1: Ammonia is recovered in this tower from ammonium chloride solution produced in the carbonated tower and calcium hydroxide formed in lime kiln

Ans 2: $2\text{NH}_4\text{Cl}_{(\text{aq})} + \text{Ca}(\text{OH})_{2(\text{aq})} \rightarrow 2\text{NH}_3(\text{g}) + \text{CaCl}_{2(\text{aq})} + 2\text{H}_2\text{O} (\text{l})$

Q3. Give two advantages of solvay's process

Ans 1: 1: Carbon dioxide and ammonia are recovered and reused
2: Sodium carbonate of very high purity is obtained

Q4. Give a use of kerosene oil

Ans 1: Used a domestic fuel, a special grade of it is used as jet fuel

Q5. Name preventive methods of water borne diseases.

Ans 1: Provision of safe water. Disposal of sewage Control of toxic chemicals.

Q6. Mention the chemical reactions for the formation of metallic copper in the bessemerization process

Ans 1: $2\text{Cu}_2\text{S}_{(\text{l})} + 3\text{O}_2 \rightarrow 2\text{Cu}_2\text{O}_{(\text{l})} + 2\text{SO}_{2(\text{g})}\uparrow$
 $2\text{Cu}_2\text{O}_{(\text{l})} + \text{Cu}_2\text{S}_{(\text{l})} \rightarrow 6\text{Cu}_{(\text{l})} + \text{SO}_{2(\text{g})}\uparrow$

Q7. What are the effects of temporary hardness in water?

Ans 1: 1. Hard water consumes large amount of soap in washing purposes. 2. Drinking hard water causes stomach disorders. 3. Hard water is unfit for use in steam engines, boilers and turbines because insoluble calcium and magnesium salts deposit inside. They are called scales. They are bad conductors of heat and hence more fuel is used. Insoluble calcium and magnesium sulphates not only reduce the efficiency of the engine but also cause the boiler to burst.

Q8. How petroleum is extracted ?

Ans 1: Petroleum is extracted by drilling holes into earth's crust where the oil is formed

Q9. In which field organic chemist work ?

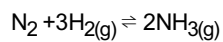
Ans 1: Organic chemists have career in pharmaceutical , petroleum , petrochemicals , cosmetics , polymer and plastic industries

Q10. How is ammonia prepared for the synthesis of urea ?

Ans 1: Ammonia is prepared by the Haber's process . One volume of nitrogen (from air) and three volumes of hydrogen (obtained by passing methane and steam over heated nickel catalyst) is passed over iron catalyst at 450° C AND 200 atm pressure

Ans 2:

450°C



200atm
