Chemistry - 12th Class Chemistry Chapter 2 Short Questions Preparation

Q1. What happens when: 1) Li_2CO_3 2) $Na_2CO_3$is heated.

Ans 1: Lithium has low electropositive character,thus its carbonate are not so stable and therefore decomposed giving lithium oxide on heating.
Li_2CO_3----------->$Li_2O + CO_2$

Ans 2: At temperature below 35.2 ^oC,Na_2CO_3crystallizes out from water as $Na_2CO_3.10H_2O$ which is called washing soda.Above this temperature it crystallizes as $Na_2CO_3.H_2O$. On standing in air,$Na_2CO_3.10H_2O$ slowly loses.

Q2. How Gypsum is converted into Plaster of Paris?

Ans 1: When gypsum is heated under carefully controlled conditions,It loses three quarters of its water of crystallization,the resulting product is called Plaster of Paris.Calcium sulphate occurs in nature as gypsum $CaSO_4.2H_2O$.When it is heated above 100^oC,it loses three quarters of its water of crystallization,giving a white powder which is known as Plaster of Paris.
$2CaSO_4.2H_2O$--------->$(CaSO_4)_2.H_2O+3H_2O$
Gypsum Plaster of Paris

Q3. What is mil;k of Magnesia and for which treatment it used.

Ans 1: A suspension of $Mg(OH)_2$in water is called milk of magnesia and it is used for the treatment of acidity in stomach.

Q4. Give the name and formula for common minerals of Be.

Ans 1: **Name Formula**
Beryl $Be_3Al_2(SiO_3)_2$
Chrysoberyl Al_2BeO_4

Q5. Why S-block elements are called as alkali metals and alkaline earth metals?

Ans 1: The name alkali came from Arabic,which mean The Ashes.The arab used this term for these metals because they found that the ashes of plants were composed chiefly of sodium and potassium,.Elements of group IA are called alkali metals,because they produce alkaline solutions with water.

Ans 2: Elements of group IIAare called alkaline earth metals.The alkaline earth metals are beryllium,magnesium,calcium,strontium,barium and radium.They are called alkaline earth metals because they produce alkalies in water and are widely distributed in earth crusts.

Q6. Why is $CaCl_2$added in molten Nacl in Down's cell?

Ans 1: $CaCl_2$added in molten NaCl in Down's cell: Sodium chloride is used as raw material in Down's cell.The melting point of sodium chloride is 801^oC. Some calcium chloride is added to lower the melting point of sodium chloride.Calcium chloride permits the furnace to operate at about 600^oC.

Q7. How chlorine produced in Diaphragm cell,is protected to react with Hydroxide ions?

Ans 1: Chlorine produced can react with hydroxide ions.To prevent this problem asbestos diaphragm is used.This keeps the two solutions separate while allowing sodium ions to move towards the cathode.This movement of ions keep the current following through the external current.

Q8. What is the role of Gypsum in Agriculture.

Ans 1: Role of Gypsum in Agriculture: Gypsum is applied to the soil as source of calcium and sulphur. The calcium supplied by gypsum in fertilizer is of importance in crop production in area where soils are subject to extensive leaching. Sulphur compounds had been applied to soils because of their observed beneficial effect on plants,sulphur has an influence on chlorophyll development in plant leaves.Although not a constituent o chlorophyll,plants deficient in sulphur exhibits a pale green color.The root system of several plants have been observed to be greatly enlarged by the application of sulphur containing materials such as gypsum.

Q9. What is the action of litmus with aqueous solution of Na_2CO_3?

Ans 1: The solution of Na_2CO_3in water is basic due to hydrolysis of carbonate ion.So,it will turn red litmus to blue.
$Na_2CO_3+2H_2O$---------->$2NaOH + H_2CO_3$

Q10. Why Calcium is essential for the normal growth of plants?

Ans 1: Use of Calcium in normal growth of Plants:The presence of calcium is essential for the normal development of plants.The quantity of calcium required by different plants varies considerably.An adequate supply of calcium appears to stimulate the development of roots hairs and,infect,the entire root system.
Calcium is also necessary for the normal leave development and tends to accumulate in leaves as well as in bark,an adequate supply of calcium is also essential for the optimum activity of microorganisms that produce nitrates.
