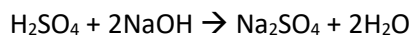
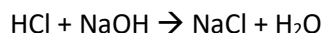


HW-May-1

Classes of chemical compounds

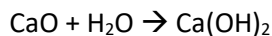
- A. Reactions where acids and bases react with each other are called reactions of neutralization. In these reactions a salt and water are formed. E.g. below is a neutralization reaction between hydrochloric acid (HCl – acid) and sodium hydroxide (NaOH – base) with formation of salt (sodium chloride, NaCl) and water:



- B. When acidic oxides react with water, they form acids. E.g.:



- C. When basic oxides react with water, they form bases. E.g.:



Names of some polyvalent ions are given below:

Acetate	$\text{C}_2\text{H}_3\text{O}_2^-$	Sulfite	SO_3^{2-}
Ammonium	NH_4^+	Sulfate	SO_4^{2-}
Carbonate	CO_3^{2-}	Phosphite	PO_3^{3-}
Hypochlorite	ClO^-	Phosphate	PO_4^{3-}
Chlorite	ClO_2^-	Permanganate	MnO_4^-
Perchlorate	ClO_4^-	Iodate	IO_3^-
Nitrite	NO_2^-	Hydrogen carbonate	HCO_3^-
Nitrate	NO_3^-		

1. Write neutralization reactions between acids and bases that result in the following salts:
 $\text{Al}_2(\text{SO}_4)_3$, NiCO_3 , $\text{Fe}(\text{NO}_3)_3$, $\text{Mg}_3(\text{PO}_4)_2$, PbS , Li_2SO_4

2. How many kg of P_2O_5 is necessary to obtain 98 kg of phosphoric acid H_3PO_4 ?