

PROJECT WORK-2
CHEMICAL REACTIONS AND EQUATIONS

Write the word equations for each of the following chemical reactions:

- 1) When dissolved beryllium chloride reacts with dissolved silver nitrate in water, aqueous beryllium nitrate and silver chloride powder are made.
- 2) When dissolved sodium hydroxide reacts with sulfuric acid (H₂SO₄), aqueous sodium sulfate, water, and heat are formed.
- 3) When fluorine gas is put into contact with calcium metal at high temperatures, calcium fluoride powder is created in an exothermic reaction.
- 4) When sodium metal reacts with iron (II) chloride, iron metal and sodium chloride are formed.

Observe the following equations and indicate the type of reaction taking place:

- 1) $3\text{NaBr} + \text{H}_3\text{PO}_4 \rightarrow \text{Na}_3\text{PO}_4 + 3 \text{HBr}$ Type of reaction: _____
- 2) $3\text{Mg} + \text{Fe}_2\text{O}_3 \rightarrow 2 \text{Fe} + 3 \text{MgO}$ Type of reaction: _____
- 3) $\text{C}_2\text{H}_4 + 3\text{O}_2 \rightarrow 2 \text{CO}_2 + 2 \text{H}_2\text{O}$ Type of reaction: _____
- 4) $2 \text{PbSO}_4 \rightarrow 2\text{PbSO}_3 + \text{O}_2$ Type of reaction: _____
- 5) $2\text{NH}_3 + 3\text{I}_2 \rightarrow \text{N}_2\text{I}_6 + 3\text{H}_2$ Type of reaction: _____
- 6) $\text{H}_2\text{O} + \text{SO}_3 \rightarrow \text{H}_2\text{SO}_4$ Type of reaction: _____



Balance the following equations:

- 1) ___ NaNO₃ + ___ PbO → ___ Pb(NO₃)₂ + ___ Na₂O
- 2) ___ AgI + ___ Fe₂(CO₃)₃ → ___ FeI₃ + ___ Ag₂CO₃
- 3) ___ C₂H₄O₂ + ___ O₂ → ___ CO₂ + ___ H₂O
- 4) ___ ZnSO₄ + ___ Li₂CO₃ → ___ ZnCO₃ + ___ Li₂SO₄
- 5) ___ V₂O₅ + ___ CaS → ___ CaO + ___ V₂S₅
- 6) ___ Mn(NO₂)₂ + ___ BeCl₂ → ___ Be(NO₂)₂ + ___ MnCl₂
- 7) ___ AgBr + ___ GaPO₄ → ___ Ag₃PO₄ + ___ GaBr₃
- 8) ___ H₂SO₄ + ___ B(OH)₃ → ___ B₂(SO₄)₃ + ___ H₂O
- 9) ___ S₈ + ___ O₂ → ___ SO₂
- 10) ___ Fe + ___ AgNO₃ → ___ Fe(NO₃)₂ + ___ Ag