Karan Arora **R.L. Chemistry Classes** **M: 99968-68554**

Max Time : 1 hr **Class = 10th Science Test** **Max Marks : 20**

CHEMICAL REACTIONS & EQUATIONS

Q.1 $AgNO_3$ (aq) + NaCl (aq) $\longrightarrow$ AgCl (s)↓ + $NaNO_3$ (aq) [1]

$FeS + H_2SO_4 \longrightarrow FeSO_4 + H_2S\uparrow$

Consider the above mention two chemical equations with two different kinds of arrows ($\uparrow$ *and* $\downarrow$) along with product. What do these two different arrows indicate?

Q.2 State the main difference between an Endothermic reaction and an exothermic reaction. [1]

Q.3 On what basis is a chemical equation balanced? [1]

Q.4 Write balanced chemical equation for the following reactions : [2]

a) Silver bromide on exposure to sunlight decomposes into silver and bromine.

b) Sodium metal reacts with water to form sodium hydroxide and hydrogen gas.

Q.5 What is meant by : (a) displacement reaction (b) Combination reaction. [2]

Write balanced chemical equation for each reaction.

Q.6 Using a suitable chemical equation justify that some chemical reaction are determined by : [2]

(i) Change in colour (ii) Change in temperature

Q.7 Write the balanced chemical equation for the following and identify the type of reaction in each case. [1 x 3 = 3]

a) potassium bromide (aq) + Barium iodide (aq) $\longrightarrow$ Potassium iodide (aq) + barium bromide (s)

b) Zinc Carbonate (s) $\longrightarrow$ Zinc oxide (s) + Carbon dioxide (g)

c) Hydrogen (g) + Chlorine (g) $\longrightarrow$ Hydrogen chloride (g)

Q.8 Balance the following chemical equation : [1 x 4 = 4]

a) $BaCl_2 + H_2SO_4 \longrightarrow BaSO_4 + HCl$

b) $Ca(OH)_2 + HNO_3 \longrightarrow Ca(NO_3)_2 + H_2O$

c) $Pb(NO_3)_2 \longrightarrow PbO + NO_2 + O_2$

d) $MnO_2 + HCl \longrightarrow MnCl_2 + H_2O + Cl_2$

Q.9 Classify each of the following as combination , decomposition , displacement or double displacement reaction : [1 x 4 = 4]

i. $2\ KNO_3$ (s) $\longrightarrow 2\ KNO_2$ (s) + O_2 (g)

ii. Zn (s) + $2\ AgNO_3$ (aq) $\longrightarrow Zn(NO_3)_2 + 2$ Ag (s)

iii. $Ni(NO_3)_2$ (aq) + 2 NaOH $\longrightarrow Ni(OH)_2\downarrow + 2\ NaNO_3$ (aq)

iv. N_2 (g) + $3\ H_2$ (g) $\longrightarrow 2\ NH_3$ (g)

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$FeS + H_2SO_4 \longrightarrow FeSO_4 + H_2S \uparrow$

Consider the above mention two chemical equations with two different kinds of arrows ($\uparrow and \downarrow$) along with product. What do these two different arrows indicate?

Q.2 State the main difference between an Endothermic reaction and an exothermic reaction. [1]

Q.3 What is balanced chemical equation? Why should the chemical equation be balanced ? [2]

Q.4 Why should a magnesium ribbon be cleaned before burning in air ? [2]

Q.5 What is meant by : (a) decomposition reaction (b) Combination reaction. [2]

Write balanced chemical equation for each reaction.

Q.6 Using a suitable chemical equation justify that some chemical reaction are determined by : [2]

(i) Change in colour (ii) Change in temperature

Q.7 Write the balanced chemical equation for the following and identify the type of reaction in each case. [1 x 5 = 5]

a) potassium bromide (aq) + Barium iodide (aq) $\longrightarrow$ Potassium iodide (aq) + barium bromide (s)

b) Zinc Carbonate (s) $\longrightarrow$ Zinc oxide (s) + Carbon dioxide (g)

c) Hydrogen (g) + Chlorine (g) $\longrightarrow$ Hydrogen chloride (g)

d) Calcium hydroxide + Carbon dioxide $\rightarrow$ Calcium carbonate + Water

e) Barium chloride + Potassium sulphate $\rightarrow$ Barium sulphate + Potassium chloride

Q.8 Balance the following chemical equation : [1 x 5 = 5]

a) $BaCl_2 + H_2SO_4 \longrightarrow BaSO_4 + HCl$

b) $Ca(OH)_2 + HNO_3 \longrightarrow Ca(NO_3)_2 + H_2O$

c) $Pb(NO_3)_2 \longrightarrow PbO + NO_2 + O_2$

d) $MnO_2 + HCl \longrightarrow MnCl_2 + H_2O + Cl_2$

e) $Al(OH)_3 \xrightarrow{\Delta} Al_2O_3 + H_2O$