ATOMIC ENERGY CENTRAL SCHOOL-KUDANKULAM

Worksheet –Module-2/4

Subject-Chemistry

Class-X

Lesson No.- Chapter 1 Chemical Reactions and Equations

Name of the topic – COMBINATION REACTION AND DECOMPOSITION REACTION

Total Marks-10x3=30

- (1) Write the chemical equation of the reaction in which the following changes have taken place with an example of each:
 - (i) Change in colour
 - (ii) Change in temperature
 - (iii) Formation of precipitate
- (2) State the type of chemical reactions and chemical equations that take place in the following:
 - (i) Magnesium wire is burnt in air.
 - (ii) Electric current is passed through water.
 - (iii) Ammonia and hydrogen chloride gases are mixed
- (3) Write the balanced chemical equation for the following reaction:

(i) Phosphorus burns in presence of chlorine to form phosphorus penta chloride.

- (ii) Burning of natural gas.
- (iii) The process of respiration.
- (4) Write one example for each of decomposition reaction carried out in presence of
 - (i) Electricity (ii) Heat (iii) Light
- (5) Which products will be obtained when lead nitrate is heated simply? Write balanced chemical equation for the reaction? State the type of chemical reaction that occurs in the change.
- (6) 2g of ferrous sulphate crystals are heated in a dry boiling tube.(i) List any two observations.

- (ii) Name the type of chemical reaction taking place.
- (iii) 'Write the chemical equation for the reaction.
- (7) What happens-
 - (i) Molten alumina is electrolysed
 - (ii) Silver bromide is kept in sunlight
 - (iii) Magnesium carbonate is heated
- (8) Identify the combination and decomposition reaction in the following-
 - (a) KCl $\xrightarrow{\text{electricity}}$ K + $\frac{1}{2}$ Cl₂
 - $(b) NH_3 + HCl \rightarrow NH_4Cl$
 - (c) $2SO2 + O_2 \rightarrow 2SO_3$
 - (d) $2NH_3 \rightarrow N_2 + 3H_2$

(9) Give two examples each of exothermic and endothermic reaction.

(10) What is the source of energy for the following decomposition reactions-

- (a) Decomposition of potassium chlorate to potassium chloride and oxygen
- (b) Electrolysis of brine solution to get hydrogen, chlorine and caustic soda.
- (c) Depletion of ozone in stratosphere due to chlorofluorocarbons.