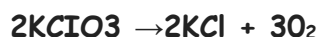


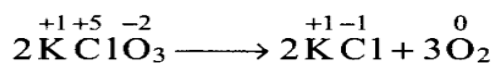
Q1. Which of the following statement(s) is/are not true about the following decomposition reaction?



- (a) Potassium is undergoing oxidation.
- (b) Chlorine is undergoing oxidation.
- (c) Oxygen is reduced.
- (d) None of the species are undergoing oxidation or reduction.

Sol: (a, b, c, d)

Writing the oxidation number of each element above its symbol,



- (a) The Oxidation number of K does not change. K undergoes neither reduction nor oxidation. Thus, option (a) is not correct.
- (b) The Oxidation number of chlorine decreases from +5 in  $\text{KClO}_3$  to -1 in  $\text{KCl}$ , hence, Cl undergoes reduction.
- (c) Since, Oxidation number of oxygen increases from -2 in  $\text{KClO}_3$  to 0 in  $\text{O}_2$ , oxygen is oxidized.
- (d) This statement is not correct because Cl is undergoing reduction and O is undergoing oxidation.

Hence options (a) (b) (c) (d) all are correct answers.