

**CLASS –X
CHEMISTRY**

1. In the decomposition of lead Nitrate to give lead (II) oxide, Nitrogen dioxide and oxygen gas , What is the co-efficient of nitrogen dioxide in the balanced chemical equation?
2. An element X on exposure to moist air turns reddish brown and a new compound Y is formed . What is Substance X and Y . Also write their formula
3. Consider the elements :- Ne , I and F .Identify the element that exhibits –ve oxidation state , the element that exhibit both –ve and +ve oxidation state and the element which exhibit Zero Oxidation State.
4. Balance the following reaction by ion electron method:-
$$\text{Cr}_2\text{O}_7^{2-}(\text{aq}) + \text{SO}_2(\text{g}) \rightarrow \text{Cr}^{3+}(\text{aq}) + \text{SO}_4^{2-}(\text{aq}) \quad (\text{in acidic medium})$$
5. Identify the Substance Oxidised, Reduced, Oxidising agent and Reducing agent.
$$\text{N}_2\text{H}_4 + \text{H}_2\text{O}_2 \rightarrow \text{N}_2 + 4\text{H}_2\text{O}$$
6. Calculate the Oxidation Number of Sulphur and Nitrogen in Sulphuric Acid and Nitrate ion.
7. Write Balanced Chemical Equation when Ammonia reacts with oxygen to give Nitric Oxide and water. Also Identify the type of Reaction.
8. When Metal salt is treated with NaOH , a white gelatinous precipitate X is formed , which is soluble in excess of NaOH. Compound X on strongly heating gives an Oxide which is used in Chromatography as an adsorbent . What is Metal X?
9. In refining of Silver , the recovery of Silver from Silver Nitrate solution involved displacement by Copper metal . Write an balanced Chemical Equation.
10. The Compound that does not produce Nitrogen gas on thermal decomposition-
 - a) $(\text{NH}_4)_2\text{Cr}_2\text{O}_7$
 - b) NH_4NO_2
 - c) $(\text{NH}_4)_2\text{SO}_4$
 - d) $\text{Ba}(\text{N}_3)_2$