

Topic :-REDOX REACTIONS

- $\text{Co}(s) + \text{Cu}^{2+}(aq) \rightarrow \text{Co}^{2+}(aq) + \text{Cu}(s)$. This reaction is :
a) Oxidation reaction b) Reduction reaction c) Redox reaction d) None of these
- The oxidation state of I in H_4IO_6^- is :
a) +7 b) -1 c) +5 d) +1
- The oxidation number of N in NH_3 is :
a) -3 b) +3 c) Zero d) 5
- Mn^{2+} can be converted into Mn^{7+} by reacting with
a) SO_2 b) Cl_2 c) PbO_2 d) SnCl_2
- The oxidation number of Ni in $\text{K}_4[\text{Ni}(\text{CN})_4]$ is :
a) +1 b) +2 c) -1 d) 0
- Which change occur when lead monoxide is converted into lead nitrate?
a) Oxidation
b) Reduction
c) Neither oxidation nor reduction
d) Both oxidation and reduction
- How many mole of electron are involved in the reduction of one mole of MnO_4^- ion in alkaline medium to MnO_3^- ?
a) 2 b) 1 c) 3 d) 4
- The oxidation number of Fe in $\text{K}_4\text{Fe}(\text{CN})_6$ is :
a) +2 b) +3 c) +4 d) +6
- For the reaction, $\text{NH}_3 + \text{OCl}^- \rightarrow \text{N}_2\text{H}_4 + \text{Cl}^-$ occurring in basic medium, the coefficient of N_2H_4 in the balanced equation will be
a) 1 b) 2 c) 3 d) 4
- In the reaction $\text{H}_2\text{O} + \text{H}_2\text{O}_2 \rightarrow \text{S} + 2\text{H}_2\text{O}$
a) H_2S is an acid and H_2O_2 is a base
b) H_2S is a base and H_2O_2 is an acid

- c) H_2S is an oxidising agent and H_2O_2 is a reducing agent
 d) H_2S is a reducing agent and H_2O_2 is an oxidising agent
11. When H_2SO_3 is converted into H_2SO_4 the change in the oxidation state of sulphur is from:
 a) 0 to +2 b) +2 to +4 c) +4 to +2 d) +4 to +6
12. The oxidation number of nitrogen in NH_2OH is :
 a) +1 b) -1 c) -3 d) -2
13. In the reaction, $2\text{CuSO}_4 + 4\text{KI} \rightarrow \text{Cu}_2\text{I}_2 + 2\text{K}_2\text{SO}_4 + \text{I}_2$ The ratio of equivalent weight of CuSO_4 to its molecular weight is :
 a) $1/8$ b) $1/4$ c) $1/2$ d) 1
14. In the reaction between acidified $\text{K}_2\text{Cr}_2\text{O}_7$ and iron (II) ions shown by the equation : $\text{Cr}_2\text{O}_7^{2-}(\text{aq}) + 6\text{Fe}^{2+}(\text{aq}) + 14\text{H}^+(\text{aq}) \rightarrow 2\text{Cr}^{3+}(\text{aq}) + 7\text{H}_2\text{O}(\text{l}) + 6\text{Fe}^{3+}(\text{aq})$
 a) The colour of the solution changes from green to blue
 b) The iron (II) ions are reduced
 c) The dichromate ions are reduced
 d) Hydrogen ions are reduced
15. Which is the reducing agent in the reaction, $8\text{H}^+ + 4\text{NO}_3^- + 6\text{Cl}^- + \text{Sn}(\text{s}) \rightarrow \text{SnCl}_6^{2-} + 4\text{NO}_2 + 4\text{H}_2\text{O}$?
 a) $\text{Sn}(\text{s})$ b) Cl^- c) NO_3^- d) $\text{NO}_2(\text{g})$
16. Which is a redox reaction?
 a) $\text{H}_2\text{SO}_4 + 2\text{NaOH} \rightarrow \text{Na}_2\text{SO}_4 + 2\text{H}_2\text{O}$
 b) $\text{BaCl}_2 + \text{H}_2\text{SO}_4 \rightarrow \text{BaSO}_4 + 2\text{HCl}$
 c) $\text{CH}_3\text{COOH} + \text{C}_2\text{H}_5\text{OH} \rightarrow \text{CH}_3\text{COOC}_2\text{H}_5 + \text{H}_2\text{O}$
 d) $2\text{FeCl}_3 + \text{SnCl}_2 \rightarrow 2\text{FeCl}_2 + \text{SnCl}_4$
17. Which one of the following reactions involves disproportionation?
 a) $2\text{H}_2\text{SO}_4 + \text{Cu} \rightarrow \text{CuSO}_4 + 2\text{H}_2\text{O} + \text{SO}_2$ b) $\text{As}_2\text{O}_3 + 3\text{H}_2\text{S} \rightarrow \text{As}_2\text{S}_3 + 3\text{H}_2\text{O}$
 c) $2\text{KOH} + \text{Cl}_2 \rightarrow \text{KCl} + \text{KOCl} + \text{H}_2\text{O}$ d) $\text{Ca}_3\text{P}_2 + 6\text{H}_2\text{O} \rightarrow 3\text{Ca}(\text{OH})_2 + 2\text{PH}_3$
18. The oxidation state of chromium in the final product formed by the reaction between KI and acidified potassium dichromate solution is
 a) +3 b) +2 c) +6 d) +4
19. Which of the following acts as an oxidising as well as reducing agent?
 a) Na_2O b) Na_2O_2 c) NaNO_3 d) NaNO_2
20. Oxidation state of carbon in graphite is:
 a) Zero b) +1 c) +4 d) +2