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TARGET : NEET (UG) 2024

Course : SARANSH (Youtube Live CRASH COURSE)

CHEMISTRY DPP DAILY PRACTICE PROBLEMS

DPP NO. 1

CHEMISTRY: Redox Reaction

DPP No. : 1

1. Oxidation number of fluorine in OF_2 is :

(1) +1 (2) +2 (3) –1 (4) –2

2. In $Ni(CO)_4$, the oxidation state of Ni is :

(1) 4 (2) 0 (3) 2 (4) 8

3. Oxidation state of nitrogen is incorrectly given for:

Compound		Oxidation State	
(1) $[Co(NH_3)_5Cl]Cl_2$	–3	(2) NH_2OH	–1
(3) $(N_2H_5)_2SO_4$	+2	(4) Mg_3N_2	–3

4. Oxidation number of Fe in $Fe_{0.94}O$ is :

(1) 200 (2) 200/94 (3) 94/200 (4) None

5. In the reaction $4Fe + 3O_2 \rightarrow 4Fe^{3+} + 6O^{2-}$ which of the following statements is incorrect ?

(1) It is a redox reaction
(2) Metallic iron is a reducing agent
(3) Fe^{3+} is an oxidising agent
(4) Metallic iron is reduced to Fe^{3+}

6. The compound that can work both as an oxidising as well as reducing agent is :

(1) $KMnO_4$ (2) H_2O_2 (3) $Fe_2(SO_4)_3$ (4) $K_2Cr_2O_7$

7. In a reaction of

H_2O (steam) + C (glowing) $\rightarrow$ CO + H_2

(1) H_2O is the reducing agent (2) H_2O is the oxidising agent
(3) carbon is the oxidising agent (4) oxidation-reduction does not occur

H_2O (steam) + C (glowing) $\rightarrow$ CO + H_2

8. If an element is in its lowest oxidation state, under proper conditions it can act as :

(1) Reducing agent
(2) An oxidising agent
(3) Oxidising as well as reducing agent
(4) Neither oxidising nor reducing agent

9. In the reaction,

$2S_2O_3^{2-} + I_2 \longrightarrow S_4O_6^{2-} + 2I^-$, the eq. wt. of $S_2O_3^{2-}$ is equal to its :

(1) Mol. wt. (2) Mol. wt./2 (3) 2 x Mol. wt. (4) Mol. wt./6

10. In the reaction : $A^{-n2} + xe^- \rightarrow A^{-n1}$, here x will be
(1) $n_1 + n_2$ (2) $n_2 - n_1$ (3) $n_1 - n_2$ (4) $n_1 . n_2$

11. Equivalent weight of FeC_2O_4 in the change : $FeC_2O_4 \rightarrow Fe^{3+} + CO_2$ is :
(1) M/3 (2) M/6 (3) M/2 (4) M/1

12. The number of mole of oxalate ions oxidised by one mole of MnO_4^- is :
(1) 1/5 (2) 2/5 (3) 5/2 (4) 5

13. What will be n-factor for $Ba(MnO_4)_2$ in acidic medium? (Where it behaves as oxidant)
(1) 5 (2) 10 (3) 6 (4) 3

14. Which is a redox reaction :
(1) $2CuI_2 \rightarrow 2CuI + I_2$
(2) $NaCl + AgNO_3 \rightarrow AgCl + NaNO_3$
(3) $NH_4Cl + NaOH \rightarrow NH_3 + NaCl + H_2O$
(4) $Cr_2(SO_4)_3 + 6KOH \rightarrow 2Cr(OH)_3 + 3K_2SO_4$

15. Which of the following change represents a disproportionation reaction (s) :
(1) $Cl_2 + 2OH^- \rightarrow ClO^- + Cl^- + H_2O$
(2) $Cu_2O + 2H^+ \rightarrow Cu + Cu^{2+} + H_2O$
(3) $2HCuCl_2 \xrightarrow[\text{Water}]{\text{dilution with}} Cu + Cu^{2+} + 4Cl^- + 2H^+$
(4) All of the above

16. $H_2O_2 + H_2O_2 \longrightarrow 2H_2O + O_2$ is an example of disproportionation because -
(1) Oxidation number of oxygen only decreases
(2) Oxidation number of oxygen only increases
(3) Oxidation number of oxygen decreases as well as increases
(4) Oxidation number of oxygen neither decreases nor increases
$H_2O_2 + H_2O_2 \longrightarrow 2H_2O + O_2$ एक विशमानुपातन का उदाहरण है, क्योंकि-

17. What is the value of *n* in the following equation :
$Cr(OH)_4^- + OH^- \longrightarrow CrO_4^{2-} + H_2O + ne$?
(1) 3 (2) 6 (3) 5 (4) 2

18. In the reaction:
$MnO_4^- + xH^+ + ne^- \longrightarrow Mn^{2+} + yH_2O$
What is the value of n :
(1) 5 (2) 8 (3) 6 (4) 3

19. (a) $H_2O_2 + O_3 \rightarrow H_2O + 2O_2$
(b) $H_2O_2 + Ag_2O \rightarrow Ag + H_2O + O_2$
Role of hydrogen peroxide in the above reactions is respectively-
(1) Oxidizing in (a) and reducing in (b) (2) Reducing in (a) and oxidizing in (b)
(3) Reducing in (a) and (b) (4) Oxidizing in (a) and (b)

20. Hot concentrated sulphuric acid is a moderately strong oxidizing agent. Which of the following reactions does not show oxidizing behaviour?
(1) $C + 2H_2SO_4 \longrightarrow CO_2 + 2SO_2 + 2H_2O$ (2) $CaF_2 + H_2SO_4 \longrightarrow CaSO_4 + 2HF$
(3) $Cu + 2H_2SO_4 \longrightarrow CuSO_4 + SO_2 + 2H_2O$ (4) $3S + 2H_2SO_4 \longrightarrow 3SO_2 + 2H_2O$