DPP
DAILY PRACTICE PROBLEMS

CLASS : XIIth **SUBJECT : CHEMISTRY**
DATE : **DPP NO. : 2**

Topic :-REDOX REACTIONS

1. Sulphur has the highest oxidation state in :
   a) SO_2 b) SO_3 c) H_2SO_3 d) H_2S

2. Nitrogen has fractional oxidation number in :
   a) N_2H_4 b) NH_4 c) HN_3 d) N_2F_2

3. As the oxidation state for any metal increases, the tendency to show ionic nature:
   a) Decreases b) Increases c) Remains same d) None of these

4. In acid medium Zn reduces nitrate ion to NH_4^+ ion according to the reaction
$Zn + NO_3 \quad Zn^{2+} + NH_4^+ + H_2O$ (unbalanced)
How many moles of HCl are required to teduce half a mole of $NaNO_3$ completely? Assume the availability of sufficient Zn.
   a) 5 b) 4 c) 3 d) 2

5. Weight of $FeSO_4$ (mol. wt. = 152) oxidized by 200 mL of 1 N $KMnO_4$ solution is :
   a) 30.4 g b) 15.2 g c) 60.8 g d) 158 g

6. In the ionic equation,
$$BiO_3^- + 6H^+ + xe^- \longrightarrow Bi^{3+} + 3H_2O$$
The values of x is
   a) 6 b) 2 c) 4 d) 3

7. The reaction, $5H_2O_2 + XClO_2 + 2OH^- \longrightarrow XCl^- + YO_2 + 6H_2O$ is balanced if :
   a) $X = 5, Y = 2$ b) $X = 2, Y = 5$ c) $X = 4, Y = 10$ d) $X = 5, Y = 5$

8. What volume of 0.40 M $Na_2S_2O_3$ would be required to react with the I_2 liberated by adding excess of KI to 50 mL of 0.20 M $CuSO_4$ solution?
   a) 12.5 mL b) 25 mL c) 50 mL d) 2.5 mL

9. For the reaction, $2Fe^{3+} + Sn^{2+} \longrightarrow 2Fe^{2+} + Sn^{4+}$ The normality of $SnCl_2$ (mol.wt. = 189.7) solution prepared by dissolving 47.5 g in acid solution and diluting with H_2O to a total of 2.25 litre is :
   a) 0.222 N b) 0.111 N c) 0.333 N d) 0.444 N

10. The eq.wt. of $Fe_2(SO_4)_3$, the salt to be used as an oxidant in an acidic solution is :
   a) (Mol. wt.)/1 b) (Mol. wt.)/2 c) (Mol. wt.)/3 d) (Mol. wt.)/5

11. Oxalic acid on reacting with acidified $KMnO_4$ is oxidised to :
   a) CO and H_2 b) CO_2 and H_2 c) CO_2 and H_2O d) CO and H_2O

12. The oxidation number of N and Cl in $NOClO_4$ respectively are
a) $+2$ and $+7$ b) $+3$ and $+7$ c) -3 and $+5$ d) $+2$ and -7

13. Sulphur in $+3$ oxidation state is present in
a) Sulphurous acid b) Pyrosulphuric acid c) Dithionous acid d) Thiosulphuric acid

14. Among the properties (a) reducing, (b) oxidising and (c) complexing the set of properties shown by CN^- ion towards metal species is :
a) a, b, c b) b, c c) c, a d) a, b

15. Magnesium reacts with acids producing hydrogen and corresponding magnesium salts. In such reactions magnesium undergoes :
a) Oxidation
b) Reduction
c) Neither oxidation nor reduction
d) Simple dissolution

16. What volume of 0.1 *N* oxalic acid solution can be reduced by 250 g of an 8 per cent by weight $KMnO_4$ solution?
a) 6.3 litre b) 12.6 litre c) 25.2 litre d) 0.63 litre

17. The oxidation state of $+3$ for phosphorus is in:
a) Hypophosphorous acid
b) Meta-phosphoric acid
c) Ortho-phosphoric acid
d) Phosphorous acid

18. When SO_2 is passed through acidified solution of potassium dichromate, then chromium sulphate is formed. The change in oxidation number of chromium is :
a) $+4$ to $+2$ b) $+5$ to $+3$ c) $+6$ to $+3$ d) $+7$ to $+2$

19. Oxidation no. of P in $H_4P_2O_5, H_4P_2O_6, H_4P_2O_7$ are respectively :
a) $+3, +5, +4$ b) $+4, +3, +5$ c) $+3, +4, +5$ d) $+5, +3, +4$

20. Oxidation of thiosulphate ($S_2O_3^{2-}$) ions by iodine gives:
a) SO_3^- b) SO_4^{2-} c) $S_4O_6^{2-}$ d) $S_2O_8^{2-}$