Date Planned : __ / __ / __	Daily Tutorial Sheet-2	Expected Duration : 90 Min
Actual Date of Attempt : __ / __ / __	Level-1	Exact Duration :_____

16. MnO_4^- is a good oxidising agent in different medium changing to :

$MnO_4^- \longrightarrow Mn^{2+}$

$\longrightarrow MnO_4^{2-}$

$\longrightarrow MnO_2$

$\longrightarrow Mn_2O_3$

Change in oxidation number respectively are :

(A) 1, 3, 4, 5 **(B)** 5, 4, 3, 2 **(C)** 5, 1, 3, 4 **(D)** 2, 6, 4, 3

***17.** Which of the following acts as an oxidizing as well as reducing agent ?

(A) Na_2O **(B)** Na_2O_2 **(C)** $NaNO_3$ **(D)** $NaNO_2$

18. What is the oxidation state of P in $Ba(H_2PO_2)_2$?

(A) +1 **(B)** +2 **(C)** +3 **(D)** −1

19. Arrange the following in order of an increase in oxidation number:

I. Mn^{2+} **II.** MnO_2 **III.** $KMnO_4$ **IV.** K_2MnO_4

The correct choice is :

(A) I > II > III > IV **(B)** I < II < IV < III **(C)** II < III < I < IV **(D)** III > I > IV > II

20. In which of the following reactions, hydrogen is acting as an oxidising agent?

(A) With Li to form LiH **(B)** With I_2 to give HI

(C) With S to give H_2S **(D)** None of the above

21. Between two compounds, $KMnO_4$ and $K_2Cr_2O_7$, the highest oxidation state is of the element.

(A) Mn **(B)** K **(C)** O **(D)** Cr

22. Which conversion is an oxidation?

(A) $SO_4^{2-} \longrightarrow SO_3^{2-}$ **(B)** $Cu^{2+} \longrightarrow Cu$

(C) $H^+ \longrightarrow H$ **(D)** $H^- \longrightarrow H$

23. Oxidation number of nitrogen is highest in :

(A) N_3H **(B)** N_2O_4 **(C)** NH_4OH **(D)** NH_3

24. In a reaction KCl is converted into $KClO_4$. Change in oxidation number is :

(A) 3 **(B)** 5 **(C)** 7 **(D)** 8

25. In which case, oxidation number of Cr has been affected ?

(A) $2CrO_4^{2-} + 2H^+ \longrightarrow Cr_2O_7^{2-} + H_2O$ **(B)** $Cr_2O_7^{2-} + 2OH^- \longrightarrow 2CrO_4^{2-} + H_2O$

(C) $(NH_4)_2Cr_2O_7 \longrightarrow N_2 + Cr_2O_3 + 4H_2O$ **(D)** $CrO_2Cl_2 + 2OH^- \longrightarrow CrO_4^{2-} + 2HCl$

26. Reaction of Br_2 with Na_2CO_3 in aqueous solution gives sodium bromide and sodium bromate with evolution of CO_2 gas. The number of sodium bromide molecules formed in the balanced chemical equation is :

(A) 1 **(B)** 3 **(C)** 5 **(D)** 7

27. In the given typical redox reaction : $M^{x+} + MnO_4^- \longrightarrow MO_3^- + Mn^{2+} + \frac{1}{2}O_2$, If one mole of MnO_4^- oxidises 2.5 moles of M^{x+}, then the value of x is :

(A) 5 **(B)** 3 **(C)** 4 **(D)** 2

28. One mole of acidified $K_2Cr_2O_7$ on reaction with excess KI will liberate ... mole(s) of I_2.

(A) 6 **(B)** 1 **(C)** 7 **(D)** 3

29. Maximum number of moles of electrons taken up by one mole of NO_3^- when it is reduced to :

(A) NH_3 **(B)** NH_2OH **(C)** NO **(D)** NO_2

30. In the reaction $Na_2S_2O_3 + 4Cl_2 + 5H_2O \longrightarrow Na_2SO_4 + H_2SO_4 + 8HCl$. The equivalent weight of $Na_2S_2O_3$ will be : (M = molecular weight of $Na_2S_2O_3$)

(A) $\frac{M}{4}$ **(B)** $\frac{M}{8}$ **(C)** $\frac{M}{1}$ **(D)** $\frac{M}{2}$