Date Planned : __ / __ / __	Daily Tutorial Sheet-4	Expected Duration : 90 Min
Actual Date of Attempt : __ / __ / __	Level-1	Exact Duration :_____

46. Which has maximum number of equivalent per mol of the oxidant ?

(A) $Zn(s) + VO^{2+}(aq) \longrightarrow Zn^{2+}(aq) + V^{3+}(aq)$

(B) $Ag(s) + NO_3^-(aq) \longrightarrow Ag^+(aq) + NO_2(g)$

(C) $Mg(s) + VO_4^{3-}(aq) \longrightarrow Mg^{2+}(aq) + V^{2+}(aq)$

(D) $I^-(aq) + IO_3^-(aq) \longrightarrow I_3^-(aq)$

47. NH_3 is oxidised to NO by O_2 (air) in basic medium. Number of equivalent of NH_3 oxidised by 1 mol of O_2 is :

(A) 4 **(B)** 5 **(C)** 6 **(D)** 7

48. In the given unbalanced redox reaction : $Cu_3P + Cr_2O_7^{2-} \longrightarrow Cu^{2+} + H_3PO_4 + Cr^{3+}$. Equivalent weight of H_3PO_4 is :

(A) $\frac{M}{3}$ **(B)** $\frac{M}{6}$

(C) $\frac{M}{7}$ **(D)** $\frac{M}{8}$

49. $NaHC_2O_4$ is 0.1 M when neutralised with NaOH. Hence, it is ..... when oxidised with MnO_4^- / H^+.

(A) 0.1 N **(B)** 0.2 N **(C)** 0.05 N **(D)** 0.15 N

50. Which halide is not oxidised by MnO_2 ?

(A) F **(B)** Cl **(C)** Br **(D)** I

51. 100 mL of $NaHC_2O_4$ required 50 mL of 0.1 M $KMnO_4$ solution in acidic medium. Volume of 0.1 M NaOH required by 100 mL of $NaHC_2O_4$ is :

(A) 50 mL **(B)** 100 mL **(C)** 125 mL **(D)** 150 mL

52. In a titration, H_2O_2 is oxidised to O_2 by MnO_4^-. 24 mL of 0.1 M H_2O_2 requires 16 mL of 0.1 M MnO_4^- solution. Hence MnO_4^- changes to :

(A) MnO_4^{2-} **(B)** MnO_2 **(C)** MnO_4^{2-} **(D)** Mn_2O_7

53. Select correct statement :

(A) In iodometric titration, hypo solution. (Hypo solution is $Na_2S_2O_3 / H^+$) is taken in burette

(B) In iodimetric titration, I_2 solution is taken in burette

(C) In iodometric titration, I_2 formed exist as I_3^-

(D) All are correct statements

54. I^- reduces HNO_2 to :

(A) N_2 **(B)** NO **(C)** N_2O **(D)** NO_2

55. $KMnO_4$ oxidises I^- to I_2 in acidic medium. The equivalent weight of $KMnO_4$ is :

(A) $\frac{158}{2}$ **(B)** $\frac{158}{3}$ **(C)** $\frac{158}{4}$ **(D)** $\frac{158}{5}$

56. In hot alkaline solution, Br_2 disproportionates to Br^- and BrO_3^-.

$$3Br_2 + 6OH^- \longrightarrow 5Br^- + BrO_3^- + 3H_2O$$

Hence, equivalent weight of Br_2 is (molecular weight = M)

(A) $\frac{M}{6}$ **(B)** $\frac{M}{5}$ **(C)** $\frac{3M}{5}$ **(D)** $\frac{5M}{3}$

57. Moles of KHC_2O_4 (potassium acid oxalate) required to reduce 100 mL of 0.02 M $KMnO_4$ in acidic medium (to Mn^{2+}) is :

(A) 0.002 **(B)** 0.005 **(C)** 0.001 **(D)** 0.007

58. The number of electrons involved in the reduction of 1 mole $Cr_2O_7^{2-}$ in acidic solution to Cr^{3+} is :

(A) 0 **(B)** 2 **(C)** 3 **(D)** 6

59. How many moles of $K_2Cr_2O_7$ can be reduced by 1 mole of Sn^{2+} ?

(A) $\frac{1}{3}$ **(B)** $\frac{1}{6}$ **(C)** $\frac{2}{3}$ **(D)** 1

60. In the equation: $H_2S + 2HNO_3 \longrightarrow 2H_2O + 2NO_2 + S$, the equivalent weight of hydrogen sulphide is :

(A) 16 **(B)** 68 **(C)** 34 **(D)** 17