Date Planned : __ / __ / __	Daily Tutorial Sheet-5	Expected Duration : 90 Min
Actual Date of Attempt : __ / __ / __	Level-1	Exact Duration :_____

61. Which of the following is disproportionation reaction ?

(A) $CaCO_3 + 2H^+ \longrightarrow Ca^{2+} + H_2O + CO_2$ **(B)** $2CrO_4^{2-} + 2H^+ \longrightarrow Cr_2O_7^{2-} + H_2O$

(C) $Cr_2O_7^{2-} + 2OH^- \longrightarrow 2CrO_4^{2-} + H_2O$ **(D)** $Cu_2O + 2H^+ \longrightarrow Cu + Cu^{2+} + H_2O$

62. In the following reaction, $3Br_2 + 6CO_3^{2-} + 3H_2O \longrightarrow 5Br^- + BrO_3^- + 6HCO_3^-$

(A) Bromine is oxidised and carbonate is reduced

(B) Bromine is reduced and water is oxidised

(C) Bromine is neither reduced nor oxidized

(D) Bromine is both reduced and oxidised

63. The conversion of sugar $C_{12}H_{22}O_{11} \longrightarrow CO_2$ is :

(A) Oxidation **(B)** Reduction

(C) Neither oxidation nor reduction **(D)** Both oxidation and reduction

64. Which of the following is the most powerful oxidizing agent ?

(A) F_2 **(B)** Cl_2 **(C)** Br_2 **(D)** I_2

65. Of the four oxyacids of chlorine the strongest oxidising agent in dilute aqueous solution is :

(A) $HClO_4$ **(B)** $HClO_3$ **(C)** $HClO_2$ **(D)** HOCl

***66.** Which of the following behaves as both oxidising and reducing agents ?

(A) H_2SO_3 **(B)** SO_2 **(C)** H_2S **(D)** HNO_3

***67.** Which of the following can act as reducing agent ?

(A) $NaNO_2$ **(B)** $NaNO_3$ **(C)** HI **(D)** $SnCl_2$

***68.** Which of the following can work as oxidising agent ?

(A) O_2 **(B)** $KMnO_4$ **(C)** H_2O_2 **(D)** H_2S

69. The possible oxidation number of As are :

(A) + 2 and + 3 **(B)** + 3 and + 5

(C) + 3 and + 4 **(D)** None of these

70. The valency of Cr in the complex $[Cr(H_2O)_4Cl_2]^+$ is :

(A) 1 **(B)** 3 **(C)** 5 **(D)** 6

71. What is the equivalent mass of IO_4^- when it is converted into I_2 in acidic medium ?

(A) $\frac{M}{6}$ **(B)** $\frac{M}{7}$ **(C)** $\frac{M}{5}$ **(D)** $\frac{M}{4}$

72. The equivalent weight of KIO_3 in the reaction $2Cr(OH)_3 + 4OH^- + KIO_3 \longrightarrow 2CrO_4^{2-} + 5H_2O + KI$ is:

(A) Mol. wt. **(B)** $\frac{\text{Mol. wt.}}{6}$ **(C)** $\frac{\text{Mol. wt.}}{2}$ **(D)** $\frac{\text{Mol. wt.}}{3}$

73. In alkaline medium, ClO_2 oxidises H_2O_2 to O_2 and is reduced to Cl^-, then how many mole of H_2O_2 will be oxidised by one mole of ClO_2 ?

(A) 1.0 **(B)** 1.5 **(C)** 2.5 **(D)** 3.5

74. MnO_4^{2-} (1 mole) in neutral aqueous medium disproportionates to :

(A) $\frac{2}{3}$ mole of MnO_4^- and $\frac{1}{3}$ mole of MnO_2 **(B)** $\frac{1}{3}$ mole of MnO_4^- and $\frac{2}{3}$ mole of MnO_2

(C) $\frac{1}{3}$ mole of Mn_2O_7 and $\frac{1}{3}$ mole of MnO_2 **(D)** $\frac{2}{3}$ mole of Mn_2O_7 and $\frac{1}{3}$ mole of MnO_2

75. **Statement 1:** Equivalent weight of NH_3 in the reaction $N_2 + H_2 \longrightarrow NH_3$ is $\frac{17}{3}$ while that of N_2 is $\frac{28}{6}$.

Statement 2 : Equivalent weight $= \frac{\text{Molecular weight}}{\text{number of } e^- \text{ lost or gained}}$

(A) Statement-1 is True, Statement-2 is True and Statement-2 is a correct explanation for Statement-1.

(B) Statement-1 is True, Statement-2 is True and Statement-2 is NOT a correct explanation for Statement-1.

(C) Statement-1 is True, Statement-2 is False.

(D) Statement-1 is False, Statement-2 is True.