**61.(D)** $Cu^{1+} \longrightarrow Cu^0 + Cu^{2+}$

**62.(D)** $3\overset{0}{Br_2} + 6CO_3^{2-} + 3H_2O \rightarrow 5\overset{-1}{Br^-} + \overset{+5}{BrO_3^-} + 6HCO_3$. In this reaction bromine is oxidised as well as reduced.

It is an example of disproportionation reaction

**63.(A)** In this reaction oxidation occur.

$\overset{0}{C_{12}} \overset{+1}{H_{22}} \overset{-2}{O_{11}} \longrightarrow \overset{+4}{C} \overset{-2}{O_2}$ ; $\qquad \overset{0}{C} \longrightarrow \overset{+4}{C} + 4e^-$ (oxidation)

**64.(A)** Fluorine is a most powerful oxidizing agent because its reduction potential (tendency to get reduced) is very high at + 2.5 V.

**65.(D)** HClO is the strongest oxidising agent. The correct order of oxidising power is:

$H\overset{+1}{C}lO > H\overset{+3}{C}lO_2 > H\overset{+5}{C}lO_3 > H\overset{+7}{C}lO_4$.

**66.(AB)** (Remember it as fact)

**67.(ACD)** $NaNO_2$, $SnCl_2$ and HI have reducing and oxidizing properties but $NaNO_3$ have only oxidizing property.

**68.(ABC)** In $H_2S$ sulphur is in lowest oxidation state $\qquad$ **69.(B)** (Remember it as fact)

**70.(B)** $[\overset{x}{Cr}(H_2O)_4 Cl_2]^+$

Note that charge over $H_2O$ is zero.

$\Rightarrow \quad x + 0 - 2 = + 1 \quad \Rightarrow \qquad x = 3$

**71.(B)** $2IO_4^- + 16H^+ + 14e^- \longrightarrow I_2 + 8H_2O \quad \Rightarrow \quad$ n – factor $= \dfrac{14}{2} = 7 \quad \Rightarrow \quad$ Eqwt $= \dfrac{M}{7}$ (M : Mol. Mass)

**72.(B)** $\dfrac{\text{Molecular weight}}{6}$ $IO_3^- + 3H_2O + 6e^- \longrightarrow I^- + 6OH^-$

**73.(C)** $ClO_2 \rightarrow Cl^-$

$ClO_2 + 2H_2O + 5e^- \rightarrow Cl^- + 4OH^-$

$H_2O_2 \rightarrow O_2$

$H_2O_2 + 2OH^- \rightarrow O_2 + 2H_2O + 2e^-$

$ClO_2 + 2H_2O + 5e^- \rightarrow Cl^- + 4OH^- ] \times 2$

$H_2O_2 + 2OH^- \rightarrow O_2 + 2H_2O + 2e^- ] \times 5$

$\overline{2ClO_2 + 5H_2O_2 + 2OH^- \rightarrow 2Cl^- + 5O_2 + 6H_2O}$

$\qquad 2ClO_2 \equiv 5H_2O_2$

$\therefore \qquad ClO_2 = 2.5H_2O_2$

**74.(A)** $MnO_4^{2-}$ in neutral aqueous medium disproportionate to $\dfrac{2}{3}$ mole of $MnO_4^-$ and $\dfrac{1}{3}$ mole of $MnO_2$.

**75.(A)** Both assertion and reason are true and reason is the correct explanation of assertion.

$\overset{0}{N_2} + 6e^- \longrightarrow 2\overset{-3}{N}$

2mol $NH_3 \equiv 6$ mol $e^- \quad \Rightarrow \quad$ n factor of $NH_3 = 3 \quad \Rightarrow \quad$ Equivalent weight $= \dfrac{17}{3}$

Observer that : 1 mol $N_2 \equiv 6$ mol $e^- \quad \Rightarrow \quad$ n factor $N_2 = 6 \quad \Rightarrow \quad$ Equivalent weight $= \dfrac{28}{6}$.