

Balance the following equations:

(In Acidic Medium)

- $\text{IO}_3^- + \text{N}_2\text{H}_4 + \text{HCl} \rightarrow \text{N}_2 + \text{ICl}_2^- + \text{H}_2\text{O}$
- $\text{Zn} + \text{NO}_3^- + \text{H}^+ \rightarrow \text{Zn}^{+2} + \text{NO}_2 + \text{H}_2\text{O}$
- $\text{I}_2 + \text{NO}_3^- + \text{H}^+ \rightarrow \text{IO}_3^- + \text{NO}_2 + \text{H}_2\text{O}$
- $\text{I}_2 + \text{Cl}_2 + \text{H}_2\text{O} \rightarrow \text{HIO}_3 + \text{HCl}$
- $\text{NaNO}_2 + \text{NaI} + \text{H}_2\text{SO}_4 \rightarrow \text{NO} + \text{I}_2 + \text{Na}_2\text{SO}_4 + \text{H}_2\text{O}$
- $\text{H}_2\text{S} + \text{HNO}_3 \rightarrow \text{NO} + \text{S} + \text{H}_2\text{O}$
- $\text{P} + \text{HNO}_3 \rightarrow \text{HPO}_3 + \text{NO} + \text{H}_2\text{O}$
- $\text{K}_2\text{Cr}_2\text{O}_7 + \text{HCl} \rightarrow \text{KCl} + \text{CrCl}_3 + \text{H}_2\text{O} + \text{Cl}_2$
- $\text{MnO}_4^- + \text{C}_2\text{O}_4^{2-} + \text{H}^+ \rightarrow \text{CO}_2 + \text{Mn}^{+2} + \text{H}_2\text{O}$
- $\text{MnO}_2 + \text{HCl} \rightarrow \text{MnCl}_2 + \text{Cl}_2 + \text{H}_2\text{O}$

(In Basic Medium)

- $\text{N}_2\text{H}_4 + \text{AgNO}_3 + \text{KOH} \rightarrow \text{N}_2 + \text{Ag} + \text{KNO}_3 + \text{H}_2\text{O}$
- $\text{Cr}(\text{OH})_3 + \text{IO}_3^- + \text{OH}^- \rightarrow \text{I}^- + \text{CrO}_4^{2-} + \text{H}_2\text{O}$
- $\text{MnO}_4^- + \text{SO}_2^{2-} + \text{H}_2\text{O} \rightarrow \text{MnO}_2 + \text{SO}_4^{2-} + \text{OH}^-$
- $\text{Fe}_3\text{O}_4 + \text{MnO}_4^- + \text{H}_2\text{O} \rightarrow \text{Fe}_2\text{O}_3 + \text{MnO}_2 + \text{OH}^-$
- $\text{Cl}_2 + \text{IO}_3^- + \text{OH}^- \rightarrow \text{Cl}^- + \text{IO}_4^- + \text{H}_2\text{O}$
- $\text{H}_2\text{O}_2 + \text{ClO}_2 + \text{OH}^- \rightarrow \text{ClO}_2^- + \text{O}_2 + \text{H}_2\text{O}$
- $\text{Zn} + \text{NO}_3^- + \text{OH}^- \rightarrow \text{NH}_3 + \text{ZnO}_2^{2-} + \text{H}_2\text{O}$
- $\text{MnO}_4^- + \text{CN}^- + \text{H}_2\text{O} \rightarrow \text{MnO}_2 + \text{CNO}^- + \text{OH}^-$
- $\text{Sn}(\text{OH})_3^- + \text{Bi}(\text{OH})_3 + \text{OH}^- \rightarrow \text{Sn}(\text{OH})_6^{2-} + \text{Bi}$
- $[\text{Fe}(\text{CN})_6]^{-3} + \text{N}_2\text{H}_4 + \text{OH}^- \rightarrow [\text{Fe}(\text{CN})_6]^{-4} + \text{N}_2 + \text{H}_2\text{O}$

KEY FOR ASSIGNMENT: 2

Balance the following equations:

(In Acidic Medium)

- $\text{IO}_3^- + \text{N}_2\text{H}_4 + 2\text{HCl} \rightarrow \text{N}_2 + \text{ICl}_2^- + 3\text{H}_2\text{O}$
- $\text{Zn} + 2\text{NO}_3^- + 4\text{H}^+ \rightarrow \text{Zn}^{+2} + 2\text{NO}_2 + 2\text{H}_2\text{O}$
- $\text{I}_2 + 10\text{NO}_3^- + 8\text{H}^+ \rightarrow 2\text{IO}_3^- + 10\text{NO}_2 + 4\text{H}_2\text{O}$
- $\text{I}_2 + 5\text{Cl}_2 + 6\text{H}_2\text{O} \rightarrow 2\text{HIO}_3 + 10\text{HCl}$
- $2\text{NaNO}_2 + 2\text{NaI} + 2\text{H}_2\text{SO}_4 \rightarrow 2\text{NO} + \text{I}_2 + 2\text{Na}_2\text{SO}_4 + 2\text{H}_2\text{O}$
- $3\text{H}_2\text{S} + 2\text{HNO}_3 \rightarrow 2\text{NO} + 3\text{S} + 4\text{H}_2\text{O}$
- $3\text{P} + 5\text{HNO}_3 \rightarrow 3\text{HPO}_3 + 5\text{NO} + \text{H}_2\text{O}$
- $\text{K}_2\text{Cr}_2\text{O}_7 + 14\text{HCl} \rightarrow 2\text{KCl} + 2\text{CrCl}_3 + 7\text{H}_2\text{O} + 3\text{Cl}_2$
- $2\text{MnO}_4^- + 5\text{C}_2\text{O}_4^{2-} + 16\text{H}^+ \rightarrow 10\text{CO}_2 + 2\text{Mn}^{+2} + 8\text{H}_2\text{O}$
- $\text{MnO}_2 + 4\text{HCl} \rightarrow \text{MnCl}_2 + \text{Cl}_2 + 2\text{H}_2\text{O}$

(In Basic Medium)

- $\text{N}_2\text{H}_4 + 4\text{AgNO}_3 + 4\text{KOH} \rightarrow \text{N}_2 + 4\text{Ag} + 4\text{KNO}_3 + 4\text{H}_2\text{O}$
- $2\text{Cr}(\text{OH})_3 + \text{IO}_3^- + 4\text{OH}^- \rightarrow \text{I}^- + 2\text{CrO}_4^{2-} + 5\text{H}_2\text{O}$
- $4\text{MnO}_4^- + \text{SO}_2^{2-} + 2\text{H}_2\text{O} \rightarrow 4\text{MnO}_2 + 3\text{SO}_4^{2-} + 4\text{OH}^-$
- $6\text{Fe}_3\text{O}_4 + 2\text{MnO}_4^- + \text{H}_2\text{O} \rightarrow 9\text{Fe}_2\text{O}_3 + 2\text{MnO}_2 + 2\text{OH}^-$
- $\text{Cl}_2 + \text{IO}_3^- + 2\text{OH}^- \rightarrow \text{Cl}^- + \text{IO}_4^- + \text{H}_2\text{O}$
- $\text{H}_2\text{O}_2 + 2\text{ClO}_2 + 2\text{OH}^- \rightarrow 2\text{ClO}_2^- + \text{O}_2 + 2\text{H}_2\text{O}$
- $4\text{Zn} + \text{NO}_3^- + 7\text{OH}^- \rightarrow \text{NH}_3 + 4\text{ZnO}_2^{2-} + 2\text{H}_2\text{O}$
- $2\text{MnO}_4^- + 3\text{CN}^- + \text{H}_2\text{O} \rightarrow 2\text{MnO}_2 + 3\text{CNO}^- + 2\text{OH}^-$
- $3\text{Sn}(\text{OH})_3^- + 2\text{Bi}(\text{OH})_3 + 3\text{OH}^- \rightarrow 3\text{Sn}(\text{OH})_6^{2-} + 2\text{Bi}$
- $4[\text{Fe}(\text{CN})_6]^{-3} + \text{N}_2\text{H}_4 + 4\text{OH}^- \rightarrow 4[\text{Fe}(\text{CN})_6]^{-4} + \text{N}_2 + 4\text{H}_2\text{O}$

* *Wish You all the Best* *