



INDIAN SCHOOL DARSAIT



DEPARTMENT OF CHEMISTRY

Subject: Chemistry Topic : Redox reaction Date of Worksheet: 23.10.2018		
Resource Person: Rohitha P N Date of Submission: _____		
Name of the Student: _____ Class & Division: XI Roll Number: _____		
1.	Name a compound each in which oxidation state of H is i) +1 ii) -1	1
2.	Which is a better oxidizing agent? $\text{Cl}_2 + 2\text{e}^- \longrightarrow 2\text{Cl}^- \quad E^\circ = 1.36\text{V}$ $\text{F}_2 + 2\text{e}^- \longrightarrow 2\text{F}^- \quad E^\circ = 2.87\text{V}$	1
3.	Can we store 1M AgNO_3 in a copper vessel? $E^\circ_{\text{Cu}^{2+}/\text{Cu}} = 0.34\text{V}$, $E^\circ_{\text{Ag}^+/\text{Ag}} = 0.80\text{V}$	1
4.	Calculate E° for the cell. $\text{Al}/\text{Al}^{3+}_{(1\text{M})} // \text{Cu}^{2+}_{(1\text{M})}/\text{Cu}$. Given $E^\circ_{\text{Al}^{3+}/\text{Al}} = -1.66\text{V}$, $E^\circ_{\text{Cu}^{2+}/\text{Cu}} = 0.34\text{V}$	1
5.	Write the stock notation for NiSO_4 , SnO_2	1
6.	Identify oxidant, reductant, substance oxidized, substance reduced in i) $\text{I}_2 + 2\text{S}_2\text{O}_3^{2-} \longrightarrow 2\text{I}^- + \text{S}_4\text{O}_6^{2-}$ ii) $\text{MnO}_2 + 4\text{HCl} \longrightarrow \text{MnCl}_2 + \text{Cl}_2 + 2\text{H}_2\text{O}$	2
7.	Arrange in the decreasing order of oxidation number KMnO_4 , MnO_2 , Mn_2O_3 , Mn , K_2MnO_4	2
8.	Calculate the oxidation number of the underlined elements i) $\text{S}_2\text{O}_3^{2-}$ ii) XeOF_4 iii) P_2O_5 iv) KMnO_4	2
9.	In the following galvanic cell $\text{Zn}_{(s)} + 2\text{Ag}^+_{(aq)} \longrightarrow \text{Zn}^{2+}_{(aq)} + 2\text{Ag}_{(s)}$ i) Which electrode is negatively charged? ii) Which is the carrier of current in the cell? iii) Represent the cell. iv) Write the individual reaction at the anode and cathode.	3
10.	Balance the following	2 each
	i) $\text{N}_2\text{H}_4 + \text{ClO}_3^- \longrightarrow \text{NO} + \text{Cl}^-$ (basic)	
	ii) $\text{MnO}_4^- + \text{H}_2\text{O}_2 \longrightarrow \text{MnO}_4^{2-} + \text{O}_2$ (basic)	
	iii) $\text{HNO}_3 + \text{I}_2 \longrightarrow \text{HIO}_3 + \text{NO}_2 + \text{H}_2\text{O}$ (acidic)	
	iv) $\text{MnO}_4^- + \text{Fe}^{2+} \longrightarrow \text{Mn}^{2+} + \text{Fe}^{3+}$ (acidic)	

