NANYANC	ANG		Name: ()
Contraction of the second	a popole	Chem!stry	Class:	
麦埃站楼	appoo		Date: / /	

Ionic Equations for Redox Reactions – Advanced

• For each one of the following reactions, deduce two logical ionic half-equations (one for each reactant). Next, combine the two ionic half-equations together in order to produce a single ionic equation that accurately describes the chemical changes that are taking place.

• For each reaction, identify the species that has been oxidised and the species that has been reduced.

• For each reaction, identify the oxidising agent and the reducing agent.

Question One:

 $CH_3CH_2OH(aq) + MnO_4^{-}(aq) \rightarrow CH_3CHO(aq) + Mn^{2+}(aq)$

Question Two:

 $CH_3CHO(aq) + Ag^+(aq) \rightarrow CH_3COOH(aq) + Ag(s)$

Question Three:

 $C_6H_5NO_2(aq) + Sn(s) \rightarrow C_6H_5NH_2(aq) + SnCl_4(aq)$

Question Four:

 $Hg^{2*}(aq) \ + \ N_2O_4(aq) \ \rightarrow NO_3^-(aq) \ + \ Hg_2^{2*}(aq)$

Question Five:

 $MnO_4^{-}(aq) + SbH_3(aq) \rightarrow MnO_2(s) + Sb(s)$ Note: This reaction takes place in a *basic* medium.

Question Six:

 $Cr_2O_7^{2-}(aq) + NO_2^{-}(aq) \rightarrow Cr^{3+}(aq) + NO_3^{-}(aq)$

• Scan the QR code below for the answers to this assignment.



http://www.chemist.sg/redox/advanced_ionic_equations_ans.pdf