Oxidation and Reduction Set 20: Oxidation and Reduction

1. (a) **Mn**O_4^- O.N (O)= -2x4= -8 leave -1 therefore Mn= +7
   (b) **Sn**F_4 O.N. (F)= -1x4= -4 then Sn= +4
   (c) **Cr**$_2O_7^{2-}$ O.N. (O)= -2x7= -14 leave -2 therefore Cr= +6
   (d) **C**O_3^{2-} O.N. (O)=-2x3=-6 leave -2 therefore C=+4
   (e) **Fe**$_2O_3$ O.N. (O)=-2x3=-6 therefore Fe=+3
   (f) **N**$_2O_4$ O.N (O)= -2x4= -8 therefore N=+4
   (g) K_2**S**$_2O_3$ O.N. (O)=-2x3=-6 and K=1x2=2 leave -4/2= S=+2

2.

	Reduced (GER) Oxidising agent	**Oxidised (LEO) Reducing agent**
(a)	Oxygen 0→-2	Hydrogen 0→+1
(b)	Oxygen 0→-2	Carbon -4→+4
(c)	hydrogen ion +1→0	tin metal 0→+2
(d)	chromium ion +6→+3	iodide ion -1→0
(e)	Oxygen -1→-2	tin(II) ion +2→+4
(f)	iron(III) ion +3→+2	tin(II) ion +2→+4
(g)	Manganese ion +7→+2	bromide ion -1→0