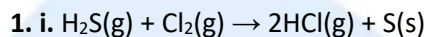
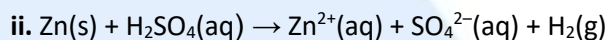


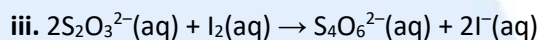
SL & HL Answers to Oxidation & reduction (1) questions



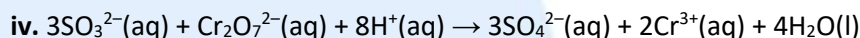
(-2) (0) oxidized.



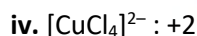
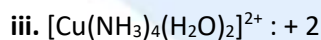
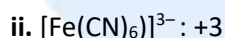
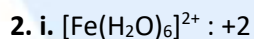
(+6) (+6) no change.



(+2) (+2.5) oxidized



(+4) (+6) oxidized



3. (III) refers to the oxidation number but is only used when naming compounds, e.g. iron(III) oxide.

3+ refers to the charge carried by an ion of iron e.g. $\text{Fe}^{3+}(\text{aq})$.

+3 refers to the oxidation state, but is not used when naming compounds, e.g. the oxidation state of iron in iron(III) oxide is +3.

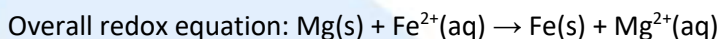
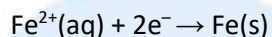
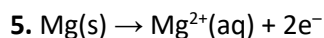
4. i. Cu_2SO_4 : copper(I) sulfate

ii. FeCl_2 : iron(II) chloride

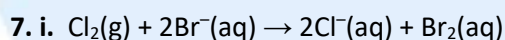
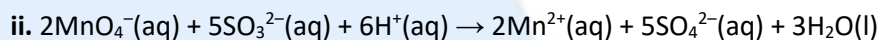
iii. Na_2CO_3 : sodium carbonate (the (I) is omitted as this is the only oxidation number for sodium)

iv. Fe_2O_3 : iron(III) oxide

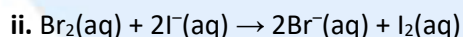
v. MnO_2 : manganese(IV) oxide (although this is still often called manganese dioxide)



6. i. Oxidizing agent: Potassium manganate(VII) or MnO_4^{-}



oxidizing agent: chlorine



oxidizing agent: bromine

8. i. Oxidizing agent: nitric acid (N has gone from +5 to +4).

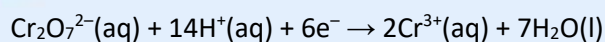
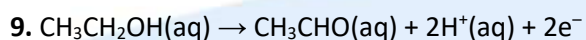
Reducing agent: copper (Cu has gone from 0 to +2)

ii. Oxidizing agent: manganate(VII) ion (Mn has gone from +7 to +2).

Reducing agent: hydrogen peroxide (O has gone from -1 to 0)

iii. Oxidizing agent: hydrogen peroxide (O has gone from -1 to -2)

Reducing agent: iron(II) (Fe has gone from +2 to +3)



Overall redox equation:

