GLOSSARY OF USEFUL TERMS FOR UNIT 5

Enthalpy of Formation	enthalpy change when one mole of a compound is formed from its elements in their standard states
First Ionisation Enthalpy	enthalpy change when one electron is removed from each of a mole of free gaseous atoms of that element
Second Ionisation Enthalpy	enthalpy change when one electron is removed from each of a mole of free gaseous unipositive ions of that element
Enthalpy of Atomisation of an Element	enthalpy change when one mole of free gaseous atoms is produced from that element in its standard state
Enthalpy of Atomisation of a Compound	enthalpy change when one mole of a compound in its standard state is converted into free gaseous atoms
First Electron Affinity	enthalpy change when one electron is added to each of a mole of free gaseous atoms of that element
Second Electron Affinity	enthalpy change when one electron is added to each of a mole of free gaseous uninegative ions of that element
Bond Dissociation Enthalpy	mean enthalpy change when one mole of covalent bonds is broken homolytically, resulting in free gaseous atoms
Lattice Enthalpy	enthalpy change when one mole of an ionic compound is formed from its free gaseous ions
Lattice Dissociation Enthalpy	enthalpy change when one mole of an ionic compound is completely dissociated into free gaseous ions
Enthalpy of Hydration	enthalpy change when one mole of free gaseous ions is added to an excess of water

Enthalpy of Solution	enthalpy change when one mole of an ionic compound is completely dissolved in an excess of water
Entropy	a measure of the degree of disorder in a substance
Spontaneous Reaction	a reaction for which the free energy change is negative
Amphoteric	able to react with acids and alkalis
Oxidation Number	the charge that would exist on an atom if all the bonding were completely ionic
Standard Electrode Potential	the emf of a cell in which the left-hand electrode is the standard hydrogen electrode and the right-hand electrode is the standard electrode in question
Ligand	a species which can use its lone pair of electrons to form a co-ordinate bond with a metal ion
Co-ordination Number	the total number of co-ordinate bonds formed between the metal ion and the ligands in a complex
Complex	a species containing a metal ion attached to one or more ligands by means of co-ordinate bonds
Bidentate ligand	a ligand which uses two lone pairs of electrons to form two co-ordinate bonds with a metal ion
Multidentate ligand	a ligand which uses more than two lone pairs of electrons to form more than two co-ordinate bonds with a metal ion
Homogeneous Catalyst	A catalyst in the same physical state as the reactants
Heterogeneous Catalyst	A catalyst in a different physical state to the reactants

Lewis Acid	An electron pair acceptor
Lewis Base	An electron pair donor