

TOPIC 5 SUMMARY NOTES

CHEMICAL FORMULAE

Group number	1	2	3	4	5	6	7	0
Valency	1	2	3	4	3	2	1	0

Roman numeral	Number
I	1
II	2
III	3
IV	4
V	5
VI	6

Prefix	Meaning
mono	1
di	2
tri	3
tetra	4
penta	5

Group number	1	2	3	4	5	6	7
Charge on ion	1+	2+	3+	NA	3-	2-	1-

Summary

- Naming compounds:

- compound names are derived from the names of the elements from which they are formed;
- most compounds with a name ending in '-ide' contain the two elements indicated;
- the ending '-ite' or '-ate' indicates that oxygen is also present.

Formulae:

- chemical formulae can be written for two element compounds using valency rules and a Periodic Table;
- roman numerals can be used, in the name of a compound, to indicate the valency of an element;
- the chemical formula can also be determined from names with prefixes;

- the chemical formula of a covalent molecular substance gives the number of each type of atom present in a molecule;
- the formula of a covalent network gives the simplest ratio of each type of atom in the substance.

Ionic formulae:

- ions containing more than one type of atom are often referred to as group ions;
- chemical formulae can be written for compounds containing group ions using valency rules and the data book;
- ionic formulae give the simplest ratio of each type of ion in the substance and can show the charges on each ion, if required;
- in formulae, charges must be superscript and numbers of atoms/ions must be subscript.