Ionic Bond

Name : _____( ) Class : _____ Date : _____

Part A: Simple Ions

(A simple ion is derived from a single atom.)

Group I	Group II	Group III	Group IV	Group V	Group VI	Group VII	Group 0
Li^+ Lithium ion	Be^{2+} Beryllium ion	✘	✘	N^{3-} Nitride ion	O^{2-} Oxide ion	F^- Fluoride ion	✘
Na^+ Sodium ion	Mg^{2+} Magnesium ion	Al^{3+} Aluminium ion	✘	P^{3-} Phosphide ion	S^{2-} Sulphide ion	Cl^- Chloride ion	✘
K^+ Potassium ion	Ca^{2+} Calcium ion					Br^- Bromide ion	✘

Name	Formula	Name	Formula	Name	Formula
Iron(II) ion	Fe^{2+}	Iron(III) ion	Fe^{3+}	Hydrogen ion	H^+
Copper(I) ion	Cu^+	Copper(II) ion	Cu^{2+}	Silver ion	Ag^+
Mercury(I) ion	Hg^+	Mercury(II) ion	Hg^{2+}	Zinc ion	Zn^{2+}
Cobalt(II) ion	Co^{2+}	Nickel(II) ion	Ni^{2+}		
Manganese(II) ion	Mn^{2+}	Chromium(III) ion	Cr^{3+}		

Colour of ions:

Name	Formula	Colour	Name	Formula	Colour
Iron(II) ion	Fe^{2+}	Pale green	Manganese(II) ion	Mn^{2+}	very pale pink
Iron(III) ion	Fe^{3+}	yellow	Nickel(II) ion	Ni^{2+}	green
Copper(II) ion	Cu^{2+}	blue	Chromium(III) ion	Cr^{3+}	green
Cobalt(II) ion	Co^{2+}	pink			

Part B: Polyatomic ions

(A polyatomic ion is derived from a group of atoms.)

Charge (-)	Charge (-2)	Charge (-3)	Charge (+)
Nitrate ion : NO_3^-	Dichromate ion : $Cr_2O_7^{2-}$	Phosphate ion : PO_4^{3-}	Ammonium ion : NH_4^+
Nitrite ion : NO_2^-	Chromate ion : CrO_4^{2-}		
Hydrogencarbonate ion : HCO_3^-	Carbonate ion : CO_3^{2-}		
Hydrogensulphate ion : HSO_4^-	Sulphate ion : SO_4^{2-}		
Hydrogensulphite ion : HSO_3^-	Sulphite ion : SO_3^{2-}		
Hydroxide ion : OH^-	Silicate ion: SiO_3^{2-}		
Permanganate ion : MnO_4^-			
Hypochlorite ion : ClO^-			
Chlorate ion : ClO_3^-			
Cyanide ion : CN^-			

Colour of ions:

Name	Formula	Colour	Name	Formula	Colour
Permanganate ion	MnO_4^-	purple	Chromate ion	CrO_4^{2-}	yellow
			Dichromate ion	$Cr_2O_7^{2-}$	orange