Answer 1A) If XCl_2 is the chloride, then metal X has valency 2. Therefore:

- Sulphate formula: XSO_4
- Hydroxide formula: $X(OH)_2$

Answer 1B) If XN is the nitride, metal X has valency 3 (since nitrogen has valency 3). Therefore: i) Sulphate formula: $X_2(SO_4)_3$ ii) Hydroxide formula: $X(OH)_3$

i) Answer1C) Valency of nitrogen in: i) NO: +2 ii) N_2O: +1 iii) NO_2: +4 Additional Questions

Answer 2A) a) Three metals whose symbols are derived from first letter of their name:

- Boron (B)
- Carbon (C)
- Potassium (K)

b) Three metals whose symbols are derived from Latin names:

- Gold (Au from Aurum)
- Silver (Ag from Argentum)
- Iron (Fe from Ferrum)

Answer 2B) Eight metals showing variable valency:

1. Iron (Fe): +2, +3
2. Copper (Cu): +1, +2
3. Mercury (Hg): +1, +2
4. Tin (Sn): +2, +4
5. Lead (Pb): +2, +4
6. Gold (Au): +1, +3
7. Chromium (Cr): +2, +3, +6
8. Manganese (Mn): +2, +3, +4, +6, +7

Valency of sulphur in: a) SO_2: +4 b) SO_3: +6

Answer 2C) Examples of chemical equations: a) One product: $2H_2 + O_2 \rightarrow 2H_2O$ b) Two products: $CaCO_3 \rightarrow CaO + CO_2$ c) Three products: $4HNO_3 \rightarrow 2H_2O + 4NO_2 + O_2$ d) Four products: $2KClO_3 \rightarrow 2KCl + 2O_2 + O_2 + Heat$

Answer 2D) Symbols in chemical equations mean: i) ↑ - Gas evolved ii) ↓ - Precipitate formed iii) (s) - Solid state iv) (l) - Liquid state v) (g) - Gaseous state vi) (aq) - Aqueous solution