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Answer 1.1) If XCI■ then X should be a metal with valency 2.

Sulphate Formula: XSO■

Hydroxide Formula: X(OH)■

Answer 1.2) XN is nitride. X is a valency 3 metal as nitrogen has valency 3.

Therefore, Sulphate's formula would be  $X\blacksquare(SO\blacksquare)\blacksquare$  and Hydroxide's formula would be  $X(OH)\blacksquare$ 

Answer 1.3) Valency of nitrogen in:

- 1) NO: +2
- 2) N**■**O: +1
- 3) NO**■**: +4

Answer 2.1) Three symbols whose first letter is the symbol for them.

- (1) Boron (B)
- (2) Carbon (C)
- (3) Hydrogen (H)

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Answer 2.2) The 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

## Answer 2.3) Examples of chemical equations:

(a) One product : 2H2 + O2 -> 2H2O

(b) Two product : CaCO3 —> CaO + CO2

(c) Three Products: 4HNO3 —> 2H2O + 4NO2 + O2

(d) four Products : 2KClO3  $\rightarrow$  2KCl + 2O2 + O2 +  $\Delta$ 

Answer 2.4) Symbols in chemical equation mean:

- (i) ↑ Gas evolved
- (ii) ↓ precipitate formed
- (iii) (s) solid state
- (iv) (l) liquid state
- (v) (g) gaseous state
- (vi) (aq) aqueous solution