**COSTAATT**

**CHEM092 – Introduction to Concepts in Chemistry II**

**Lesson 4**

**Homework – Concentrations, Dilutions & Titrations.**

(1) What is the concentration in g dm-3of some potassium hydroxide, KOH, solution with a concentration of 0.200 mol dm-3?

(RAMs: H = 1; O = 16; K = 39)

(2) 25.0 cm3 of 0.250 mol dm-3 potassium carbonate solution was neutralised by 12.5 cm3 of ethanoic acid of unknown concentration.

2CH3COOH(aq) + K2CO3(aq) → 2CH3COOK(aq) + CO2(g) + H2O(l)

Find the concentration of the ethanoic acid.

(3) Lime water is calcium hydroxide solution. In an experiment to find the concentration of calcium hydroxide in lime water, 25.0 cm3 of lime water needed 18.8 cm3 of 0.0400 mol dm-3 hydrochloric acid to neutralise it. Calculate the concentration of the calcium hydroxide in mol dm-3.

(RAMs: H = 1; O = 16; Ca = 40)

Ca(OH)2(aq) + 2HCl(aq) → CaCl2(aq) + 2H2O(l)