Contents

1.	MATHEMATICAL BACKGROUND	1
	 1-1 Simultaneous equations . 1-2 Quadratic equations 1-3 Logarithmic functions 	3 5 7
2.	Solubility	
	 2-1 The solubility product 2-2 Solubility of salts in pure water 2-3 The common ion effect 2-4 The effect of ionic strength 2-5 The effect of acidity and complexing agents 	11 14 16 20 24
3.	STRONG ACIDS AND BASES	31
	3-1 The ionization of water	31 34
4.	WEAK ACIDS AND BASES	42
	4-1 pH of a weak acid 4-2 pH of a weak base 4-3 Generalized acids and bases 4-4 Buffer solutions 4-5 Polyprotic acids	42 53 58 62 69
Answers to Problems		83
TA	BLES	91