TEST 3
STUDY GUIDE

Topic	*Text Reference*
CHAPTER 17	
• Solve problems involving common ions	Notes
• Know what a buffer is and how it functions	17.2
• Calculate the pH of a buffer solution from given data	17.2
• Write chemical equations describing reactions of buffers with acids or bases	17.2
• Calculate the pH of a buffer solution after addition of small amounts of acid or base	17.2, 17.3
• Use Henderson-Hasselbalch equation to solve buffer problems	17.2, 17.3
• Know the characteristics of a titration curve for strong acid and strong base	17.4
• Calculate the pH of a titration involving a strong acid and strong base	17.4
• Know the characteristics of a titration curve for weak acid and strong base	17.4
• Calculate the pH of a titration involving a weak acid and strong base	17.4
• Know the characteristics of a titration curve for strong acid and weak base	17.4
• Calculate the pH of a titration involving a strong acid and weak base	17.4
• Write solubility product constant expression for slightly soluble compounds	17.5
• Calculate Ksp value for a compound given its solubility	17.5
• Calculate the solubility of a compound from its given Ksp value	17.5
• Know the relationship of molar solubility and K_{sp}	17.5
• Calculate solubility of compounds with common ion effect	17.5
• Calculate the solubility of a slightly soluble salt using bounce-back method	Notes
• Predict whether a precipitation occurs given the concentration of its ions	17.7
• Calculate the cation or anion concentration required for a precipitation to occur	17.7
• Understand fractional precipitation and predict which ion will in a mixture will precipitate first	17.7
• Calculate the ion concentration required for a precipitation to occur in a mixture	
• Predict qualitative and quantitative effects of pH on the solubility of compounds	Notes
• Write formation constant (K_f) expressions for complex ions	17.8
• Determine dissociation constants (K_d) from K_f values	17.8
• Calculate the concentration of metal ions in complex-ion equilibria	17.8
• Know what an amphoteric hydroxide is and write equations for its reactions with acid and base	17.8
• Predict whether a precipitate will form in the presence of a complex-ion	Notes
• Calculate the solubility of a slightly soluble compound in presence of the complex-ion	Notes