

Name:.....

Date:.....

CHEMISTRY HONORS HOMEWORK 5.1 – ACIDS, BASES, SALTS AND NEUTRALIZATION

1.	Complete the following table:		/6	
	Name	Formula		Acid, base or salt?
	nitric acid			
		Ca(OH) ₂		
	calcium nitrate			
		(NH ₄) ₂ SO ₄		
		H ₂ SO ₄		
	potassium carbonate			
2.	Write balanced equations, with state symbols, for the following reactions:			
(a)	magnesium hydroxide powder with dilute hydrochloric acid		/3	
(b)	dilute sulfuric acid with sodium carbonate solution		/3	
(c)	Ammonia solution with dilute nitric acid		/3	
3.	(a)	Describe what you would see as reaction 2 (a) was taking place.	/2	
	(b)	State a useful application of reaction 2 (a).	/1	
	(c)	Explain how you would prepare a pure sample of the salt produced in reaction 2 (a).	/3	
	(d)	Explain why it is much easier to produce a pure sample of salt from reaction 2 (a) than from reactions 2 (b) or 2 (c)	/2	

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4.	<p>In terms of the concentration of H⁺ and OH⁻ ions, explain what it meant by the terms:</p> <p>acidic solution</p> <p>alkaline solution</p> <p>neutral solution</p>	/3
5.	(a) What is the concentration of H ⁺ ions in a solution with a pH of 5?	/1
	(b) What is the pH of a solution containing an OH ⁻ concentration of 1 x 10 ⁻⁴ mol/L?	/2
	<p>(c) What is the hydrogen ion concentration and the hydroxide ion concentration in a solution with a pH of 12?</p> <p>H⁺ concentration: mol/L OH⁻ concentration: mol/L</p>	/2
TOTAL		/30