ACIDS, BASES & SALTS 2

1) a) What is an acid? ……

…… (1)

b) Nitric acid is a strong acid. Citric acid is a weak acid. What is the difference between strong and weak acids?

……

…… (2)

c) What is an alkali? ……

…… (1)

2) Name the following substances and ***tick*** to show if they are acids, bases and/or alkalis. (6)

Formula	Name	Acid	Base	Alkali	Salt
NaOH					
MgO					
HNO_3					
NH_3					
KNO_3					
$Al_2(SO_4)_3$					

3) a) Complete the following equations.

i) copper oxide + hydrochloric acid → …… (2)

ii) sulfuric acid + calcium hydroxide → …… (2)

iii) ammonia + nitric acid → …… (2)

iv) nickel carbonate + sulfuric acid → …… (2)

v) strontium + hydrochloric acid → …… (2)

b) Write the ionic equation for the reaction in (a) (ii). …… (2)

c) i) Which of the reactions in (a) are redox (electron transfer) reactions? ……

ii) Which of the reactions in (a) are acid-base (proton transfer) reactions? …… (2)

4) a) Give a balanced equation for: potassium hydroxide + sulfuric acid → potassium sulfate + water

…… (2)

b) Give a balanced equation for: zinc(II) carbonate + nitric acid → zinc(II) nitrate + water + carbon dioxide

…… (2)

Area	Strength	To develop	Area	Strength	To develop	Area	Strength	To develop
Done with care and thoroughness			Identify acids, bases, salts, alkalis			Write formulae		
Good SPG			Write word equations for acid reactions			Write balanced equations		
Can define acids and alkalis			Electron v proton transfer			Write ionic equations		
Understand strong and weak acids								