



St. Ninian's High School
Science Department



S1 Chemistry
Chemical Reactions Homework 2 (12 Marks)

- Which of the following is a common household alkali?
 - Soap
 - Vinegar
 - Lemonade
 - Soda water

1 mark

- Which of the following substances is a common acid?
 - Ammonia
 - Toothpaste
 - Oven cleaner
 - Lemon juice

1 mark

- What is the colour of an alkaline solution on the pH Scale?
 - Red
 - Yellow
 - Green
 - Blue

1 mark

- The elements magnesium and oxygen react together to form magnesium oxide. The magnesium oxide
 - looks like magnesium
 - looks like oxygen
 - does not look like magnesium or oxygen
 - is a mixture of magnesium and oxygen

1 mark

- A student dissolved carbon dioxide gas in water. They then tested the water with pH paper and it produced an orange colour.
What type of substance must have been produced when the carbon dioxide dissolved?

1 mark

6. (a) What name is given to a chemical that changes colour when added to a substance that is an acid, neutral or an alkali? **1 mark**

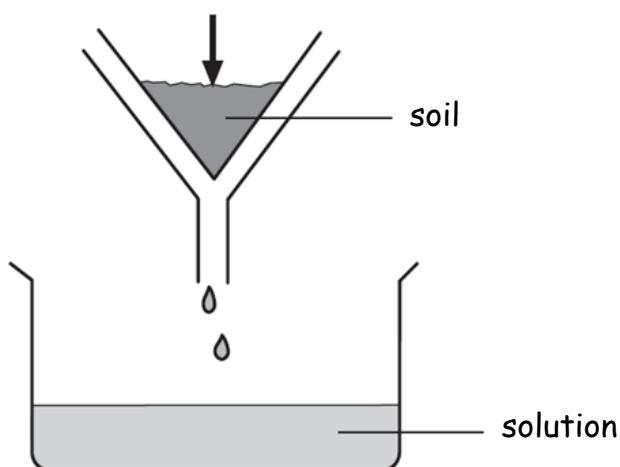
(b) What name is given to the scale which would be used to compare the colour after the chemical in question (a) is added to an acid, neutral or an alkali? **1 mark**

7. A student tested pH of some everyday chemicals using universal indicator paper. Her observations are below

- I tested vinegar and it had a pH of 2.
- Tap water had a pH of 6.
- Soda water had a pH of 3 but the pH of baking soda was 12.

Draw a table, with 2 suitable headings to show her results. **2 marks**

8. A student carried out an experiment to find the pH values of different garden soils. Water and soil were mixed and the mixture was slowly poured through a filter paper. A solid and a solution was collected as shown in the diagram below.



Using your knowledge of chemistry, describe how the student could determine whether the solution was an acid, neutral or an alkali. **3 marks**