



**Subject:** Grade 7 Natural Sciences

**Topic:** Acids, bases and neutrals

**Total:** 29 Marks

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1. neutral 3 marks

**Explanation:**

Sugar water is neither an acid nor a base. It will have no effect on the litmus paper. We say it is neutral.

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2. alkali 3 marks

**Explanation:**

Alkalis are basic salts that are soluble in water. A solution of such a salt in water is said to be alkaline. It will turn red litmus paper blue.

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3. indicator | indicators 3 marks

**Explanation:**

An acid-base indicator shows whether a substance is an acid or a base. It changes colour based on whether a solution is basic or acidic.

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4. true 2 marks

**Explanation:**

Ripe fruit usually have a sweet taste, while unripe fruit tend to taste sour. As fruit ripen, organic acids and starch in the fruit are changed to sugars. That is why the taste of fruit becomes more pleasant as they ripen.

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5. D: household cleaner 4 marks

**Explanation:**

Household cleaner normally consists of a solution of basic substances. Lemon juice and vinegar tastes sour. Fizzy drinks have carbon dioxide gas in them. When carbon dioxide is pumped through a solution it becomes acidic.

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6. B: bicarbonate of soda 4 marks

**Explanation:**

A base is the opposite of an acid.

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7. false 2 marks

**Explanation:**

Substances such as pure water and cooking oil have no affect on litmus paper. They are not acidic or basic. We say that they are neutral.

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8. true

2 marks

**Explanation:**

Red litmus paper can only turn blue in a basic solution. It does not show any colour change in a neutral solution.

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9. B: Red litmus paper turned blue because the substance is a base.

4 marks

**Explanation:**

Red litmus paper turns blue in a base. It remains red in an acid. In the graphic, red litmus paper was dipped into the substance. The litmus paper turned blue, so the substance must be a base.

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10. false

2 marks

**Explanation:**

Tap water is not pure water. In some areas, tap water is obtained from underground water that contains dissolved salts. This makes the water basic. In other areas, municipalities add chemicals to the water to kill germs. This tends to make the water acidic.

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