1. What colour did Boyle's syrup of violets turn with acids?

   ☐ Green

   ☐ Blue

   ☐ Red

   ☐ Colourless

2. An alkali is a base that:

   ☐ dissolves in water

   ☐ produces hydrogen ions

   ☐ is always solid

   ☐ turns litmus red

3. Which oxide from burning coal made the 1952 London smog acidic?

   ☐ Sulfur dioxide

   ☐ Sodium oxide

   ☐ Calcium oxide

   ☐ Aluminium oxide

4. Which salt are "Epsom salts"?

   ☐ Copper(II) sulfate

   ☐ Calcium carbonate

   ☐ Magnesium sulfate

   ☐ Sodium chloride

5. An insoluble salt is made by:

   ☐ electrolysis

   ☐ mixing two soluble salt solutions (precipitation)

   ☐ reacting acid with excess base

   ☐ evaporating sea water

6. Litmus paper can show the pH of a solution as a number.

   ☐ True ☐ False

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8. Sulfur dioxide and nitrogen dioxide cause acid rain.

   ☐ True ☐ False

9. After filtering, the copper(II) sulfate solution is in the filtrate.

   ☐ True ☐ False

10. Adding water to white anhydrous copper sulfate turns it white again.

    ☐ True ☐ False

1. **Red**

   Green with alkalis.

2. **dissolves in water**

   An alkali is a soluble base, giving OH^- ions.

3. **Sulfur dioxide**

   It formed acid droplets.

4. **Magnesium sulfate**

   From the bitter spring.

5. **mixing two soluble salt solutions (precipitation)**

   Precipitation forms an insoluble solid.

6. **False**

   Use universal indicator or a pH meter.

7. **7**

   pH 7 is neutral.

8. **True**

   They form acids in water.

9. **True**

   The black excess stays in the filter paper.

10. **False**

    False. Adding water turns white anhydrous copper sulfate blue, which is a test for water. Heating the blue hydrated salt drives the water off and makes it white.

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