

CLASS VII (2017-18) HOTS questions

1. The formula for a compound is written as H_2X where H stands for Hydrogen. What would be the valency of X? Suggest an element that could be X.
2. The surface of a paper covered with a turmeric paste, can be used to make cards by applying soap solution to its surface. What is the phenomenon behind this?
3. A litmus paper when dipped into a jar full of hydrogen chloride gas shows no colour change. Why does this happen?
4. Use of chemical fertilizers causes the soil to become excessively acidic. We then add quick lime to the soil. Explain why.
5. Give reasons why an insect bites can be soothed with the application of toothpaste.
6. In the reactivity series of metals, Cu is placed below H; what does this indicate?
7. When X g mass of Magnesium is placed in a crucible and burnt in the presence of Oxygen. Afterwards the mass of the product is found to be greater than X g. Explain why this happens.
8. How many atoms are lost during a chemical reaction?
9. Rusting and Respiration are both oxidation reactions but rust formed during rusting is different from carbon dioxide and water vapour formed during respiration. What are the similarities?
10. The weight of Manganese dioxide used in the laboratory preparation of Oxygen from the decomposition of hydrogen peroxide remains unaltered. Why does this happen?