

# WATER WORKSHEET - 1

1. State the importance of water for all general uses.
2. State a reason to prove that water is a compound and not an element.
3. State the causes of hardness of water.
4. State why water is considered a universal solvent.
5. Define solute, solvent and solution.
6. State the causes of hardness in temporary and permanent hard water.
7. State the characteristics of a true solution.
8. Differentiate between saturated, unsaturated and supersaturated solutions.
9. How would you convert a saturated solution to unsaturated solution and vice-versa?
10. Temporary hardness in water can be removed by boiling. Give balanced equations to explain how hardness in temporary hard water is removed by boiling.
11. Define solubility. Give the main steps with the calculations involved of the method to determine the solubility of a given salt 'X' in water.
12. Two samples of water are placed in a beaker individually. State how you will determine experimentally, which of the two samples contains permanent hard water.
13. From the following list of salts:  $\text{Na}_2\text{SO}_4$ ,  $10\text{H}_2\text{O}$ ,  $\text{NaCl}$ ,  $\text{KClO}_3$ ,  $\text{NaNO}_3$ ,  $\text{Ca}(\text{OH})_2$ ,  $\text{NH}_4\text{Cl}$ ,  $\text{KCl}$ ,  $\text{CaSO}_4$ . State the salts whose solubility increases, decreases and is fairly independent or slightly increases with rise in temperature of water.
14. What is a solubility curves. State two applications and two benefits of the solubility curve.
15. Give the influence of pressure, temperature on the solubility of gases in water.
16. How does water, occur in the free state and in the combined state.