Class – IX (SCIENCE – CHEMISTRY)

Worksheet – 3 (Chapter – 1)

Topic – Evaporation

Evaporation – A process of conversion from liquid to gas that takes place below the boiling point.It takes place at surface of the liquid.The particles of water collide with each other as well as with the particles of gases in atmosphere.After sometime,the particles on the surface gain sufficient energy so as to change into vapours.

Factors affecting Evaporation :

1)Surface Area – Greater the surface area, more will be the rate of evaporation because it is a surface phenomenon.There will be more number of molecules on the surface which will change into vapours easily.

2)Humidity - It is the amount of water vapours present in air.The air around us cannot hold more than a definite amount of water vapours at a given temperature.If the amount of water in air is already high,the rate of evaporation decreases.Decrease in humidity leads to increase in rate of evaporation.

3)Temperature – The rate of evaporation increases with increase in temperature because more number of particles gain enough kinetic energy to go to vapour state.

4)Wind Speed – The rate of evaporation increases with increase in wind speed because particles of water vapours are taken away decreasing the amount of water vapours in atmosphere.

Effect of Evaporation :

Evaporation leads to cooling because high energy molecules

leave the surface and average energy of remaining molecules decreases.This results in drop in temperature of the part of liquid that is left.Therefore evaporation causes cooling.

Assignment :

1)Why is evaporation a surface phenomena?

2)Why do clothes dry up faster on a hot dry day?

3)Why do we feel cool after applying shave lotion or perfume?

4)Why does evaporation causes cooling?

5)Give three differences between evaporation and boiling.

6)Water kept in earthen pot becomes cool after some time .Explain, why?

7)Why does a desert cooler cool better than on a hot dry day?

8)Why does our palm feel cold when we put some acetone or petrol or perfume on it?

9)What type of clothes should we wear in summer ? and why?

10)Why does a piece of cloth drys faster than a bedsheet?

11)Why are we able to sip hot tea or milk faster from a saucer rather than a cup?

12)Explain the various factors on which the process of evaporation depends.