**12.AIR AND WATER**

**1. What are the different components of air?**

**Ans** Air is a mixture of gases. The different components of air are nitrogen, oxygen, carbon dioxide, water vapour and other gases such as argon, methane, nitrous oxide and sulphur dioxide. Smoke and dust

particles are also present in the atmosphere.

2. List two reasons why we need oxygen.

**Ans i)**Living beings need oxygen for breathing.

ii)Oxygen is also needed for burning.

3. Why is the mesosphere important to us?

Ans Mesosphere is important to us because it burns and destroys the meteors that enter the atmosphere from space before they can strike the Earth’s surface.

**4. How does boiling make water fit for drinking?**

Ans Boiling kills most of the germs present in water. It also converts some soluble impurities into insoluble ones. These impurities settle at the bottom and sides of the container. These can be easily removed by filtration.

5. What is chlorination of water?

Ans The process of killing germs present in water by adding small amounts of chlorine to the water is called chlorination.

6. What is distilled water? What are its uses?

Ans Distilled water is the purest form of water. It is used in science laboratories and in car batteries.

7. List any three uses of nitrogen.

Ans Three uses of nitrogen are as follows:

**i.** Nitrogen is used to make fertilizers.

**ii.** It is also used to keep packaged foods fresh.

**iii.** Liquid nitrogen is very cold. It is used in laboratories, blood banks and food storage units to keep items frozen.

8. Why is water important? If 70% of the Earth’s surface is covered with water, why do we need to save water?

Ans 1.All living organisms on the Earth need water to survive. Water covers nearly 70% of the Earth’s surface.

2.However, less than 1% of the total water is in the rivers, lakes and streams.

3.The remaining water is found as ice and in the oceans. We cannot drink sea water as it is too salty.

4.So, the water that is found in the rivers, lakes and streams has to be used by all human beings, animals and plants.

5.If this water gets polluted and becomes unfit for drinking, we will run out of water. So water is important and we need to save water.

9. List the different methods used to remove soluble and insoluble impurities from water. Explain sedimentation and decantation.

Ans Insoluble impurities are removed from water by sedimentation and decantation, and filtration. We can remove certain soluble impurities and kill germs present in water by boiling and chlorination.

Insoluble impurities are allowed to settle down at the bottom of a container of water. This process is called sedimentation.

The impurities that settle down at the bottom are called sediments. The top layer of clean water is gently poured into another container without disturbing the sediment. This process is called decantation.

10. Explain the process of distillation with the help of a labeled diagram. Give an example of distilled water found in nature.

Ans The water is boiled to change into water vapour, leaving behind all the dissolved impurities.

The vapours are collected and condensed in another container to obtain distilled water.



The dew drops seen on leaves of plants early in the morning are an example of distilled water found in nature.