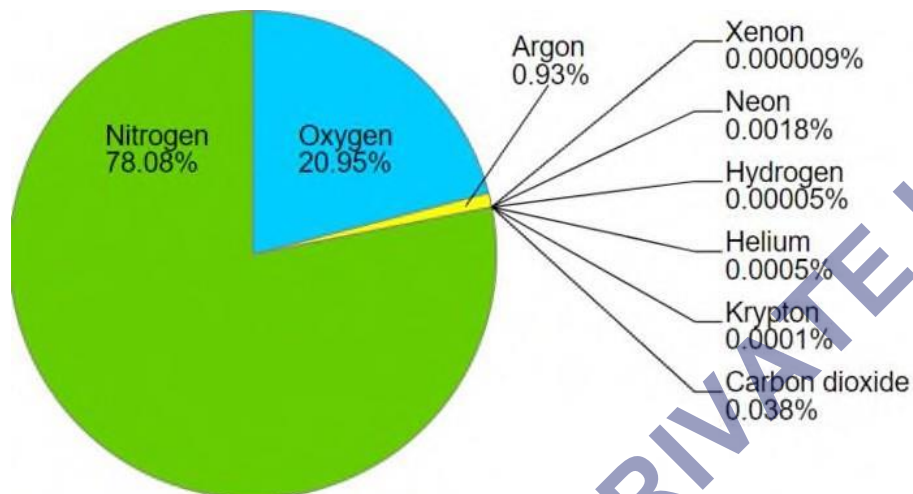


## CHAPTER – 11

### AIR AROUND US

#### Q.1 What is the composition of air?

Answer:



Air contains gases, water vapour and dust particles. The gases mainly constitute of nitrogen, oxygen and carbon dioxide along with several other gases in small amounts. 99% of the air is comprised of oxygen and nitrogen. Water vapour, carbon dioxide and other gases form remaining 1% of the air.

#### Q.2 Which gas in the atmosphere is essential for respiration?

Answer:

Oxygen gas in the atmosphere is essential for respiration. This is because the production of energy inside our body is dependent on oxygen.

#### Q.3 How will you prove that air supports burning?

Answer:

To prove that air supports burning, let's take two lighted candles.

- 1) Put one candle in a tumbler containing water and cover it with an inverted glass.
- 2) Put the second candle in open air. After some time, this covered candle gets extinguished and the water level rises up in the glass.
- 3) This happens because oxygen present inside the air in the glass was used up completely.

This experiment shows that air is necessary for burning.

Practical life example:

In villages, the food is cooked on chulha. In the chulha, blowing air helps in quickly burning the wood in it. This also shows that air supports burning.

**Q. 4** How will you show that air is dissolved in water?

Answer:

Take some water in a glass vessel or beaker. Heat it slowly on a tripod stand. Look carefully at the inner surface of the vessel. You will see tiny bubbles on the inner side. On heating. These bubbles come from the air dissolved in water. On heating, air dissolved in water This shows that water contains air.

**Q. 5** Why does a lump of cotton wool shrink in water?

Answer:

A lump of cotton wool has air inside the gaps of cotton fibres. When the air inside the cotton wool is driven out by water, the cotton lump shrinks.

**Q. 6** The layer of air around the earth is known as \_\_\_\_\_.

Answer:

The layer of air around the earth is known as atmosphere.

**Q. 7**

The component of air used by green plants to make their food, is \_\_\_\_\_.

Answer:

The component of air used by green plants to make their food is **carbon dioxide**.

*\* Note: The process by which the plants make their own food with the help of carbon dioxide, water, nutrients, and sunlight is called photosynthesis.*

**Q. 8** List five activities those are possible due to the presence of air.

Answer:

The activities that are possible due to the presence of air are:

- i. Burning of fuel and substance.
- ii. Formation of clouds
- iii. Respiration by animals.
- iv. Power generation by windmills
- v. Transpiration
- vi. Photosynthesis by plants.

**Q. 9** How do plants and animals help each other in the exchange of gases in the atmosphere?

Answer:

1. Plants make their own food by the process of photosynthesis. In this process, they take carbon dioxide and give out oxygen.
2. Both animals and plants use oxygen from the air during respiration and release carbon dioxide gas in air. This released carbon dioxide again used by plants for photosynthesis. This shows plants and animals help each other in the exchange of gases in the atmosphere.

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