

Chemistry - 10th Class Chemistry English Medium Chapter 14 Preparation

Q1. What are major constituents of troposphere?

Ans 1: The major constituents of troposphere are nitrogen and oxygen gases. These gases comprise 99% by volume of earth's atmosphere.

Q2. Tell some use of water in our life .

Ans 1: Uses of water in our daily life are for drinking ,cooking , washing , purposes etc

Q3. How water dissolve sugar and alcohol?

Ans 1: Water molecule is composed of oxygen and hydrogen atoms . Because of two O-H bonds and two lone pairs , one H₂O molecule can form hydrogen bonding with four H₂O molecules , which are arranged tetrahedrally around the H₂O molecule . This unique behaviour of water enables it to dissolve many polar non-ionic compounds having hydroxyl group (-OH), like alcohols , organic acids , glucose , sugar , etc by forming hydrogen bonds with them

Q4. What is Existence of ozone layer.

Ans 1: It lies in stratosphere region about 25 to 30 km away from earth's surface.

Q5. Explain the chemistry of removing the temporary hardness by boiling water .

Ans 1: Temporary harness of water is easily removed by boiling water . On boiling , calcium bicarbonate Ca(HCO₃)₂ decomposes to produce insoluble calcium carbonate , which precipitates of the solution

Ans 2: $\text{Ca}(\text{HCO}_3)_2(\text{aq}) \rightarrow \text{CaCO}_3 + \text{H}_2\text{O} + \text{CO}_2(\text{g})$

Q6. How water used as a cleansing agent in industries causes pollution .

Ans 1: Water used as cleaning agent in industries is directly discharged out . This water contains all kinds of toxic chemicals and detergents

Q7. Why the 75% of the atmospheric mass lies within the troposphere ?

Ans 1: The major constituent of troposphere are nitrogen and oxygen gases . These two gases volume by volume of Earth's atmosphere Hence it contain 75% of atmosphere mass

Q8. How waterborne disease can be prevented ?

Ans 1: Waterborne diseases can be prevented by taking the following measures

1: Provision of safe water : Drinking water must be properly treated and purified

2: Disposal of sewage : There must be adequate sanitary disposal of sewage . Any type of waste must not be thrown or discharge directly in water supplies or reservoirs

3: Control of toxic chemicals : Chemical contamination can cause acute illness , but often toxic contaminants are slow poisons and carcinogens . There must be a strict control over the use of pesticides and other chemical

Q9. How sodium zeolite softens water ?

Ans 1: Sodium zeolite is a naturally occurring resin of sodium aluminium silicate $\text{NaAl}(\text{SiO}_3)_2$, which can also be prepared artificially . It is used for softening of water at domestic as well as on industrial scale . When water is passed through resin , sodium ions of the resin are exchanged with the unwanted calcium and magnesium ions of the hard water

Ans 2: $\text{Na}_2 \text{ zeolite} + \text{CaSO}_{4(aq)} \rightarrow \text{Ca zeolite} + \text{Na}_2\text{SO}_{4(aq)}$

Q10. What is capillary action ?

Ans 1: Capillary action is a process by which rises up from the roots of plants to leave . This process is vital for the survival of the land plant