

CHAPTER 8 : A JOURNEY THROUGH STATES OF WATER

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SHORT AND LONG ANSWER :

1.

During winter why do we see more fog in closed areas where there are lots of trees?

Ans: Due to lots of trees, air at that place contains much more water vapour during winter. These vapours condense on dust or smoke particles forming thick fog.

2.

Water kept in sunlight evaporates due to the heat of the sun. How does water kept in the shade evaporate?

Ans: Water kept under the shade of a tree also evaporates because of warm air. During daytime, the heat of the sun heats up the surrounding air. This warm air provides heat for evaporation of water, kept in the shade.

3.

If water would be a sticky substance that had smell, how would it affect our daily activities?

Ans: It would affect our daily activities because it could not be used for drinking, bathing, cleaning and cooking purposes. It would also affect commercial activities as sticky water cannot be used for industrial activities, transportation and manufacturing purposes.

4.

Why does the mirror in the bathroom become hazy (fogged) after a hot shower in winter?

Ans: The bathroom mirror becomes hazy (fogged) after a hot shower in winter due to condensation.



sation. While taking a hot shower, the water releases water vapour (steam) into the air. This increases the humidity in the bathroom, filling the air with warm, moist air. Since the mirror's surface is cooler than the warm, moist air it causes the water vapour to condense into tiny water droplets on the mirror's surface making it appear foggy or hazy.

5: A cooled water bottle was kept outside the refrigerator. Why was a puddle of water observed around the bottle after sometime?

Ans: The puddle of water observed around the cooled water bottle after it was kept outside the refrigerator is due to condensation. When the warm, moist air comes into contact with the cold surface of the bottle, the air cools down and condenses into tiny droplets of water on the surface of the bottle. Over time, the tiny droplets combine and grow larger, eventually dripping down and forming a puddle around the bottle.

6. The Earth has more water than land but still there is a shortage of water. Why?

Ans: The Earth has more water than land, with about 71% of its surface covered by water. But 97% of Earth's water is found in the oceans, which is salty and not suitable for drinking, agriculture or most industrial uses. Only 3% of Earth's water is fresh and even a large part of this is inaccessible. Most of the freshwater is trapped in glaciers and ice caps and only a small fraction is available to use. That's why there is a shortage of water.



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HIGHER ORDER THINKING SKILLS:

1. What happens on the glasses when people often breathe on their spectacles to clean them? Why?

Ans: When the people breathe on to their glasses, the breathe contains moisture in the form of water vapour. If the glasses are cooler than the breath, the water vapour condenses into tiny water vapour droplets on the surface of the lenses, creating a foggy layer. Once the moisture is wiped off using a clean cloth, the lenses become clearer.

2. What would happen if water did not evaporate easily?

Ans: Evaporation plays a key role in the water cycle. Without evaporation, water would not rise into the atmosphere to form clouds, leading to little or no rain. This would cause widespread droughts, leading to flooding, stagnant water which would promote the growth of harmful bacteria and pests causing health issues. Moreover the temperature in many areas could become unbearably hot.

3. Why can the Oceans or Seawater not to be used for drinking purpose?

Ans: Seawater contains salts. The human body cannot process this high salt concentration effectively. Drinking sea water would force the kidneys to work harder to expel the excess salt, leading to dehydration. It also contains pollutants, microorganisms and heavy metals that can be harmful if ingested.

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