

EXERCISE SOLUTION

(1.) Fill in the blanks with the appropriate term.

a) The capacity of air to hold moisture depends upon the TEMPERATURE of the air.

b) Water does not have a SHAPE but has definite MASS and

c) While freezing, the DENSITY of water is lowered.

2.) WHY IS IT SAID THAT-

a) AIR IS A HOMOGENEOUS MIXTURE OF VARIOUS GASES.

ANS:- Air is a homogeneous mixture of gases because it is primarily made up of Nitrogen and oxygen. These elements are not separated from one another.

b) WATER IS A UNIVERSAL SOLVENT.

ANS:- Water is a very good solvent because it can dissolve most every substances in it so that water is known as a 'Universal solvent'.

c) THERE IS NO ALTERNATIVE TO WATER FOR CLEANING PURPOSES.

ANS:- Because water dissolves everything in it. So water is a universal solvent. Water dissolves all other dirt present in our clothes and other items. When we soak our clothes in detergent with water to washing and the pH of water is neutral.

(3.) WHAT WILL HAPPEN IF-

a) THE AMOUNT OF WATER VAPOUR IN THE AIR INCREASES.

ANS:- *The amount of water vapor in the atmosphere says that the level of humidity in the atmosphere. So when the amount of water vapor in the atmosphere increases means humidity increases. Its result is excessive sweating.*

b) ONLY ONE CROP IS GROWN REPEATEDLY IN THE SOIL.

ANS:- *If only one crop grown repeatedly in the soil then it loses its fertility. So crop rotation is an important procedure to fertility the soil. There is no loss of nutrients.*

(4.) With whom should I pair up ?

GROUP A	GROUP B
1.) AIR	B) SCATTERING OF LIGHT.
2.) WATER	A) EXCRETION
3.) SOIL	C) PLASTICITY.

(5.) State whether the following statements are true or false.

- a) SANDY SOIL HAS LOW CAPACITY FOR HOLDING WATER. _____ **FALSE.**
- b) THE SUBSTANCE IN WHICH A SOLUTE DISSOLVES IS CALLED A SOLVENT. _____ **TRUE.**
- c) THE PRESSURE EXCERTED BY AIR IS CALLED ATMOSPHERIC PRESSURE. _____ **TRUE.**

(6.) Explain the picture in your own words.

a) *Here are two pictures. Image 'a' represents a crack which is filled with water. And image 'b' represents an ice. It is evident from both the images that in image b, the width of the crevice increases as the water in the crevice freezes. This is one of the properties of water due to which it expands upon freezing. This expansion in water after freezing results in the widening of the crack in image'b'.*

7) Write answers to the following questions in your own words.

a) HOW IS LIGHT SCATTERED BY THE AIR?

ANS:- *Scattering is the phenomenon of change in direction of light rays when they travel in atmosphere. Air is a mixture of gases, smok, dust and particles. When the light fall in these particles then the light rays are scattered in all directions. In this process light scattered by air.*

b) EXPLAIN THE VARIOUS PROPERTIES OF WATER.

ANS:- *The properties of water are-*

(i) Water is colourless, tasteless, and it has no smell.

(ii) The boiling point of water is 100 degree celcius.

(iii) Water is neither acidic nor basic element.

(iv) Water is an universal solvent.

(v) Water is a bad conductor of heat of electricity.

c) WHY IS THE DENSITY OF SEAWATER MORE THAN THAT OF RAIN WATER?

ANS:- *The density of sea water is more than of Rain water because the sea water contains with salt. Salt makes the seawater mass high. So from the definition of density we can say as the mass of the object increases its density also increases. So the the density of sea water is more.*

d) WHAT IS THE IMPORTANCE OF THE GOOD SOIL STRUCTURE?

ANS:- *The facility of soil depends upon soil structure. It is important with respect to growth of plants and type of plantation. Good soil structure has many advantages like-*
1. Roots get sufficient supply of oxygen. 2. Water drainage is good. Therefore the roots of the plants grow well.

e) WHAT ARE THE VARIOUS USES OF SOIL?

Ans:- *The uses of soil are- 1. Plant Conservation. 2. Water conservation. 3. Plasticity*

f) WHAT IS THE NEED AND IMPORTANCE OF SOIL TESTING FROM THE POINT OF VIEW OF FARMERS.

ANS:- *Soil testing is a method of determining the constituents of the soil. Soil is tested to find out if there is a deficiency of any ingredients and to decide what measure should be taken to remove the deficiency. It is important for agriculture practices as it helps the farmer to determine which crop can be grown in which region. Two tests namely the pH and the electrical conductivity tests are useful to finding the characteristics of the soil.*

g) WHAT IS THE IMPORTANCE OF AIR IN TRANSMISSION OF SOUND?

ANS:- *Air acts as a medium for transmission of sound. When sound wave passes through the air the particles of air vibrate. All the sounds that we hear reach us through the surrounding air. The density of air also changes due to change in its temperature. Sound cannot travel without a medium. So in space we cannot listen any sounds because of the absence of the air.*

h) WHY SHOULD A GLASS BOTTLE COMPLETELY FILLED WITH WATER NEVER BE KEPT IN A FREEZER?

ANS:- *Because in a freezer the bottle can break. We know that the density of water increases when it freezes. If a completely filled water glass kept in a freezer the water would freeze and expand resulting the bottle would break.*