

## WORKSHEET 2

### Chapter 1: Matter in our Surroundings

#### 1 Mark Questions

- Q1. Why do liquids take up the shape of the container in which they are kept?
- Q2. Name the property of gases that helps aquatic plants and animals to survive in water.
- Q3. What happens to the boiling point of a liquid when atmospheric pressure decreases?
- Q4. When a drop of blue ink is put in water, the blue colour spreads and the whole solution becomes blue. Name the phenomenon due to which this happens
- Q5. What happens when you open a bottle of perfume?
- Q6. The boiling point of alcohol is 78°C. What is the corresponding temperature on the Kelvin scale?

#### 2 Mark Questions

- Q1. Interconversion of states of matter occurs at constant temperature. Explain.
- Q2. How change in temperature and humidity affect the rate of evaporation?
- Q3. Arrange the three states of matter in the increasing order of : (i) rate of diffusion (ii) particle motion.
- Q4. Mention two properties of water to justify the water in liquid at room temperature.
- Q5. Ice, water and steam are three states of a substance and not different substances. Justify.
- Q6. Explain whether the following statement is true or false? "Sublimation occurs only when the solid is heated."
- Q7. Give reason why we are able to sip hot tea or milk faster from a saucer rather than a cup?

#### 3 Mark Questions

- Q1. (i) Explain the interconversion of three states of matter in terms of force of attraction and kinetic energy of the molecules.  
(ii) Arrange the three states of matter in the increasing order of rate of diffusion and particle motion.
- Q2. Which factors determine the state of a substance?  
(ii) Convert 30°C into Kelvin.  
(iii) Water droplets are observed on the outer surface of a glass tumbler containing ice cold water. Give reason.
- Q3. Prove that liquids have no fixed shape but have a fixed volume. Why the rate of diffusion of fluids is higher than that of solids.
- Q4. Carbon dioxide was taken in an enclosed cylinder and compressed by applying pressure:  
(i) Which state of matter will we obtain after completion of the process?  
(ii) Name and define this process.  
(iii) What is the common name of the product obtained in the above process?
- Q5. Write answer in one word:  
(i) The process by which the solid directly changes into gases without liquefying.  
(ii) Energy required to change 1 kg of a liquid to gas at atmospheric pressure at its boiling point.  
(iii) The property of gases which makes it possible to inflate a large number of balloons from a small cylinder of hydrogen gas.
- Q6. Explain with the examples from your daily life where cooling is caused by evaporation.

#### 5 Mark Questions

- Q1. (i) What temperature in Kelvin scale is equal to 50°C?  
(ii) Describe an activity to show that rate of evaporation increases with surface area.  
(iii) Describe the method of formation of plasma and Bose-Einstein condensate.
- Q2. Pressure and temperature determine the state of a substance. Explain this in detail.
- Q3. (a) Arrange the following in the increasing order of  
(i) force of attraction,  
(ii) inter-molecular space; iron nail, kerosene and oxygen gas.  
(b) Define the following terms:  
(i) Rigidity,  
(ii) Compressibility,  
(iii) Diffusion.
- Q4. Account for the following:  
(i) When sugar crystals dissolve in water, the level of water does not rise appreciably.  
(ii) Doctors advise to put strips of wet cloth on the forehead of a person having high fever.  
(iii) Naphthalene balls disappear with time without leaving any solid residue.  
(iv) A wooden table should be called a solid  
(v) Dogs generally hang out their tongue in summer.

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