

Board – CBSE

Class – 9

Topic – Matter in our Surroundings

1. Give the graphical representation of the temperature and time when a student's heats a mixture of ice and water in a beaker.
2. Define Diffusion. It is faster in winter or summer season?
3. By placing finger in the running steam of water, you are not able to break the steam of water. What do you conclude from this?
4. Give reasons for the following:
 - (a) Ice at 0°C appears colder to the mouth than water at 0°C . Why?
 - (b) Doctors' advice to put strips of wet cloth on the forehead of a person having high temperature. Why?
5. How is heating of sugar and heating of ammonium chloride different from each other? Explain your answer.
6. "Osmosis is a special kind of diffusion". Comment.
 - (a) How gas can be liquefy?
 - (b) Why do clothes take more time in drying on a rainy day?
7. A substance A has high compressibility and can be easily liquefied. It can take the shape of container. Predict the nature of the substance. Enlist four properties of this state of Matter.
8. Suggest an activity to show that the rate of diffusion of liquid decreases with increase in density of the liquid.
9. A gas jar containing air is placed upside down on a gas jar of bromine vapors. It is observed that after sometimes, the gas jar containing air also becomes completely reddish brown.
 - (a) Explain why this happens.
 - (b) Name the process involved
10. (a) Steam produces more burns as compared to boiling water.
(b) Temperature of the liquid does not change during evaporation. Explain.
11. Define Density? What do you mean by the term Volume?
12. Define the term Volatile Liquid.
13. Why do gases diffuse rapidly?
14. Why is light not considered matter?
15. Why does diffusion become faster at higher temperatures?

16. Why we wear cotton clothes in summer?
17. After rains when do rain drops dry away easily– on a cloudy day or on a sunny day?
Why?
18. A diver is able to cut through water in a swimming pool. Which property of matter does
19. this observation show?
20. Our own bodies contain examples of all three states of matter. Can you identify these?
21. Define Latent Heat of Fusion and Latent Heat of vaporization.
22. What is a dry ice and what are its properties?
23. Give reasons for the following observations. The smell of hot sizzling food reaches you several meters away, but to get smell from cold food you have to go close.
24. What is SI unit of temperature? Give mathematical relation also. And convert the following temperature to Celsius scale: (a) 300 K (b) 573 K
25. Explain evaporation and its cooling effect in terms of kinetic energy of particles.
26. What are the differences between boiling and evaporation?
27. What do you mean by change in state? How can matter change its state? Write the three states of matter.
28. What factors affect the rate of evaporation?
29. Define the following terms:
 - a. Melting point
 - b. Freezing point
 - c. Boiling point
30. Define boiling. Why boiling is considered as bulk phenomenon? How vapour is different from gases? Give examples of each.
31. Write four differences among solids, liquids and gas.