

ASSIGNMENT FOR THE SESSION 2012-2013 Class: IX Subject: Science & Technology: Chemistry

1. Tabulate the differences in characteristics of states of matter.
2. Comment upon the following properties of states of matter: rigidity, compressibility, fluidity, kinetic energy, density
3. Account for the following:
 - a) A gas fills completely the vessel in which it is kept
 - b) A gas exerts pressure on the walls of the container
 - c) A wooden table should be called a solid
 - d) We can easily move our hand in air but to do the same in a solid block of wood, we need karate expert.
4. Convert the following temperature to the Celsius scale:
 - a) 300 K b) 573 K
5. What is the physical state of water at:
 - a) 2500C b) 1000C
6. For any substance, why does the temperature remain constant during the change of state?
7. Why does a desert cooler cool better on a hot and dry day?
8. Why is ice at 273 K more effective in cooling than water at the same temperature?
9. Give reasons for the following observations:
 - a) Naphthalene balls disappear without leaving any solid residue.
 - b) We can get the smell of perfume sitting several meters away.
10. a) Define latent heat of fusion
b) Define and explain the difference between the term rigidity and fluidity.
11. What is dry ice? How is it prepared and why is it called as dry ice?
12. What is evaporation? In what way is it different from boiling?
13. Some substance cannot exist in gaseous state; others cannot exist in the liquid state and some other cannot exist in either in the gaseous or in the liquid state. Giving example justify the above statement.
14. A student spilled a bottle of ammonia in one corner of the laboratory. Soon the whole laboratory was filled with pungent irritating smell. The students immediately opened the doors and windows and switched on the exhaust fans. After sometime students got relief. Explain what did actually happen?
15. Calculate the temperature at which the Fahrenheit and Celsius scale have the same reading.