L-1. Matter in our surroundings

1. State any two methods that can change the state of matter.
2. Why do solids have definite shape and volume?
3. Give the factors responsible for the difference in the three states of matter.
4. What are the characteristics of particles of matter?
5. For any substance, why does temperature remain constant during change of state?
6. Why do the gases diffuse easily but not solids?
7. What is the chemical name of dry ice? Why is it called dry ice?
8. How does evaporation cause cooling?
9. Distinguish between boiling and evaporation.
10. a) Particles in water at 0°C have more energy as compared to the particles in ice at the same temperature. Explain.
    b) Particles in steam at 100°C have more energy than water at the same temperatu Why?
11. What are the factors affecting evaporation?
12. Define the melting point of a substance.
13. Why do we wear cotton clothes in summer?
14. Why do we see water droplets on the outer surface of a glass tumbler containing ice cold water or crushed ice?
15. Explain briefly interconversion of states of matter on the basis of kinetic theory of gases with the help of flowchart.
16. Define diffusion. Give the factors on which the rate of diffusion depends.
17. Comment on the following statements :-
    a) Sponge though compressible is a solid.
    b) A gas fills completely the vessel in which it is kept.
    c) Naphthalene balls disappear with time without leaving any solid.
18. Give reasons for the following :-
    a) Water at room temperature is a liquid.
    b) Ice floats on water.
    c) We can get the smell of perfume sitting several metres away.
    d) We can easily move our hand in air but to do the same through a solid bloc of wood, we need a karate expert.
    e) We are able to sip hot tea or milk faster from a saucer rather than in a c

L-2 Is matter around us pure?

1. What is tyndall effect ?
2. List any two differences between homogeneous and heterogeneous mixtures.
3. Is air a mixture or a compound ? Give three reasons for your answer.
4. Define the term solubility. Discuss the effect of temperature and pressure on the solub of gases in liquids.
5. You are provided with a mixture containing sand, iron fillings, ammonium chloride an sodium chloride. Describe the procedures you would use to separate these compone from the mixtures
6. Differentiate between true solution, colloid and suspension.
7. How do physical change differ from chemical change ? Also give one example involving both physical and chemical change.
8. Differentiate between mixtures and compounds.
9. a) Solution is prepared by dissolving 15g of sodium chloride in 200g of water. What is the mass by mass percentage of sodium chloride in the solution?
   b) What is solute and solvent in aerated drinks ?
   c) How will you test whether the given solution of substance 'A' is saturated or unsaturated with respect to 'A' at the given temperature ?
10. Give an example for the mixture having a volatile and a non-volatile component Suggest a suitable method to separate the components of this mixture.
11. a) Define an element.
    b) Name a non-metallic element found in :
       i) Liquid ii) Gaseous state
    c) Pick metalloid from the following :
       Carbon, Silicon, Phosphorus, Gold
    d) Which two properties of metals enable us to give the desired shape to metals ?
    e) Name a metal which is liquid at room temperature.