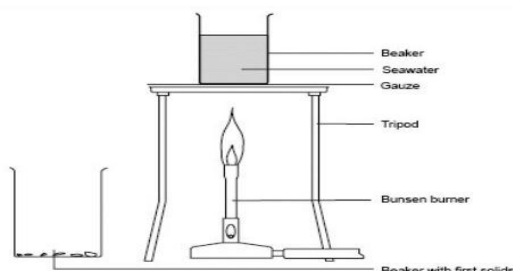


Chapter – 1

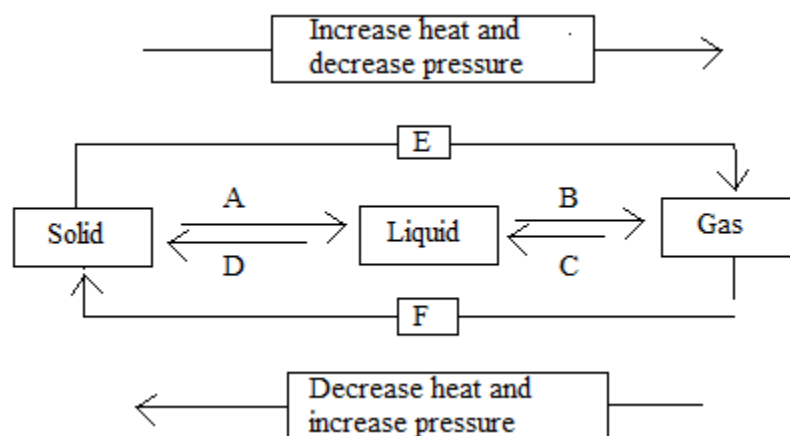
Matter in our surroundings

1. A rubber band changes its shape when it is pulled, yet it is classified as a solid. Give reason. (1)
2. A man swims in sea-water and then in river water.
 - (i) Compare the weight of sea-water and river water displaced by him.
 - (ii) Where does he find it easier to swim and why? (2)
3. Study the diagram shown below and answer the following questions: (3)



- (i) Name and define the process shown in the diagram.
 - (ii) Which type of substance can be separated by this method?
 - (iii) What can we interpret about the nature of ink?
4. What do you mean by melting point? How is the melting point affected by impurities present in solid substance? (2)
 5. What is dry ice? State its one use. (1)
 6. Why is dry ice so called? (1)
 7. Give reasons:
 - (i) A gas cylinder cannot be half-filled.
 - (ii) Carbon dioxide is a gas. (3)
 8. CO₂ was taken in an enclosed cylinder and compressed by applying pressure.
 - (a) Which state of matter will we obtain after the completion of the process.
 - (b) Name and define this process.
 - (c) What is the common name of the product obtained in the above process? (3)
 - (d) Which property of a gas is used in supplying oxygen cylinders to hospitals? (1)
 9. Give reasons for the following:
 - (i) A liquid generally flows easily.
 - (ii) Ice at 0°C appears colder to the mouth than water at 0°C, why?
 - (iii) Doctors advise to put strips of wet cloth on the forehead of a person having high temperature. (3)
 10. Which gas is called dry ice and why? (1)
 11. Give reasons:
 - (a) After your morning exercise you feel cold.
 - (b) It takes longer time to dry wet clothes in humid weather.
 - (c) Spreading of wet clothes quicken their drying. (3)

- (d) Name A, B, C, D, E and F in the following diagram showing change in its states: (3)



12. Give reasons for the following observations:
- A gas fills the vessel in which it is kept.
 - A gas exerts pressure on the walls of the container.
 - A wooden table should be called a solid. (3)
13. We see water-droplets on the outer surface of a glass containing ice-cold water, why? (1)
14. Convert the following temperature to Kelvin scale:
- -37°C
 - 27°C (1)
15. Give reasons:
- Dry ice does not wet the surface on which it is kept.
 - The temperature remains constant at the melting point. (3)
16. (a) Define the following terms:
- Compressibility
 - Diffusion
- (b) When sugar and common salt are kept in different jars, they take the shape of the jars. Are they solid? Justify your answer. (3)
17. Give reasons to justify that water at room temperature is a liquid. (1)
18. Give reasons for the following:
- Why does ice float on water?
 - Latent heats of evaporation of two liquids A and B are 100 J/kg and 150 J/kg respectively, which will produce more cooling? (2)
19. Give reasons for the following:
- Rate of evaporation of an aqueous solution decreases with increase in humidity.
 - Sugar crystals dissolve faster in hot water than cold water. (2)
20. Convert the following temperatures to the Celsius scale:
- 25 K
 - 293 K (1)
21. “We can easily move our hand in air but not through any solid material”. Justify the statement giving any three reasons. (3)
22. Give reason to justify that an iron almirah is solid at room temperature. (1)
23. It is easier to swim in sea water than river water. Why? (2)
24. Give reasons:
- Trees usually acquire more leaves during summer.
 - We feel comfortable under a fan when we are perspiring.
 - Spreading of wet clothes quicken their drying. (3)

25. Give reasons:
- (a) The smell of hot sizzling food reaches you several metres away, but to get the smell of cold food you have to close. (3)
 - (b) A diver is able to cut through water in a swimming pool. Explain. (3)
 - (c) We usually wear cotton clothes in summer. (3)
26. There is no increase in the level of water taken in a beaker when common salt is dissolved in it. Give reason. (1)
27. Show by an activity that the particles of matter are very small. (3)
28. Give reasons for the following observations:
- (a) A gas fills the vessel in which it is kept. (3)
 - (b) We can easily move our hands in air but to do the same through a solid block of wood we need a karate player. (3)
29. What is similarity in a pen, water, knife and oxygen? (1)
30. Show by an activity that there are spaces between the particles of water. (3)
31. Give reasons:
- (a) How does the water kept in an earthen pot (matka) becomes cool during summer? (3)
 - (b) Why does our palm feel cold when we put some acetone on it? (3)
32. Name the process which occurs when a small piece of potassium permanganate is added to water. (1)
33. Account for the following:
- (a) Doctors advice to put strips of wet cloth on the forehead of a person having high fever. (3)
 - (b) Dogs generally hang out their tongue in summer. (3)
 - (c) When sugar crystals dissolve in water, the level of water does not rise appreciably. (3)
34. Account for the following:
- (a) Why is ice at 273 K more effective in cooling than water at the same temperature? (3)
 - (b) Why does a desert cooler cool better on a hot dry day? (3)
35. What do you mean by melting point of ice and boiling point of water? Write the exact values of melting point of ice and boiling point of water at normal atmospheric pressure. (2)
36. The melting point of three solids A, B and C are 193K, 293K and 400K respectively. Arrange these solids in increasing order of the inter particle force of attraction. (1)
37. Why are we able to sip hot tea or milk faster from a saucer rather than a cup? (1)
38. Describe the law of constant proportion with an example? (2)
39. Why does the temperature remain unchanged until the entire solid (ice) changes into liquid even if we are heating the ice? (2)
40. Naphthalene balls disappear with time without leaving any solid. Give reason. (1)
41. Give reasons:
- (a) On a hot sunny day people sprinkle water on the roof or open ground. (3)
 - (b) A doctor advises to use ice pad on forehead to bring high fever down instead of using water at 0°C. Why? (3)
42. (a) State two characteristic properties each of
- (i) solid (ii) liquid (iii) gas. (3)
 - (b) Gases undergo diffusion very fast. (3)