CLASS IX : ASSIGNMENT : CHAPTER-1 : MATTER IN OUR SURROUNDINGS : SCIENCE (CHEMISTRY)

One mark questions

1. A substance has no mass. Can we regard it as a matter?
2. A rubber band is a solid, but it can change its shape. Why?
3. Why are light and sound not considered matter?
4. Out of dry and wet air, which is heavier?
5. We can get the smell of perfume sitting several meters away, why?
6. When salt or sugar is poured into different kinds of vessels, why do they take the shape of vessels as they are solid?
7. A sponge is a solid, yet we can compress it. Why?
8. What is plasma?
9. Express the boiling point of water in Celsius as well as the Kelvin scale.
10. What is diffusion?
11. What happens to the rate of diffusion if the temperature is increased?
12. What is dry ice?
13. What is normal atmospheric pressure?
14. Give the temperature at which water exists in two different phases/states.
15. What do you mean by vapour?
16. State the effect of pressure on boiling point.
17. Name any two substances that sublime.
18. Which is the slow process, evaporation or boiling?
19. Why is the Kelvin scale of temperature regarded as a better scale than Celsius?
20. Why evaporation is called a surface phenomenon?
21. Why is it not proper to regard the gaseous state of ammonia as vapours?
22. Name two processes from which it may be concluded that the particles of a gas move continuously.
23. The melting points of [A] and [B] are 300K and 350K respectively. Which has more interparticle forces?
24. Do solid ice and liquid water co-exist together? If yes, then at what temperature?
25. What is common among the three states of matter?
26. Which property of gas is used in supplying oxygen cylinders to hospitals?
27. A substance X is highly compressible and could easily be liquefied. It can also take the shape of a container. Guess the nature of the substance.
28. Name the state of water at 100 degrees Celsius, zero degrees Celsius, and 4 degrees Celsius.
29. Is it possible to turn a liquid into vapour without heating?
30. The boiling point of alcohol is 78°C. What is this temperature on the Kelvin scale?
31. The Kelvin scale temperature is 0 K. What is the corresponding Celsius scale temperature?

Three marks questions

32. Is it true to say that a fluorescent tube contains plasma? Explain
33. What is the difference between gas and plasma?
34. Why do we see water droplets on the outer surface of a glass containing ice-cold water?
35. A piece of chalk can be broken into small pieces when hammered but it is not possible in the case of an iron bar. Why?
36. Explain, why solids have a fixed shape but liquids and gases do not have a fixed shape.

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37. A balloon when kept in Sun, bursts after some time. Why?
38. Why do people perspire a lot on a hot humid day?
39. Why is it advisable to use pressure cooker at higher altitudes?
40. What do you observe when force is applied and then removed on the plunger of the syringe containing air? Give a reason for your answer.
41. A karate expert can easily move his hand through a solid block of wood but we cannot. Why?
42. Two cubes of ice are pressed hard between two palms and after releasing the pressure, the cubes join together. Why?
43. What is the reason that "Ice has a lower density than water"?
44. Why does the temperature remain constant during the change of state, for any substance?
45. Both the process of evaporation and boiling involve the change of state from liquid to gas but still, they are different from each other. Justify.
46. How is pressure developed in a container full of gas?
47. Is it not proper to regard the gaseous state of ammonia as vapours? Explain.
48. State characteristics of matter demonstrated by:
    (a)Diffusion. (b)Brownian motion.
49. Why is water liquid at room temperature?
50. Cotton is solid but it floats on water. Why?
51. On a hot sunny day, why do people sprinkle water on the roof or open grounds?
52. Ammonia and hydrogen chloride gases are both pungent smelling in nature. These are released from the two opposite corners in a room. Which gas will reach first a person sitting in the centre of the room? Give a reason in support of your answer.
53. Carbon dioxide gas is heavier than both nitrogen and oxygen. Why does not it form a lower layer in the atmosphere?

Five marks questions

54. Discuss the factors that affect evaporation.
55. Give the difference between Evaporation and Boiling.
56. Explain the inter-conversion of three states in terms of the force of attraction and kinetic energy of the molecules.
57. The melting point of ice is 273.16 K. What does this mean? Explain in detail.
58. How is the high compressibility property of gas useful to us?
59. With the help of an example, explain how the diffusion of gases in water is essential.
60. Pressure and temperature determine the state of a substance. Explain this in detail.