



**PAST PAPER QUESTIONS**

**LIQUIDS AND SOLIDS**

## SHORT QUESTIONS

1. Define Anisotropy and Allotropy
2. What are dipole - dipole forces. How they effect thermodynamic properties of substances.
3. Define vapour pressure. Name the factors which affect, vapour pressure of a liquid.
4. Write four properties of Metallic crystals
5. Why diamond is hard and electrically neutral?
6. Ionic solids do not conduct electricity in solid state?
7. What is effect of intermolecular forces on vapour pressure?
8. Write two advantages of vacuum distillation?
9. Define transition temperature with two examples?
10. Water is liquid at room temperature while  $H_2S$  is a gas. Explain?
11. Give reason that ice floats on water.
12. Explain cleavage of crystals and cleavage plane.
13. Evaporation causes cooling. Explain.
14. Vacuum distillation can be used to avoid decomposition of a sensitive liquid. Explain with reason.
15. Liquid crystals can be used in diagnosis of Cancer. Explain.
16. Graphite has slippery touch. Give reason.
17. Explain why evaporation takes place at all temperatures.
18. Why heat of sublimation of iodine is very high?
19. Why ionic crystals do not conduct electricity in the solid state?
20. Describe those ionic crystals are highly brittle?
21. Give two uses of liquid crystals.
22. Why earthenware vessels keep water cool?
23. Why the boiling point of water is higher than HF?
24. Ice occupies more space then water. give reason.
25. Water and ethanol can mix is all proportions. Give reason.
26. Describe cleaning action of soaps and detergents on the basis of H-bonding.

27. Why boiling point of water varies from sea-level to higher places?
28. Transition temperature is exhibited by both elements and compounds. Explain.
29. Why molar heat of vaporization ( $\Delta H_v$ ) is greater than molar heat of fusion ( $\Delta H_f$ )?
30. Cleavage is an anisotropic behavior. Explain it.
31. Why boiling point of  $H_2O$  is greater than  $HF$ ?
32. Why one feels sense of cooling under the fan after bath?
33. Define isomorphism and polymorphism with example.
34. Define molar heat of fusion with one example.
35. Why  $NaF$  has higher lattice energy than  $NaCl$ ?
36. Describe that heat of sublimation is greater than heat of vaporization.
37. Define lattice energy with an example
38. Explain the term unit cell dimension.
39. Transition temperature is the term used for elements as well as compounds. Explain.
40. Write four properties of molecular solids.

## LONG QUESTION

1. Define vapour pressure. How vapour pressure is measured by manometric method?
2. What are ionic solids? Write four properties of ionic solids?
3. What are metallic crystals? Discuss the electron gas theory of metallic bond.
4. Define liquid crystals and give their three uses.
5. Define covalent solids with example. Write four properties of covalent solids.
6. What are molecular solids? Give examples and explain their properties.
7. What is the effect of external pressure on the boiling point of a substance? Give example.
8. What is H-Bonding? Discuss H-Bonding in biological compounds?