

States and Phases of Matter

Sr	Questions	Answers Choice
1	Which of the following is essential for hydrogen bond formation.	<p>A. H bonded to a metal</p> <p>B. H bonded to high electronegative atoms $\text{F}, \text{O},$ or N</p> <p>C. H bonded to non polar atom</p> <p>D. Present of π bond</p>
2	When the vapour pressure of a liquid equals the external pressure, what phenomenon occurs.	<p>A. Sublimation</p> <p>B. Boiling</p> <p>C. Freezing</p> <p>D. condensation</p>
3	Which of the following is a polar molecule that shows permanent dipole interactions.	<p>A. CHCl_3</p> <p>B. CH_4</p> <p>C. Cl_2</p> <p>D. H_2</p>
4	Why does ice float on water.	<p>A. It has lower density than water</p> <p>B. It is heavier than water</p> <p>C. It forms ionic bonds</p> <p>D. It denser than water</p>
5	Why does acetone feel colder than water when poured on skin.	<p>A. It reacts with skin</p> <p>B. It has lower boiling point and evaporate faster</p> <p>C. It is more viscous</p> <p>D. It absorbs moisture</p>
6	What type of molecular shape is commonly found in liquid crystals.	<p>A. Spherical</p> <p>B. Rod like and elongated</p> <p>C. Spiral</p> <p>D. Cubic</p>
7	Which of the following compounds exhibits permanent dipole permanent dipole interactions.	<p>A. HCl</p> <p>B. Cl_2</p> <p>C. CH_4</p> <p>D. O_2</p>
8	London dispersion forces are the only forces present among.	<p>A. Molecules of water in liquid state</p> <p>B. Atoms of helium in gaseous state at high temperature</p> <p>C. Molecules of solid iodine</p> <p>D. Molecules of hydrogen chloride gas</p>
9	Surface tension of liquid is due to.	<p>A. Inward pull of surface molecule</p> <p>B. Upward pull from the surface</p> <p>C. Collision of molecules</p> <p>D. Repulsive forces</p>
10	The expansion of liquids increase with temperature is.	<p>A. Equal to that of gases</p> <p>B. Greater than that of gases</p> <p>C. Negligible compared to gases</p> <p>D. Same as solids</p>
11	At equilibrium in a closed system, which two processes occur at the same rate.	<p>A. Melting and Freezing</p> <p>B. Evaporation and condensation</p> <p>C. Sublimation and condensation</p> <p>D. Evaporation and boiling</p>
12	The expansion of liquids increase with temperature is	<p>A. What happens to the kinetic energy of liquid molecules when cooled.</p> <p>B. Increases</p> <p>C. Remain unchanged</p>

		D. <p>Decreases, and the liquid may turn into solid</p> <p>E. <p>Becomes Zero</p></p>
13	Which of the following materials is an example of an amorphous solid	A. <p>Glass</p> <p>B. <p>Ice</p></p> <p>C. <p>Diamond</p></p> <p>D. <p>Sodium Chloride</p></p>
14	When a crystalline solid is broken, it does so along specific planes, These planes are known as.	A. <p>Cleavage planes</p> <p>B. <p>Crystal faces</p></p> <p>C. <p>Surface planes</p></p> <p>D. <p>Growth planes</p></p>
15	Liquid crystals exhibit properties of	A. <p>Only solid</p> <p>B. <p>Only liquid</p></p> <p>C. <p>Both solids and liquids</p></p> <p>D. <p>Gases and solids</p></p>
16	amorphous solids are typically	A. <p>Rigid and hard</p> <p>B. <p>Found in lump or fine powder form</p></p> <p>C. <p>Have a sharp melting point</p></p> <p>D. <p>Always; crystalline in structure</p></p>
17	Which type of intermolecular force is present in all types of molecules regardless of their polarity.	A. <p>Dipole -dipole forces</p> <p>B. <p>London dispersion forces</p></p> <p>C. <p>Hydrogen bonds</p></p> <p>D. <p>Ion dipole forces</p></p>
18	When water freezes at 0 °C its density decreases due to.	A. <p>Cubic structure of ice</p> <p>B. <p>Empty spaces; present; in the structure of ice</p></p> <p>C. <p>Decrease in volume</p></p> <p>D. <p>Decrease in viscosity</p></p>
19	What causes the lower compressibility of liquids compared to gases.	A. <p>Absence of intermolecular forces</p> <p>B. <p>Larger molecular size</p></p> <p>C. <p>Stronger intermolecular forces and less empty space</p></p> <p>D. <p>High kinetic energy of molecules</p></p>
20	What happens to the particles in a solid when the temperature increases.	A. <p>They move closer to each other</p> <p>B. <p>Their vibrational motion increases</p></p> <p>C. <p>They start moving freely</p></p> <p>D. <p>The solid melts</p></p>