



**INDIAN SCHOOL DARSAIT
DEPARTMENT OF CHEMISTRY**



Subject: Chemistry			Topic: States of Matter			Date : 29.01.18		
Resource Person: Jyothy Sukhadiya								
Name of Student: _____			Class & Division: XI :			Roll No:		
1.	A mixture of CO ₂ and O ₂ is taken in a container. a) Name the type of inter-particle forces exist in the system. b) State the law that governs the total pressure of the system.					2		
2.	What is Boyle temperature?					1		
3.	a) State the law depicting the volume - temperature relationship and verify it graphically. b) Name the temperature at which the volume of a gas becomes equal to zero.					2		
4.	How is the pressure of a given sample of a gas related to temperature at constant volume?					2		
5.	Define a) Critical temperature b) Critical pressure c) Critical Volume					1		
6.	Define a) isochors b) isobars c) isotherms					1		
7.	Define a) Viscosity b) Surface tension.					2		
8.	The temperature of a given mass of air was reduced from 150C to -150 C. If the initial volume of air was 100ml, what would be its new volume if pressure is maintained a constant?					2		
9.	A gas occupies a volume of 250 mL at 745 mmHg and 25°C. What additional pressure is required to reduce the gas volume to 200 mL at the same temperature?					2		
10.	The density of a gas was found to be 1.56g/L at 745mm of Hg and 65°C. Calculate its molecular mass.					2		
11.	Draw i) PV Vs P graph for an ideal gas ii) P Vs T graph for a gas					2		
12.	a) Which two postulates of the kinetic molecular theory are only approximations when applied to real gases? b) Write the van der Waal's equation for real gases					2		
13.	A vessel of 120 mL capacity contains a certain amount of gas at 35 ⁰ C and 1.2 bar pressure. The gas is transferred to another vessel of volume 180 mL at 35 ⁰ C. What would be its pressure?					2		
14.	Account for the following: i) Falling liquid drops are spherical ii) Liquid boil at low temperature at the top of a mountain than at a sea level.					2		
15.	What will be the pressure of the gaseous mixture when 0.5 L of H ₂ at 0.8 bar and 2.0 L of dioxygen at 0.7 bar are introduced in a 1L vessel at 27°C?					2		