GALGOTIAS UNIVERSITY

ADMISSION NUMBER												

School of Basic Sciences

Bachelor of Science Honours in Chemistry
Mid Term Examination - Nov 2023

Duration : 90 Minutes
Max Marks : 50

Sem III - C1UB301B - States of Matter

General Instructions
Answer to the specific question asked
Draw neat, labelled diagrams wherever necessary
Approved data hand books are allowed subject to verification by the Invigilator

1)	Why is the concept of mean free path important in understanding the behavior of gases?	K2	(2)
2)	Summarize the Kinetic Molecular Model of gases and its key assumptions.	K1	(3)
3)	Explain how the Kinetic Molecular Model of gases accounts for the pressure and temperature dependence of gas behavior.	K2	(4)
4)	Apply the concept of collision frequency to compare the viscosities of two different gases.	K2	(6)
5)	Examine the role of molecular velocities in determining the kinetic energy of gas molecules.	K3	(6)
6)	Determine the average kinetic energy of gas molecules using the Maxwell distribution.	K3	(9)
7)	Analyze how the collision frequency and collision diameter contribute to the viscosity of gases.	K4	(8)
8)	Discuss how the Kinetic Molecular Model explains the temperature and pressure dependence of gas behavior.	K4	(12)
	OR		
	Discuss the challenges faced by real gases in adhering to the ideal gas law and the solutions proposed by the Van der Waals equation.	K4	(12)