

**Government PG College, Ambala Cantt.**  
**Lesson Plan Session 2023-24 (Even Semester)**

Class: **B.Sc. Non Medical&Medical**

Subject: **Physical CHEMISTRY**

Name: **Dr Abha Chaudhary**

Semester: **VI**

<b>Week/ Working Days</b>	<b>Details</b>	<b>Remarks</b>
<b>Jan 05, 2024</b> Jan 06, 2024 02 Days	<b>Photochemistry</b> Interaction of radiation with matter, difference between thermal and photochemical processes. Laws of photochemistry:	
<b>Jan 12, 2024</b> Jan 13, 2024 02 Days	Grotthus-Drapper law, Stark-Einstein law (law of photochemical equivalence), Jablonski diagram depicting various processes occurring in the excited state, qualitative description of fluorescence, phosphorescence,	
<b>Jan 19, 2024</b> Jan 20, 2024 02 Days	non-radiative processes (internal conversion, intersystem crossing), quantum yield, photosensitized reactions-energy transfer processes (simple examples).	
<b>Jan 26, 2024</b> Jan 27, 2024 01 Day	<b>Phase Equilibrium</b> Statement and meaning of the terms – phase, component and degree of freedom,	
<b>Feb 02, 2024</b> Feb 03, 2024 02 Days	thermodynamic derivation of Gibbs phase rule, phase equilibria of one component	
<b>Feb 09, 2024</b> Feb 10, 2024 02 Days	system –Example – water system. Phase equilibria of two component systems solid-liquid equilibria, simple eutectic	
<b>Feb 16, 2024</b> Feb 17, 2024 02 Days	Example Pb-Ag system, desilverisation of lead.	
<b>Feb 23, 2024</b> Feb 24, 2024 02 Days	<b>Solutions, Dilute Solutions and Colligative Properties</b> Ideal and non-ideal solutions, methods of expressing concentrations of solutions, Dilute solutions,	
<b>Mar 01, 2024</b> Mar 02, 2024 02 Days	Raoult's law. Colligative properties: (i) relative lowering of vapour pressure (ii) Elevation in boiling point	
<b>Mar 08, 2024</b> Mar 09, 2024 01 Days	(iii) depression in freezing point (iv) osmotic pressure.	

<b>Mar 15, 2024</b> Mar 16, 2024 02 Days	Thermodynamic derivation of relation between amount of solute and elevation in boiling point and depression in freezing point.	
<b>Mar 22, 2024</b> Mar 23, 2024 01 Days	Applications in calculating molar masses of normal, dissociated and associated solutes in solution.	
<b>Apr 05, 2024</b> Apr 06, 2024 02 Days	<b>Introduction to statistical mechanics</b> Need for statistical thermodynamics, thermodynamic probability, Maxwell Boltzmann distribution statistics,	
<b>Apr 12, 2024</b> Apr 13, 2024 01 Days	Born oppenheimer approximation, partition function and its physical significance.	
<b>Apr 19, 2024</b> Apr 20, 2024 02 Days	Factorization of partition function.	
<b>Apr 26, 2024</b> Apr 27, 2024 02 Days	Revision	
	<b>Semester End Final Examinations 1/5/24 Onwards</b>	

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