

SARASWATI MAHILA MAHAVIDHYALAYA, PALWAL

LESSON-PLAN

Class:Bsc 3rd year (Medical & Non-medical)

Semester:6th

Subject:Physical chemistry

Session:2021-2022

L-1	Unit-1:Introduction of electronic spectrum, concept of potential energy curves
L-2	Potential energy curves for bonding and Antibonding molecular orbitals
L-3	Qualitative description of selection rules, Franck -condon principle
L-4	Qualitative description of sigma and pie and n molecular orbitals (MO) their energy level and respective transitions
L-5	Revision
L-6	Unit-2:Introduction of photochemistry, Interaction of radiation with matter
L-7	Difference between thermal and photochemical processes, Grotthus-Draper Law
L-8	Stark-Einstein Law, Jablonski diagram depicting various processes occurring in excited state
L-9	Qualitative description of fluorescence, phosphorescence, Non-radiative processes
L-10	Quantum yield, Photosensitized reactions-Energy transfer processes
L-11	Revision
L-12	Unit-3:Introduction of solutions, Ideal and non-ideal solutions, Activity and Activity coefficient
L-13	Methods of expressing concentrations of solutions, Dilute solutions, colligative properties
L-14	Raoult's Law, Relative lowering of vapour pressure, Molecular weight determination
L-15	Osmosis Law of Osmotic pressure and it's measurement, Determination of molecular weight



L-16	Elevation of boiling point and depression of freezing point
L-17	Thermodynamic derivation of relation between molecular weight and elevation in boiling point
L-18	Thermodynamic derivation of relation between molecular weight and depression in freezing point
L-19	Experimental methods for determination of various colligative properties
L-20	Abnormal molar mass, Degree of dissociation and association of solutes
L-21	Revision
L-22	Unit-4: Introduction of phase equilibrium, phase, component, Degree of freedom
L-23	Thermodynamic derivation of Gibbs phase rule, phase equilibria of water and sulphur systems
L-24	Phase equilibria of two component systems solid-liquid equilibria
L-25	Simple eutectic example Pb - Ag system, Desilverisation of lead
L-26	Revision



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