Lesson Plan Format	
Name of the Assistant Professor : Manu Kumar Bhandoria	
Class B.Sc. 2nd Sem Subject: CHEMISTRY Paper: Physical Chemistry	
Week 1	Ch1- Chemical Kinetics Rate of reaction and expressing and measuring the rate of reaction
	Factors affecting the rate of reaction and conc. dependence of the reaction rates
Week 2	Zero order and first order reactions and their integrated rate expression
	Half life period, Pseudofirst order reactions and kinetics of second order
Week 3	Second and third order reactions and their integrated rate expressions with
	Mechanism of reaction rate and Rate law
Week 4	Molecularity and order of reaction
	Methods for the determination of rate of reaction
Week 5	Ch 2- Theory of Chemical Kinetics Effect of temp. on the rate of reaction-Arrhenius equation
	Theories of reaction rates, Collision theory for unimolecular reaction
Week 6	Transition state theory and effect of pressure on reaction rate
	Ch3-Electrochemistry
Week 7	*L-S coupling
	* Correlation of L and S values
Week 8	*Orbital contribution to magnetic moments
	*Application of magnetic moment data for 3d metal complexes.
Week 9	Ch4- Electron Spectra of Transition Metal Complexes *Types of electronic transitions
	*Selection rules for d-d transitions
Week 10	*Spectroscopic ground states *Spectrochemical series
	*Orgel-energy level diagram for d1 and d9 states discussion of the electronic spectrum of [Ti(H2O)6]+ complex ion.
Subject:	Chemistry
Week 11	Ch1- Quantam Mechanics-I *Black Body radiation *Plank's radiation law
	*Photoelectric effect *Heat capacity of solids *Compton effect *wave function and its significance of Postulates of quantum mechanics
Week 12	*Quantum mechanical operator *Commutations relations
	*Hamiltonial operator *Hermitian operator *average value of square of Hermitian as a postive quantity
Week 13	*Role of operators in quantum mechanics * To show quantum mechanically that position and momentum cannot predicated simultaneously

	*Determination of wave function energy of a patric le in one dimensional box
Week 14	*Pictorial representation and its significance
	Ch2- Physical Propertise and Molecular Structure *Optical activity *Polarization- (clausius - Mossotti equation) *Orientation of dipoles in an electric field, dipole moment , included dipole moment
Week 15	*measurement of dipole moment - temperature method and refractivity method *dipole moment and structure of molecules.
	*Magnetic permeability *Magnetic susceptibility and its determination.
Week 16	*Application of magnetic susceptibility
	*Magnetic properties - paramagnetism, diamagnetism and ferromagnetics.
Week 17	Revision of difficult concepts of inorganic chemistry
Week 18	Revision of difficult concepts of inorganic chemistry
Week 19	Revision of difficult concepts of physical chemistry
Week 20	Revision of difficult concepts of physical chemistry