

SARASWATI MAHILA MAHAVIDHYALAYA, PALWAL

LESSON-PLAN

Class: B.Sc.I Semester: (II) EVEN

Subject: physical Chemistry Session: 2021-2022

Lecture Number	Topic
1	Unit-1 Introduction of chemical kinetics,rate of reaction,rate equation.
2	Factors influencing the rate of reaction-concentration, temperature, pressure, solvent,light, catalyst.
3	Order of reaction, integrated rate expression for zero order reaction.
4	Integrated rate expression for first order and second order reaction.
5	Integrated rate expression for third order reaction, half- life period of reaction.
6	Methods of determination of order of reaction and problems based on it.
7	Revision Test
8	Unit-2 Effect of temperature on the rate of reaction-Arrhenius equation.
9	Simple collision theory for unimolecular and bimolecular collision.
10	Transition state theory of bimolecular reactions.
11	Revision Test
12	Unit-3 Electrolytic conduction and factors affecting electrolytic conduction.
13	Specific conductance,molar conductance, equivalent conductance and relating among them.

14	Arrhenius theory of ionization, Ostwald's dilution law.
15	Debye-Huckel -on Sagar's equation for strong electrolytes.
16	Transition number definition and determination by Hittorf's methods.
17	Revision Test
18.	Unit-4 Kohlrausch's law, Calculation of molar ionic conductance.
19	Effect of viscosity, temperature and pressure on molar ionic conductance.
20	Calculation of conductance of weak electrolytes at infinite dilution and problem based on it.
21	Determination of degree of dissociation, determination of K_a of acids.
22	Determination of solubility product of sparingly soluble salts, conductometric titrations.
23	Definition of PH and PK_a , buffer solution buffer action.
24	Henderson-Hazel equation, buffer mechanism of buffer action.
25	Revision Test

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