Lesson Plan

B. Sc. Ist Year (IInd Semester)

Paper-V (CH-105) Physical Chemistry

Teacher name: Dr. Neha Aggarwal

April 2021

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| Rate of reaction, rate equation and its types, factors influencing the rate of a reaction – concentration, temperature, pressure, solvent, light, catalyst. Order of a reaction, integrated rate expression for zero order, first order, second and third order reactions. Half life period of a reaction. Effect of temperature on the rate of reaction – Arrhenius equation. Theories of reaction rate – Simple collision theory for unimolecular collision. |

May 2021

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| Transition state theory of bimolecular reactions. Electrochemistry Electrolytic conduction, factors affecting electrolytic conduction, specific conductance, molar conductance, equivalent conductance and relation among them, their variation with concentration. Arrhenius theory of ionization, Ostwald’s Dilution Law. |

June 2021

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| DebyeHuckel – Onsager’s equation for strong electrolytes (elementary treatment only), Application of Kohlrausch’s Law in calculation of conductance of weak electrolytes at infinite dilution. Applications of conductivity measurements: determination of degree of dissociation, determination of Ka of acids determination of solubility product of sparingly soluble salts, conductometric titrations. |

July 2021

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| Concepts of pH and pKa , Buffer solution, Buffer action, Henderson – Hazel equation, Buffer mechanism of buffer action. |