

## LESSON PLAN : ENGINEERING CHEMISTRY

Discipline: <b>ELECTRICAL ENGINEERING</b>	Semester : <b>1st</b>	Name of the Teaching Faculty: <b>SWATILEENA SATPATHY/ TUSHAR RANJAN MOHANTA</b>
Subject: <b>ENGINEERING CHEMISTRY</b>	No. of days/per week class allotted: <b>04</b>	Semester From date : 16/08/2023 To Date: 11/12/2023  No. of Weeks: 16
<b>Week</b>	<b>Class/ Day</b>	<b>Theory</b>
1 <sup>ST</sup>	1 <sup>ST</sup>	Introduction ,Fundamental particles : Electron, Proton & Neutron (mass and charge ) , Rutherford's $\alpha$ - ray Scattering Experiment
	2 <sup>ND</sup>	Rutherford's Atomic model (Postulates) Failures of Rutherford's Atomic model
2 <sup>ND</sup>	1 <sup>ST</sup>	Atomic mass and mass number, Definition, examples and properties of Isotopes, Isobars and Isotones ,Bohr's Atomic model ( Postulates )
	2 <sup>ND</sup>	Drawbacks of Bohr's Atomic model , Bohr-Bury scheme
	3 <sup>RD</sup>	Quantum Numbers ,Aufbau's Principle
	4 <sup>TH</sup>	Pauli's Exclusion Principle, Hund's rule
3 <sup>RD</sup>	1 <sup>ST</sup>	Electronic configuration of elements (up to atomic no. 30)
	2 <sup>ND</sup>	Chemical Bonding: Definition, Types, Electrovalent bond: NaCl , MgCl <sub>2</sub> ,
	3 <sup>RD</sup>	HOLIDAY
	4 <sup>TH</sup>	Covalent Bond with examples H <sub>2</sub> ,Cl <sub>2</sub> ,O <sub>2</sub> ,N <sub>2</sub>
4 <sup>TH</sup>	1 <sup>ST</sup>	Covalent Bond (contd.) H <sub>2</sub> O, CH <sub>4</sub> , NH <sub>3</sub> , Coordinate bond : NH <sub>4</sub> <sup>+</sup> , SO <sub>2</sub>
	2 <sup>ND</sup>	Concept of Arrhenius theory of Acids & Bases
	3 <sup>RD</sup>	HOLIDAY
	4 <sup>TH</sup>	Bronsted Lowry Theory of Acids & Bases ( Postulates and limitations only).
5 <sup>TH</sup>	1 <sup>ST</sup>	Concept of Lewis theory for acid and base with examples (Postulates and limitations only).
	2 <sup>ND</sup>	Neutralization of acid & base.Types of salts ( Normal, acidic, basic, double, complex and mixed salts, definitions with 2 examples from each).
	3 <sup>RD</sup>	Definitions of atomic weight, molecular weight,Definition of Equivalent weight
	4 <sup>TH</sup>	Determination of equivalent weight of Acid, Base ,Salt & Ion.
6 <sup>TH</sup>	1 <sup>ST</sup>	Modes of expression of the concentrations ( Molarity , Normality) with Simple Problems
	2 <sup>ND</sup>	HOLIDAY

