



DEPARTMENT: MATHEMATICS AND SCIENCE
BHUBANANANDA ORISSA SCHOOL OF ENGINEERING,
CUTTACK

LESSON PLAN

By

Miss. Sasmita swain

ACADEMIC SESSION:-2022-23

SEMESTER: - 2NDSEMESTER

SUBJECT: -ENGINEERING CHEMISTRY

SECTION- B(CIVIL)

Discipline: Civil Branch	Semester: 2nd Semester SECTION-B	Name of the Teaching Faculty: Miss.Sasmita swain
Subject: Engineering Chemistry	No. of Days/ per week class allotted: 04 periods/per week (Tues,wed,):- (1 period each)	Semester From: - Date: _20 / 03 / 2023 to 27/ 06/2023 No of Weeks: - 15
Week	Class Dates	Theory Topics
1st	21.03.23 22.03.23	Introduction, Syllabus discussion and previous years related study discussion
2nd	28.03.23 29.03.2023	Syllabus discussion. Chapter 2 : Chemical Bonding : Definition , types Electrovalent bond with examples (formation of NaCl, MgCl ₂) Covalent bond with examples (formation of H ₂ ,Cl ₂ , O ₂ , N ₂ , H ₂ O,CH ₄ , NH ₃)
3RD	04.04.2023 05.04.2023	Coordinate bond with examples (formation of NH ₄ ⁺ , SO ₂) only Formation of sulphur dioxide molecule.
4th	11.04.2023 12.04.23	CLASS TEST AND QUESTION ANSWER DISCUSSION Chapter 3 : Acid base theory : Concept of Arrhenius, Lowry Bronsted (Postulates and limitations only). Lewis theory for acid and base with examples (Postulates and limitations only) SCUSSION

5th	18.04.23 19.04.23	<p>Neutralization of acid & base. Definition of Salt, Types of salts (Normal, acidic, basic, double, complex and mixed salts, definitions with 2 examples from each.</p> <p>CLASS TEST AND QUESTION AND ANSWER DISCUSSION</p> <p>Chapter 4: Solutions :</p> <p>Definitions of atomic weight, molecular weight, Equivalent weight. Determination of equivalent weight of Acid, Base and Salt.</p> <p>Modes of expression of the concentrations (Molarity , Normality & Molality) with Simple Problems.</p>
6th 7th	25.04.23 26.04.23 02.05.23 03.05.23	<p>Chapter 4: Solutions :</p> <p>pH of solution (definition with simple numericals) Importance of pH in industry (sugar, textile, paper industries only</p> <p>CLASS TEST AND QUESTION ANSWER DISCUSSION</p> <p>Chapter 9 : Hydrocarbons :</p> <p>Saturated and Unsaturated Hydrocarbons (Definition with example) Aliphatic and Aromatic Hydrocarbons (Huckel's rule only). Difference between Aliphatic and aromatic hydrocarbons</p>
8th	09.05.2023	Saturated and Unsaturated Hydrocarbons (Definition with example) Aliphatic and Aromatic Hydrocarbons (

	10.05.2023	IUPAC SYSTEM OF NOMENCLATURE OF ALKANES
9th	16.05.2023 17.05.2023	IUPAC system of nomenclature of Alkene, Alkyne IUPAC system of nomenclature Alkene, Alkyne
10th	23.05.2023 24.05.2023	IUPAC system of nomenclature of alkyl halide and alcohol (up to 6 carbons) with bond line notation Uses of some common aromatic compounds (Benzene, Toluene, BHC, Phenol, Naphthalene, Anthracene and Benzoic acid) in daily life Previous year semester question discussion (IUPAC Nomenclature) Chapter 11 : Lubricants: Definition of lubricant, Types (solid, liquid and semisolid with examples only) and specific uses of lubricants (Graphite, Oils, Grease), Purpose of lubrication

11th	30.05.2023 31.05.2023	<p>CLASS TEST AND QUESTION AND ANSWER DISCUSSION</p> <p>Chapter 12 : Fuel:</p> <p>Definition and classification of fuel, Definition of calorific value of fuel, Choice of good fuel.</p>
12th	06.06.2023 07.06.2023	<p>Chapter 12 : Fuel:</p> <p>Definition and classification of fuel, Definition of calorific value of fuel, Choice of good fuel.</p> <p>Diesel, Petrol, and Kerosene --- Composition and uses.</p> <p>Gaseous: Producer gas and Water gas (Composition and uses). Elementary idea about LPG, CNG and coal gas (Composition and uses only)</p>
13th	13.06.23	<p>Chapter 13 : Polymer:</p> <p>Definition of Monomer, Polymer, Homo-polymer, Co-polymer and Degree of polymerization</p> <p>. Difference between Thermosetting and Thermoplastic,</p> <p>Composition and uses of Polythene, & Poly-Vinyl Chloride and Bakelite</p>

14th	21.06.23	<p>Definition of Elastomer (Rubber). Natural Rubber (it's draw backs). Vulcanisation of Rubber.</p> <p>Advantages of Vulcanised rubber over raw rubber</p>
15th	27.06.23	<p>CLASS TEST AND DISCUSSION OF QUESTION AND ANSWER</p> <p>Chapter 14: Chemicals in Agriculture:</p> <p>Pesticides: Insecticides, herbicides, fungicides- Examples and uses.</p> <p>Bio Fertilizers: Definition, examples and uses.</p> <p>Revision Exam related problem practice</p> <p>VST FOR SEMESTER EXAM.</p>

REFERENCE BOOK:

1. Eng.Chemistry by Y.R.Sharma and Dr P.Mitra, Kalyani Publishers.
2. Textbook of intermediate Chemistry Part-1 and Part-2 by Nanda, Das, Sharma Kalyani Publishers.