

PADMASHREE KRUTARTHA ACHARYA INSTITUTE OF
ENGINEERING & TECHNOLOGY, BARGARH



LESSON PLAN
Session: 2023-24

1st Semester

Branch: Civil/Mechanical Engineering

Subject: Engineering Chemistry

Dr. Seikh Abed Hussain
Sr. Lect. in Chemistry

Subject: Engineering ChemistryNo. of Days/per week class allotted : 04Semester From Date : 16-08-2023 To Date : 11-12-2023No. of Weeks : 15

Week	Class Day	Theory /Practical Topics
1st	1	Fundamental Particles: electron, proton, neutron
	2	Rutherford Atomic Model
	3	Atomic mass & number
	4	Isotopes, Isobars & isotones
2nd	1	Bhor's Atomic Model
	2	Bohr-Bury Scheme
	3	Autbasis Principle, Hunds Rule
	4	Electronic configuration
3rd	1	Electronic configuration
	2	Types of chemical bonds & their definition
	3	Electrovalent bond with Example- NaCl, MgCl ₂
	4	Covalent bond, Example- H ₂ , Cl ₂ , O ₂ , N ₂
4th	1	Covalent bond: Example- H ₂ O, CH ₄ , NH ₃
	2	Co-ordinate bond: Example- NH ₄ ⁺ , SO ₂
	3	Definition of Salts & its types
	4	Normal, Acidic salts with example
5th	1	Basic salt with example
	2	Double salt with example
	3	Complex & Mixed salts with example
	4	Atomic weight and its determination
6th	1	Molecular weight and its determination with example
	2	Equivalent weight definition and its determination
	3	Determination of Atomic weight, Molecular weight of Acid, Base & Salts
	4	Equivalent weight of Acid, Base & Salts

Saeed Ahmed Hassan
Signature of the Faculty

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Week	Class Day	Theory /Practical Topics
7th	1	Expression of Conc ⁿ : Normality with example
	2	Expression of Conc ⁿ : Molarity with example
	3	Expression of Conc ⁿ : Molarity with example
	4	Definition of P ^H , its numerical & application
8th	1	Electrolysis, strong & weak Electrolysis
	2	Faraday's 1st law of Electrolysis with example.
	3	Faraday's 2nd law of Electrolysis with example. Electroplating
	4	Defination & types of corrosion
9th	1	Rusting & Protection
	2	Alloy, Galvanization
	3	Defination of Mineral, ore & gauge
	4	Dressing & Conc ⁿ of ore
10th	1	Defination & classification of fuel.
	2	Calorific value & choice of a good fuel
	3	Composition & uses of Diesel, Petrol & Kerosene
	4	Gaseous Fuels, water gas & Producer gas
11th	1	Elementary idea of LPG & CNG
	2	Defination of Polymer & Monomer
	3	Homo polymer, Copolymer & Degree of Polymerization
	4	Thermosetting & Thermoplastic Polymer, PVC, Polythene & Bakelite
12th	1	Eastover, Natural & Vulcanised Rubber
	2	Hardness of water & its types
	3	Removal of Hardness, Cold lime-soda process
	4	Removal of Hardness, Hot lime-soda process

Saidy Abed-Ausam
Signature of the Faculty

Subject: Engineering Chemistry

No. of Days/per week class allotted : 04

Semester From Date : 16-08-2023 To Date : 11-12-2023

No. of Weeks : 15

Week	Class Day	Theory /Practical Topics
13th	1	Advantages of Hot Process over cold process
	2	Lubricants & its types (solid, liquid & semi solid)
	3	Examples of various types lubricants
	4	Uses of Lubricants, Graphics, Oils, Grease
14th	1	Difference between Aliphatic & Aromatic Hydrocarbon
	2	IUPAC system & Nomenclature of Organic compound
	3	Alkenes & Alkyl with example
	4	Alkynes & Alkyl Halides with example
15th	1	Ferro, Nor-Ferro & Amalgam
	2	Composition & used of Brass, Bronze, Alnico, Duralumin
	3	Defination of saturated & unsaturated Hydrocarbons with example
	4	Hackle's Rule, Aliphatic and Aromatic Hydrocarbon

Saikh Ahsan Hussain
Signature of the Faculty