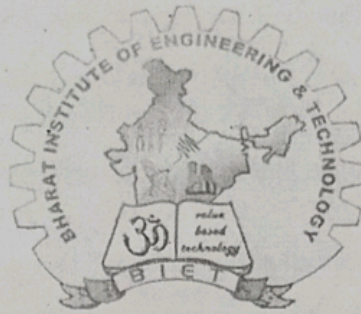


BHARAT INSTITUTE OF ENGINEERING & TECHNOLOGY

**SIVARAM VIHAR, GHATAKESWAR HILLS
MOHADA, BERHAMPUR (GM.)**



STUDENT'S ATTENDANCE REGISTER

Time	9:05	9:55	10:45	11:05	
Day	9:55	10:45	11:35	1:55	
Mon					
Tue			CHEM		
Wed	CHEM			CHEM	
Thu				CHEM	
Fri		CHEM			
Sat					

Year/ Session : 2023 (winter)	Semester from Date: 16.8.23 To Date : 11.12.23
Semester & Branch	1 st semester & E & TC
Subject with Code	Engineering chemistry. (Th-2b)
Name of the Faculty Member	S. Puja Reddy
No of Weeks:	No of Days per Week Class Allotted : 5

B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
A U G U S T	1 st W E E K		Physical chemistry
			Chapter-1 Atomic structure
		16/8/23	→ fundamental particles (electron, proton & neutron definition mass & charge). Rutherford's Atomic model. (Postulates & failure).
		18/8/23	→ Atomic mass & mass number definition & examples. Properties of isotope, isobar & isotone.
		18/8/23	→ Bohr's Atomic model (Postulate only) Bohr-Bury scheme, Aufbau's principle.
	2 nd W E E K	22/8/23	→ Hund's Rule, electronic configuration of up to 30 elements).

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Month	Week	Class Day	Theory/Practical Topic
A U G U S T	2nd W E E K	23/08/23	Chapter-2 Chemical Bonding → Definition & types of Chemical Bonding.
		23/8/23	→ Formation of NaCl, MgCl ₂ H ₂ , Cl ₂ , O ₂ , N ₂ .
		25/8/23	→ Formation of H ₂ O, CH ₄ , NH ₃ , NH ₄ ⁺ , SO ₂ .
S E P T E M B E R	3rd week	29/8/23	Chapter-3 Acid-Base theory: → concept of Arrhenius, Lowry-Bronsted theory.
		01/09/23	→ Lewis theory of Acid & Base with example. Neutralization of Acid-Base:
	4th week	05/09/23	→ Definition of salt, Types of salt (Normal, Acidic salt)
		08/09/23	→ Basic, double, complex, & mixed salts definition with example.

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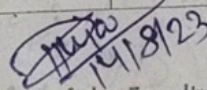
Month	Week	Class Day	Theory/Practical Topic
S			Chapter - 4 Solution:-
E	5 th W E E K	12/9/23	→ Definition of atomic weight molecular weight, equivalent weight.
P		13/9/23	→ Equivalent weight of acid, Base, & salt.
T		13/9/23	→ Modes of expression of concentration (Molarity, Normality) With simple problems.
E		15/9/23	→ Modes of expression of concentration Molarity with simple problems.
M			
B	6 th week	22/9/23	→ pH of solution (Definition with simple numericals) Importance of pH in industry.
F			Chapter - 5 Electrochemistry:
R	7 th week	26/9/23	→ Definition & types of electrolyte with example.

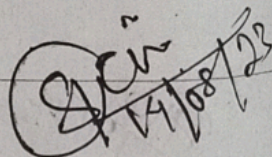
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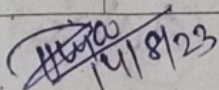
Month	Week	Class Day	Theory/Practical Topic
S E P T E M B E R	7 th W E E K	27/9/23	Electrolysis with example of NaCl. → Faraday's 1 st law of electrolysis (statement & mathematical expression) & simple numericals.
		27/9/23	→ Faraday's 2 nd law of electrolysis (statement & mathematical expression & simple numericals.
O C T O B E R	8 th W E E K	03/10/23	→ Industrial application of electrolysis - electroplating (zinc only). Chapter-6 Corrosion.
		04/10/23	→ Definition & types of corrosion.
		04/10/23	→ Mechanism of rusting of iron only, protection from corrosion.

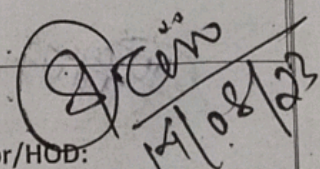
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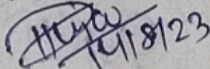
Month	Week	Class Day	Theory/Practical Topic
O C	8 th Week	06/10/23	Inorganic chemistry chapter-7 metallurgy: → Definition of mineral, ores, gangue with example. Distinction between ores & minerals.
		10/10/23	→ General method of extraction of metal (i) ore Dressing (ii) Concentration: → Gravity gravity separation
T O B	9 th W E E K	11/10/23	→ Magnetic separation, froth floating leaching.
		13/10/23	→ oxidation (calcinations, Roasting, reduction, smelting
E R	10 th W E E K	17/10/23	→ Definition & example of flux & slag.
		18/10/23	→ Refining of the metal. (electro refining & distillation only).

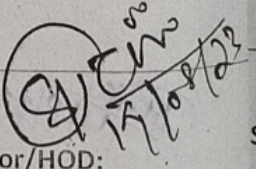
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Month	Week	Class Day	Theory/Practical Topic
N O V E F	12 th W E E K		Organic chemistry chapter - 9 Hydrocarbon:
		01/11/23	→ saturated & unsaturated hydrocarbon (Definition with example), Aliphatic & Aromatic hydrocarbon (Huckles rule only).
		01/11/23	→ Difference between Aliphatic & Aromatic hydrocarbon.
		03/11/23	→ IUPAC system of nomenclature of Alkane.
M B E R	13 th W E E K	07/11/23	→ IUPAC system of nomenclature of Alkene.
		08/11/23	→ IUPAC system of nomenclature of Alkyne.
		08/11/23	→ IUPAC system of nomenclature of Alkyl halide & alcohol.
		10/11/23	→ Bondline notation.

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Month	Week	Class Day	Theory/Practical Topic
N O V E M B E R	14 th W E E K	14/11/23 15/11/23 15/11/23	<p>→ Uses of some common aromatic compound Benzene, Toluene, BHC</p> <p>→ Uses of some common aromatic compound Phenol & naphthalene.</p> <p>→ Anthracene & Benzoic acid.</p> <p>Industrial chemistry chapter -10 Water Treatment:</p>
	15 th W E E K	17/11/23 21/11/23 22/11/23	<p>→ Sources of water, soft water, hard water, hardness.</p> <p>→ Types of hardness, (Temporary and permanent) removal of hardness by lime soda method.</p> <p>→ Principle, process & advantage of hot lime & cold lime. Advantage of hot lime over cold lime process.</p>

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B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
N O V E M B E R	15 th W E E K	22/11/23	<p>→ organic ion exchange method (principle, process & regeneration of exhausted resins).</p> <p>chapter -11 Lubricants:</p> <p>→ Definition of Lubricants. types of lubricants (solid, liquid & semi solid with example.</p> <p>→ specific use of lubricants Graphite, oils, Grease purpose of lubricants.</p>
	16 th W E E K	24/11/23 28/11/23	<p>chapter -12 fuel:</p> <p>→ Definition & classification of fuel, Definition of calorific value of fuel.</p> <p>→ choice of good fuel.</p>

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B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
N O V E M B E R	16 th W E E K	29/11/23	→ Liquid: Diesel, petrol & kerosene composition & uses. → Gaseous: producer gas & water gas composition & uses. → elementary idea about LPG, CNG & coal gas (composition & uses only). Chapter - 13 Polymer:
		01/12/23	→ Definition of monomer, polymer, Homopolymer, Co-polymer. → Degree of polymerization.
D E C E M B E R	17 th W E E K	06/12/23	→ Difference between thermo setting & thermoplastic. composition definition of elastomer (rubber) → composition & uses of polystyrene, Poly-vinyl Chloride & Bakelite.

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B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
D E C E M B E R	1 st th	06/12/23	→ Natural Rubber (its drawbacks), vulcanisation of Rubber. → Advantages of vulcanisation rubber over raw rubber. chapter - 14 chemical in Agriculture:
	2 nd th		
	3 rd th		
	4 th th		
	5 th th		
	6 th th		
	7 th th		
	8 th th	08/12/23	→ pesticides: insecticides, herbicides, fungicides, example & uses. → Bio fertilization Definition with example. → uses of Bio fertilizers.
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	10 th th		
	11 th th		
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