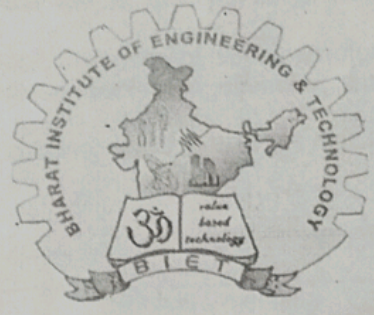


Engg Chem - (Sec D)

BHARAT INSTITUTE OF ENGINEERING & TECHNOLOGY

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



STUDENT'S ATTENDANCE REGISTER

Time	9:05	9:55	11:35	1:05	
Day	9:55	10:45	12:25	1:55	
Mon	CHEM				
Tue				CHEM	
Wed		CHEM			
Thu	CHEM				
Fri					
Sat					

Year/ Session : 2023 (winter)	Semester from Date: 16.8.23 To Date: 11.12.23
Semester & Branch	1 st semester & Electrical
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

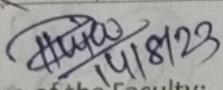
Month	Week	Class Day	Theory/Practical Topic
			Physical chemistry
A	1st week		chapter - 1 Atomic structure :
U		16/08/23	→ fundamental particles (electron, proton & neutron) Definition, mass & charge). Rutherford's Atomic model (Postulates & failure)
G	2nd week		
U		17/08/23	→ Atomic mass & mass number definition & examples, properties of isotope, isobar & isotone.
S		21/08/23	→ Bohr's Atomic model (Postulates only), Bohr-Bury scheme; Aufbau principle.
T		22/08/23	→ Hund's Rule; Electronic configuration of up to 30 elements.
			Chapter - 2 chemical Bonding :
		23/08/23	→ Definition & types of chemical Bonding

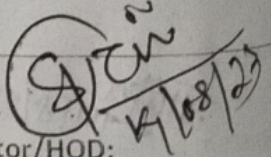
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Month	Week	Class Day	Theory/Practical Topic
A U G U S T	2 nd Week	24/08/23	→ Formation of NaCl, MgCl ₂ , H ₂ , Cl ₂ , O ₂ , N ₂ .
	3 rd Week	28/08/23	→ Formation of H ₂ O, CH ₄ , NH ₃ , NH ₄ ⁺ , SO ₂ .
		29/08/23	Chapter-3 Acid-Base theory: → Concept of Arrhenius, Lowry - Bronsted theory.
		31/08/23	→ Lewis theory of Acid & Base with example, Neutralization of acid & base.
S E P T E M B E R	4 th Week	04/09/23	→ Definition of salt, Types of salt (Normal, Acidic salt)
	05/09/23	→ Basic, double, complex & mixed salts definition with example.	

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B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
S	4 th Week	07/09/23	Chapter-4 Solution: → Definition of atomic weight, molecular weight, equivalent weight.
E	5 th Week	11/09/23	→ Equivalent weight of acid, base and salt.
P		12/09/23	→ Modes of expression of concentration (Molarity, Normality) with simple problems.
T		13/09/23	→ Modes of expression of concentration (Normality & molarity)
E		14/09/23	→ pH of solution (Definition with simple numericals) Importance of pH in industry.
M	6 th Week		Chapter-5 Electrochemistry:
B			
E		18/09/23	→ Definition & types of electrolyte with example: electrolysis with example of NaCl.
R			

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B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
S	6th week	21/09/23	→ Faraday's 1 st law of electrolysis (statement & mathematical expression) & simple numericals.
E	7th W E E K	25/09/23	→ Faraday's 2 nd law of electrolysis (statement & mathematical expression & simple numericals.
P		26/09/23	→ Industrial application of electrolysis - electroplating (Zinc only). Chapter 7-6 Corrosion:
T		27/09/23	→ Definition & types of corrosion.
E		28/09/23	→ Mechanism of rusting of Iron only, protection from corrosion.
M			
B			
E			
R			

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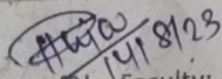
Month	Week	Class Day	Theory/Practical Topic
O C T O	8th Week	03/10/23	Inorganic chemistry chapter-7 Metallurgy: → Definition of mineral, ores, gangue with example. Distinction between ores & minerals.
		04/10/23	→ General method of extraction of metal ⇒ ore Dressing, (i) concentration
		05/10/23	(ii) Gravity separation).
		09/10/23	→ Magnetic separation, froth floating leaching.
B E R	9th Week	10/10/23 11/10/23 12/10/23	→ Oxidation (calcinations, Roasting) → Reduction (Smelting) → Definition & example of flux & slag,
R	10th Week	16/10/23	→ Refining of the metal (electro refining & distillation only).

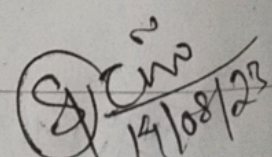
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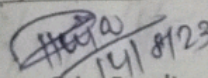
Month	Week	Class Day	Theory/Practical Topic
O C T O B E R	10 th week	17/10/23	organic chemistry chapter - 9 Hydrocarbon ; → Saturated and unsaturated hydrocarbon (Definition with example) , Aliphatic & Aromatic hydrocarbon (Huckle's rule only)
		18/10/23	→ Difference between Aliphatic and aromatic hydrocarbon.
		19/10/23	→ IUPAC system of nomenclature of Alkane.
N O V E M B E R	11 th week	30/10/23	→ IUPAC system of nomenclature of Alkene
		31/10/23	→ IUPAC system of nomenclature of Alkyne.
N O V E M B E R	12 th week	01/11/23	→ IUPAC system of nomenclature of Alkyl halide & Alcohol.
		02/11/23	→ Bondline notation.

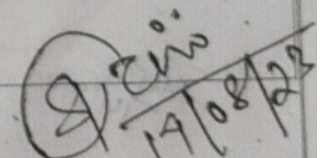
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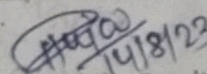
Month	Week	Class Day	Theory/Practical Topic
M	13 th Week	06/11/23	→ uses of some common aromatic compound Benzene, Toluene, BHC
O		07/11/23	→ uses of some common aromatic compound phenol, naphthalene
V		08/11/23	→ Anthracene & Benzoic acid.
E			Industrial chemistry chapter -10
M		09/11/23	Water Treatment: → sources of water, soft water hard water, hardness.
B	14 th Week	13/11/23	→ Types of hardness (temporary or carbonate & permanent removal of hardness by lime soda method.
E		14/11/23	→ principle, process & advantage of hotlime & cold lime. Advantage of hotlime over cold lime process.
R			


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B.I.E.T., COURSE PLAN


Month	Week	Class Day	Theory/Practical Topic
N O V E	14th Week	15/11/23	→ organic ion exchange method (Principle, process & regeneration of exhausted resins). chapter - 11 Lubricants:
		16/11/23	→ Definition of lubricants. types of lubricants (solid, liquid & semisolid with example).
M B E R	15th Week	20/11/23	→ specific use of lubricants. Graphite, oils, Grease. Purpose of lubricants. chapter - 12 fuel:
		21/11/23	→ Definition & classification of fuel, Definition of calorific value of fuel.
		22/11/23	→ choice of good fuel.

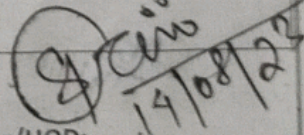
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Month	Week	Class Day	Theory/Practical Topic
N O V E M B E R	15 th week	23/11/23	→ Liquid: Diesel, petrol, & kerosene composition & uses.
	16 th week	28/11/23	→ Gaseous: producer gas & water gas composition & uses
		29/11/23	→ Elementary idea about LPG, CNG & coal gas (composition & uses only).
		30/11/23	chapter - 13 polymer: → Definition of monomer, polymer, Homopolymer, co-polymer & .
D E C E M B E R	17 th week	04/12/23	→ Degree of polymerization → Difference between thermo-setting & thermoplastic, composition Definition of Elastomer (Rubber)
		06/12/23	→ composition & uses of polythene, poly-vinyl, chloride & Bakelite.


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B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
D	17 th week	06/12/23	→ Natural Rubber (its drawbacks), vulcanisation of Rubber.
E		07/12/23	→ Advantages of vulcanised rubber over raw rubber. chapter - 14 chemical in Agriculture:
C			
E			
M			
B			
F			
R	18 th week	11/12/23	→ Bio fertilizers Definition with example. → Uses of Biofertilizers.

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