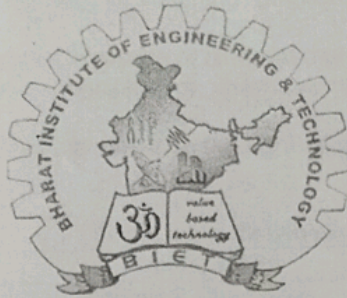


Sec - A (Chem)

# BHARAT INSTITUTE OF ENGINEERING & TECHNOLOGY

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



## STUDENT'S ATTENDANCE REGISTER

Time	9:05	10:45	1:05		
Day	9:55	11:35	1:55		
MON					
TUE	CHEM				
WED		CHEM	CHEM		
THU		CHEM			
FRI					

Year/ Session

2023 / 20/03/23 - 26/06/23 (Summer)

Semester & Branch

2<sup>nd</sup> semester / Mechanical (Sec-A)

Subject with Code

Engineering Chemistry Th. 2b.

Name of the Faculty-Member

S. Puja Reddy



# B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic	
March	4 <sup>th</sup>		Physical chemistry <u>chapter-1</u> : Atomic structure	
		21/03/23	→ fundamental particles (electron, proton & neutron) Definition, mass & charge, Rutherford's Atomic Model (Postulates & failure)	
	W			
		22/03/23	→ Atomic mass & mass number Definition examples and properties of isotope, isobar & isotones.	
	E			
		22/03/23	→ Bohr's Atomic model (Postulates only) Bohr-Bury scheme, Aufbau's principle	
	E			
		K	23/03/23	→ Hund's Rule, Electronic configuration (up to 30 elements)
				<u>chapter-2</u> chemical Bonding.
	5 <sup>th</sup>		28/03/23	→ Definition types (Electrovalent covalent & co-ordinate bond with example).
	W			
	E			
	E		29/03/23	→ Formation of NaCl, MgCl <sub>2</sub> , H <sub>2</sub> , Cl <sub>2</sub> , O <sub>2</sub> , N <sub>2</sub> .
		K		

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## B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
March	5 <sup>th</sup> Week	29/03/23	→ formation of $H_2O$ , $CH_4$ , $NH_3$ , $NH_4^+$ , & $SO_2$ .
A	2 <sup>nd</sup>	04/04/23	chapter-3 Acid-Base theory → concept of Arrhenius, Lowry - Bronsted and Lewis theory for Acid & base with example.
P	W	05/04/23	→ Postulates of Lewis theory of acid & base with example.
T	F	05/04/23	→ Neutralization of Acid & base, Definition of salt, types of salt, Normal salt acidic salt.
i	F	06/04/23	→ Basic salt, double, complex & mixed salts definition with example.
	K	06/04/23	chapter-4 solution
L	3 <sup>rd</sup>	11/04/23	→ Definition of Atomic weight molecular weight, with mathematical expressions.
	W		
	F		
	F		
	K		

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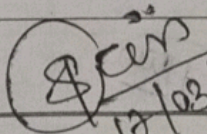
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## B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
April	3 <sup>rd</sup>	12/04/23	→ Equivalent weight, Determination of equivalent weight of Acid & base & salt.
	W		
	E	12/04/23	→ Modes of expression of the concentrations (Molarity, Normality & molality).
	E		
	K	13/04/23	→ Some mathematical problems related to the concentrations. pH of solution definition with numericals.
	4 <sup>th</sup>	18/04/23	→ Importance of pH industry (sugar, textile, paper, industry only). Chapter-5 : Electrochemistry
	W		
	E	19/04/23	→ Definition & types of electrolyte (strong & weak electrolyte with example).
E			
K	19/04/23	→ Electrolysis (principle and process with example of NaCl (fused and aqueous solution).	

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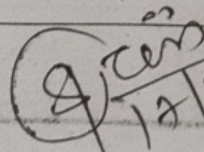
  
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## B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic	Month
April	4 <sup>th</sup> WEEK	20/04/23	→ Faraday's 1 <sup>st</sup> law of electrolyte statement, mathematical expression and simple Numerical	
	5 <sup>th</sup>	25/04/23	→ Faraday's 2 <sup>nd</sup> law of electrolyte Industrial application of electrolysis - electroplating zinc only.	
	W		Chapter - 6 Corrosion	
	E	26/04/23	→ Definition & types of corrosion, Atmospheric corrosion waterline corrosion.	May
	E	26/04/23	→ Mechanism of rusting of Iron protection from corrosion by alloying & Galvanization.	
May	K	27/04/23	<u>Chapter - 7 Metallurgy</u> → Definition of minerals, ores gangue with example	
	1 <sup>st</sup> WEEK	02/05/23	→ Distinction between ores & minerals. General method of extraction of metal by ore dressing.	

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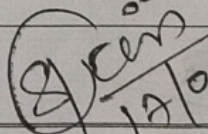
  
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## B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
May	1 <sup>st</sup>	03/05/23	→ concentration, Gravity separation, Magnetic separation
	W	03/05/23	→ Froth floatation and leaching
	E	04/05/23	oxidation (calcinations, Roasting)
	E		→ Reduction, Refining of the metal (electro refining & distillation only).
	K		Chapter-8 : Alloys
	2 <sup>nd</sup>	09/05/23	→ Definition of alloys, types of alloys. with example.
	W	10/05/23	→ composition of Brass, Bronze.
	E	10/05/23	→ composition of Alnico, Duralumin; organic chemistry
	E	11/05/23	Chapter-9 : Hydrocarbon
	K		→ saturated & unsaturated hydrocarbons definition with example.
3 <sup>rd</sup> WEEK	16/05/23	→ Aliphatic & Aromatic hydrocarbon with example & Difference between them.	

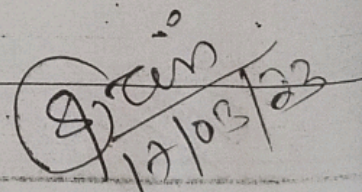
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## B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic	Month
May	3rd	17/05/23	→ Huckiel's Rule, IUPAC system of nomenclature of Alkane.	
	W			
	E	17/05/23	→ IUPAC system of nomenclature of Alkene.	
	E	18/05/23	→ IUPAC system of nomenclature of Alkyne.	
	K			
	4th	23/05/23	→ IUPAC system of nomenclature of Alkyl halide.	
	W	24/05/23	→ IUPAC system of nomenclature of alcohol with bond line notation.	
	E	24/05/23	→ uses of some common Aromatic compound Benzene, Toluene, BHC, Phenol.	
	E			
K	25/05/23	→ uses of some common Aromatic compound like Naphthalene, Anthracene, & Benzoic acid.		
5th	30/05/23	→ uses of some Aromatic compound in daily life.		
	WEEK			

  
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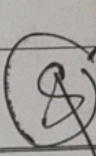
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## B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
May	5th	31/05/23	Industrial chemistry chapter -10 Water Treatment → Sources of water, soft water hard water, hardness.
	W		→ Types of hardness.
	E	31/05/23	→ Removal of hardness by lime soda method (principle, process & advantage).
	E R		→ Advantage of Hot lime over cold lime process.
June	1st	01/06/23	→ Organic ion exchange method (principle, process & advantage)
	W		chapter -11 Lubricants → Definition, types of Lubricants.
	E	02/06/23	→ Specific use of lubricants (Graphite, oils).
	E R		→ Uses of lubricants (Grease, purpose of lubricants).
	2nd WEEK		

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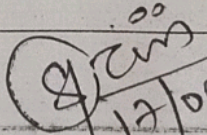

  
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# B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
JUNE	2 <sup>nd</sup>	07/06/23	Chapter - 12 Fuel: → Definition & classification of fuel. → Definition of calorific value of fuel. choice of good fuel.
	W	07/06/23	→ Liquid: petrol, kerosene, composition & uses, Gaseous producer gas & water gas (composition & uses).
	F		→ Elementary idea about LPG, CNG & coal gas (composition & uses).
	E		Chapter - 13 Polymer
	K	08/06/23	→ Definition, types of polymer (monomer, homo polymer, co-polymer). → Degree of polymerization
	3 <sup>rd</sup>	13/06/23	→ Difference between thermosetting & thermoplastic
	W		→ composition & uses of polythene, poly-vinyl chloride & Bakelite.
	F		
	F		
	K		

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# B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
JUNE	4 <sup>th</sup>	21/06/23	→ Definition of Elastomer, Natural rubber.
	W		→ vulcanisation of Rubber Advantages of vulcanised rubber over raw rubber.
	F		chapter -14 : chemical in Agriculture.
	F	21/06/23	→ Pesticides, insecticides, herbicides fungicides example & uses.
	K	22/06/23	→ Biofertilization : Definition & uses.

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