



TRADE MARK

LIONTM

Teacher's Lesson Note

ENG- CHEMISTRY - (2023-24)

BRANCH- MECHANICAL (1ST SEM)

S.B.I.T. POLYTECHNIC

1st SEM

Date	Period	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
1	2	3	4	5	6	7	8
11/10/23	1st		Physical Chemistry	Introduction of chemistry about chemistry	Introduction of chemistry about chemistry	Learning about the syllabus. Physical chemistry in organic chemistry in different chemical compounds.	
11/10/23	2nd		Atomic structure	Fundamental particles of chemistry	Definition of neutron and its mass and charge.		
11/10/23	3rd		Atomic structure	Rutherford's postulates and failures	Details explanation of Rutherford's failure.		
11/10/23	4th		Atomic structure	Atomic mass, mass number	Definition of atomic mass. Atomic mass number, isotope, isotopes.		

LESSON NOTE

Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
9	10	11	12	13	14
What is the chemistry?	Types of science. Physical science, chemical science, physics, chemistry, biology.		11/10/23	11/10/23	
What are the fundamental particles.	Details explanation of fundamental particles. Proton, electron, neutron.		11/10/23	11/10/23	
Write down the any two basic laws of Rutherford's atomic model.	Rutherford's model. Scattering experiment. Defects of Rutherford's model.		11/10/23	11/10/23	
Write the definition of atomic mass, mass number, isotope, isotopes.	Definition of atomic mass, mass number, isotope, isotopes.		11/10/23	11/10/23	

TEACHERS

LESSON NOTE

Date	Period	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
26/10/23	18	3	Physical Chemistry	Introduction of chemistry about chemical change	Introduction about the syllabus.	Physical chemistry in organic chemistry in physical chemistry.	
26/10/23	2			Atomic structure	Fundamental particles electron, proton neutron and its mass and charge.	Definition of	
26/10/23	3			Atomic structure	Rutherford's postulates and failure	Details explaining of Rutherford's failure	
26/10/23	4			Atomic structure	Atomic mass, mass number	Definition of atomic mass.	

Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
9	10	11	12	13	14
What is the chemistry?	Types of science. Physical science. Chemical science. Physics. Chemistry. Biology.				
What are the fundamental particles.	Details Explanation of fundamental particles. e.g. electron, proton, neutron.				
Write down the any two down taking of atomic bond's atomic model.	Rutherford's model. Retaining Experiment. Draw back of Rutherford's model. Failure of Rutherford's model.				
Write the definition of atomic mass. Atomic mass number. Atomic mass unit. Atomic mass isotope.	Definition of atomic mass. Atomic mass number. Atomic mass unit. Atomic mass isotope.				

Date	Period	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
1	2	3	4	5	6	7	8
11/11/23	6			Atomic structure.	Bohr's atomic model Bohr-bury scheme.	Postulates only Bohr-bury scheme.	
11/11/23	6			Atomic structure.	Aufbau's principle Hund's Rule.	Aufbau's principle. Electron configuration, up to atomic no-30	
11/11/23	6			Chemical Bonding.	Definition Types.	Concept of chemical bond. Types of chemical bond. Characteristics of covalent bond and coordinate bond.	

Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
9	10	11	12	13	14
Write down the Bohr's atomic model of Potassium only.	Details Explanation of Bohr's atomic model. Its orbits Bohr-bury scheme.		<i>[Signature]</i> 11/11/23	<i>[Signature]</i> 11/11/23	
What is the Aufbau's principle.	Aufbau's principle. Hund's rule.		<i>[Signature]</i> 11/11/23	<i>[Signature]</i> 11/11/23	
Write the Hund's rule.	Electronic configuration, (up to 30 atomic no.)		<i>[Signature]</i> 11/11/23	<i>[Signature]</i> 11/11/23	
What do mean by chemical bond.	Electrovalent Bond, covalent bond, coordinate bond. with examples		<i>[Signature]</i> 11/11/23	<i>[Signature]</i> 11/11/23	
Write the characteristics of covalent bond.	Formation of H ₂ , O ₂ , etc.		<i>[Signature]</i> 11/11/23	<i>[Signature]</i> 11/11/23	

Date	Period	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
10/11/23	5:1		inorganic chemistry	Metallurgy	Definition of metallurgy	Definition of mineral, ore, flux, slag, general methods of extraction of metal.	
10/11/23	6:1			Dressing	Dressing	Dressing, concentration, calcination, Roasting, smelting, Refining of ore.	
10/11/23	7:1			Alloys	Definition of alloy	Definition of alloy, composition and uses of brass, Bronze, Gunmetal, Duralumin.	

Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
9	Write down the definition of mineral, and ore.	1) Definition of mineral ore, compare with example. 2) distinguish b/w ore and minerals General method of extraction of metal	10/11/23	10/11/23	
	What is the dressing?	• ore dressing, concentration of magnetic & separating from the gangue & leaving. oxidation (calcination & Roasting) - → Reduction → Refining of metal.	10/11/23	10/11/23	
	Definition of alloy, composition and uses of brass, Bronze, Duralumin.	1) Definition of alloy, types of alloys, Brass, Gunmetal, Duralumin, Bronze, etc. with example. Composition and uses of Brass - Bronze, Gunmetal, Duralumin.	10/11/23	10/11/23	

Date	Period	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
20/11/23	1	2	3	4	5	6	7
20/11/23	2	3	4	5	6	7	8
20/11/23	3	4	5	6	7	8	
20/11/23	4	5	6	7	8		
20/11/23	5	6	7	8			
20/11/23	6	7	8				
20/11/23	7	8					
20/11/23	8						

Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
9	10	11	12	13	14
What do you mean by hydrocarbons?	Classify alkanes, alkenes, alkynes, and aromatic hydrocarbons.				
How many types of hydrocarbons are there?	Saturated hydrocarbons: alkanes, cycloalkanes. Unsaturated hydrocarbons: alkenes, alkynes, aromatic hydrocarbons.				
What is the IUPAC name of $C_{25}H_{52}$?	No. of C atoms: 25 Root word: penta- Suffix: -ane IUPAC name: Pentacosane				
	Alkanes: C_nH_{2n+2} Alkenes: C_nH_{2n} Alkynes: C_nH_{2n-2}				

TEACHERS

LESSON NOTE

Date	Period	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
31/12/23	2	3	Chemist	Hydrocarbon	Rules for IUPAC system of nomenclature.	① Expansion of parent chain. ② Selection of parent chain. ③ Numbering of carbon atoms.	
31/12/23	2	3	Hydrocarbon	Aromatic hydrocarbons	Huckel's Rule	Propts of aromatic compounds. ① Nucleus ② side chain	
31/12/23	2	3	Hydrocarbon	Aromatic hydrocarbons	IUPAC system of nomenclature of substituted aromatic compounds.	① Nucleus ② side chain	
31/12/23	2	3	Hydrocarbon	Aromatic hydrocarbons	IUPAC system of nomenclature of substituted aromatic compounds.	① Nucleus ② side chain	

Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
9	10	11	12	13	14
What is the definition of expansion chain of parent chain?	(1) Expansion of chain i.e. $\text{CH}_3 - \text{CH}_2 - (\text{CH}_2)_2 - \text{CH}_3$ Condensed group $\rightarrow \text{CH}_3 - \text{CH}_2 - \text{CH}_2 - \text{CH}_3$ expanded. (2) Selection of parent chain side chain	Define Huckel's rule for aromaticity.			
	Huckel's Rule of aromaticity. Use of some important aromatic compounds.	① Benzene ② Toluene ③ Dett. (Benzene derivative) ④ Phenol. ⑤ Naphthalene ⑥ Anthracene ⑦ Benzoic acid.			

Date	Period	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
08/12/23	01		Chemistry	Water Treatment	Source of water	Soft water, Hard water, types of hardness	
09/12/23	02				Types of hardness	Temporary and Permanent hardness, Removal of hardness by lime soda method, Chlorine & cold line advantages of hot line over cold line process	
11/12/23	03				Organic polymer exchange method	Principle process & Advantages and regeneration of exchanger resins.	

Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
9	10	11	12	13	14
What is temporary hardness?		Practical 100	08/12/23		
What is permanent hardness?		Practical 101	09/12/23		
How hardness of water is removed by lime soda process?					
How hardness is removed by ion-exchange method?		Practical 102	11/12/23		

TEACHERS

LESSON NOTE

Date	Period	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
14/12/23	01		Eng against any	Fuel	Fuel	1) Definition & classification of fuel.	
15/12/23	02			Fuel	Fuel	Definition of caloric value of fuel, choice of good fuel. Diesel, petrol & kerosene composition & uses. Producer gas & water gas. Elementary idea about LPG, CNG and coal gas (composition and uses only)	
16/12/23	03				liquid gaseous		

Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
9	10	11	12	13	14
Define calorific value of fuel? Give the composition and uses of producer gas and water gas.					
What are LCV and HCV?					
What are the L.P.G and CNG?					

Date	Period	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
1	2	3	4	5	6	7	8
			Eng. Chemistry	Polymer	Polymer	Definition of monomers, polymer, thermoplastic	
						CO-Polymer and Degree of polymerization	
						Difference between Thermosetting and Thermoplastic	
						Polymer composition and uses of Polythene & Poly-vinyl chloride and make life.	

Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
9	10	11	12	13	14
What are thermoplastic and thermosetting polymers give examples.					

Date	Period	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
1	2	3	4	5	6	7	8
			Eng. chemistry	chemicals in agriculture	Pesticides	insecticides herbicides fungicides uses - Chlorinated hydrocarbons like DDT, BHC, These are used to control fungi that damage plants	
					Fungicides	Fungicides are Pesticides that prevent, kill, mitigate, or inhibit the growth of fungi on plants Ex: Bleaching Powder, CuSO ₄ solution, aluminium phosphate, copper oxychloride	
					Bio. fertilizers	Bio-fertilizers are the substances that contains living microorganisms	
					Bio. fertilizers	used - Blue green algae is used for Paddy crops	

Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
9	10	11	12	13	14

Date	Period	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
1	2	3	4	5	6	7	8
				Acid-base theory	induction Acid-ba-theory	Arrhenius theory, Lowry-Bronsted theory Lewis theory	
						Acids are the substance which produces H^+ ions in aqueous solution while bases are the substance which produces OH^- ions ex- HCl Acids and substance which donate a proton to any other substance while bases are the substance which accept	
						Lewis theory Acids are the substance which can accept a pair of electron from any other substance. Types of salt Normal salt, acidic salt, basic salt,	

Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
9	10	11	12	13	14

Date	Period	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
1	2	3	4	5	6	7	8
1				Solutions	introduction	Atomic weight/mass, gram atomic mass, molecular weight, gram molecular weight, Equivalent weight of ions,	
2						Atomic weight/mass, gram atomic mass, molecular weight	
3						Equivalent weight of ions, modes of expressions of concentration, molar mass, molarity.	

Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
9	10	11	12	13	14