BHUBANANANDA ORISSA SCHOOL OF ENGINEERING, CUTTACK

DEPARTMENT OF MATHEMATICS AND SCIENCE

ACADEMIC SESSION-2020-21

Lesson Plan

Faculty Name – Sasmita Swain

SUBJECT:-ENGINEERING CHEMISTRY PRACTICAL

SEMESTER:- 2nd

BRANCH:- Civil

SEC:- "A"

FACULTY NAME:- Sasmita Swain

Semester From: - Date.28.04.2021 to 19 /08/2021

No of week:- 14

No of classes available per week: 2

Total period available: 28 periods

Class duration: 55 minutes

Teaching Method: Online Meeting App, procedure , PDF , Demonstration

Lesson plan

WEEk No.	Dates	No. of Periods available	Name of the experiments	Experiments Actually taken	Date of teaching	Short Fall if any	Reasons	Date of make up of short fall	Initial of Faculty
1	04.05.21	2	**Experiment -1. Preparation and study of physical and chemical properties of Carbon dioxide gas. (CO_2) gas**	preparation and study of physical and chemical properties of carbondioxide gas (CO_2) gas.	04.05.21	Nill	-	-	S.Swain
2	11.05.21	2			11.05.21	Nill	-	-	S.Swain
3	18.05.21	2			18.05.21	Nill	-	-	S.Swain

4	01.06.21	2	Experiment -2. Preparation and study of physical and chemical properties of Ammonia (NH3) gas.	preparation and study of physical and chemical properties of Ammonia (NH_3) gas.	01.06.21	Nill	–	–	S.Swain
5	08.06.21	2			08.06.21	Nill	–	–	S.Swain
6	22.06.21	2			22.06.21	Nill	–	–	S.Swain
7	29.06.21	2	Experiment -3. Crystallization of Copper sulphate from copper carbonate.	Crystallization of copper sulphate ($CuSO_4$) from copper carbonate.	29.06.21	Nill	–	–	S.Swain
8	06.07.21	2			06.07.21	Nill	–	–	S.Swain
13	10.08.21	2	Experiment -4. Simple acid – base titrations	Simple acid-base titrations	10.08.21	Nill	–	–	S.Swain.
14	17.08.21	2			17.08.21	Nill	–	–	S.Swain.

9	13.07.21	2	**Experiment – 5 Tests for acid redicals (known):** **1. Carbonate** **2. Sulphide** **3. Chloride** **4. Nitrate and** **5. Sulphate**	Tests for acid radicals (Known) (1) carbonate (2) sulphide (3) chloride	13.07.21	Nill	—	—	S. Swain
10	20.07.21	2		Tests for acid radicals (known) (4) Nitrate and (5) Sulphate	20.07.21	Nill	—	—	S. Swain
11	27.07.21	2	**Experiment – 6 Test for basic radicals (Known):** **1. Ammonium** **2. Zinc** **3. Magnesium**	Tests for basic radicals (known): (1) Ammonium (2) zinc	27.07.21	Nill	—	—	S. Swain
12	03.08.21	2	**4. Aluminium** **5. Calcium** **6. Sodium and** **7. Potassium**	(3) Magnesium (4) Aluminium	03.08.21	Nill	—	—	S. Swain

19.08.2021
Sr. Lect. (Chemistry)

BHUBANANANDA ORISSA SCHOOL OF ENGINEERING, CUTTACK

DEPARTMENT OF MATHEMATICS AND SCIENCE

ACADEMIC SESSION-2020-21

Lesson Plan

Faculty Name – Sasmita Swain

SUBJECT:-ENGINEERING CHEMISTRY PRACTICAL

SEMESTER:- 2nd

BRANCH:- Mechanical

SEC:- "F"

FACULTY NAME:- Sasmita Swain

Semester From: - Date.28.04.2021 to 19 /08/2021

No of week:- 15

No of classes available per week: 2

Total period available: 30 periods

Class duration: 55 minutes

Teaching Method: Online Meeting App, procedure , PDF , Demonstration C

Lesson plan

WEEk No.	Dates	No. of Periods available	Name of the experiments	Experiments Actually taken	Date of teaching	Short Fall if any	Reasons	Date of make up of short fall	Initial of Faculty
1	30.04.21	2	**Experiment -1. Preparation and study of physical and chemical properties of Carbon dioxide gas. (CO_2) gas**	Preparation and study of physical and chemical properties of carbon dioxide gas (CO_2) gas.	30.04.21	Nill	—	—	S. Swain
2	07.05.21	1			07.05.21	Nill	—	—	S. Swain
3	21.05.21	2			21.05.21	Nill	—	—	S. Swain

4	28·05·21	2	**Experiment -2. Preparation and study of physical and chemical properties of Ammonia (NH3) gas.**	preparation and study of physical and chemical properties of Ammonia (NH_3) gas.	28·05·21	Nill	—	—	S. Swain
5	04·06·21	2			04·06·21	Nill	—	—	S. Swain
6	11·06·21	2			11·06·21	Nill	—	—	S. Swain
7	18·06·21	2	**Experiment -3. Crystallization of Copper sulphate from copper carbonate.** Crystallization of copper sulphate ($CuSO_4$) from copper carbonate. ($CuCO_3$)	Crystallization of copper sulphate ($CuSO_4$) from copper carbonate ($CuCO_3$).	18·06·21	Nill	—	—	S. Swain
8	25·06·21	2			25·06·21	Nill	—	—	S. Swain
9	02·06·21	2			02·06·21	Nill	—	—	S. Swain
14	06·08·21	2	**Experiment -4. Simple acid – base titrations**	Simple acid-base titrations	06·08·21	Nill	—	—	S. Swain
15	13·08·21	2			13·08·21	Nill	—	—	S. Swain

10	09.07.21	2	**Experiment – 5 Tests for acid redicals (known):** **1. Carbonate** **2. Sulphide** **3. Chloride** **4. Nitrate and** **5. Sulphate**	Tests for acid radicals (known): (1) carborate (2) sulphide (3) chloride	09.07.21	Nill	–	–	S. Swain
11	16.07.21	2		Test for acid radicals (known): (4) Nitrate and (5) sulphate.	16.07.21	Nill	–	–	S. Swain
12	23.07.21	2	**Experiment – 6 Test for basic radicals (Known):** **1. Ammonium** **2. Zinc** **3. Magnesium** **4. Aluminium**	Test for basic radicals (known): (1) Ammonium (2) Zinc (3) Magnesium (4) Aluminium	23.07.21	Nill	–	–	S. Swain
13	30.07.21	2	**5. Calcium** **6. Sodium and** **7. Potassium**	Test for basic radicals (known) (5) calcium (6) sodium and (7) potassium.	30.07.21	Nill	–	–	S. Swain

19.08.2021
Sd. Lect (Mathematics)

BHUBANANANDA ORISSA SCHOOL OF ENGINEERING, CUTTACK

DEPARTMENT OF MATHEMATICS AND SCIENCE

ACADEMIC SESSION-2020-21

Lesson Plan

Faculty Name – Sasmita Swain

SUBJECT:-ENGINEERING CHEMISTRY PRACTICAL

SEMESTER:- 2nd

BRANCH:- Mechanical

SEC:- "G"

FACULTY NAME:- Sasmita Swain.

Semester From: - Date.28.04.2021 to 19 /08/2021

No of week:- 17

No of classes available per week: 2

Total period available: 58 periods

Class duration: 55 minutes

Teaching Method: Online Meeting App, procedure, PDF, Demonstration.

Lesson plan

WEEk No.	Dates	No. of Periods available	Name of the experiments	Experiments Actually taken	Date of teaching	Short Fall if any	Reasons	Date of make up of short fall	Initial of Faculty
1	29.04.21	2	**Experiment -1. Preparation and study of physical and chemical properties of Carbon dioxide gas. (CO_2) gas**	preparation and study of physical and chemical properties of carbon dioxide gas (CO_2) gas.	29.04.21	Nill	—	—	S. Swain, SS
2	04.05.21	2			04.05.21	Nill	—	—	S. Swain
	06.05.21	2			06.05.21	Nill	—	—	S. Swain, SS
3	11.05.21	2			11.05.21	Nill	—	—	S. Swain
	13.05.21	2			13.05.21	Nill	—	—	S. Swain, SS

4	18.05.21	1	Experiment -2. Preparation and study of physical and chemical properties of Ammonia (NH3) gas.	Preparation and study of physical and chemical properties of Ammonia (NH_3) gas.	18.05.21	Nill	—	—	S.Swain
	20.05.21	1			20.05.21	Nill	—	—	S.Swain
5	25.05.21	1			25.05.21	Nill	—	—	S.Swain
	01.06.21	1			01.06.21	Nill	—	—	S.Swain
6	03.06.21	1			03.06.21	Nill	—	—	S.Swain.dy
7	08.06.21	1	Experiment -3. Crystallization of Copper sulphate from copper carbonate.	Crystallization of copper sulphate ($CuSO_4$) from copper carbonate. ($CuCO_3$)	08.06.21	Nill	—	—	S.Swain
8	17.06.21	1			17.06.21	Nill	—	—	S.Swain, dy
	22.06.21	1			22.06.21	Nill	—	—	S.Swain
9	24.06.21	1			24.06.21	Nill	—	—	S.Swain dy
	29.06.21	1			29.06.21	Nill	—	—	S.Swain
10									
15	03.08.21	1	Experiment -4. Simple acid – base titrations	Simple acid- base titrations.	03.08.21	Nill	—	—	S.Swain
	05.08.21	1			05.08.21	Nill	—	—	S.Swain, dy
	10.08.21	1			10.08.21	Nill	—	—	S.Swain
16	12.08.21	1			12.08.21	Nill	—	—	S.Swain dy
	17.08.21	1			17.08.21	Nill	—	—	S.Swain dy
17	19.08.21	1			19.08.21	Nill	—	—	S.Swain dy

11	01.07.21	2	Experiment – 5 Tests for acid redicals (known): 1. Carbonate 2. Sulphide 3. Chloride 4. Nitrate and 5. Sulphate	Tests for acid radicals (known) : (1) carbonate (2) sulphide (3) chloride (4) Nitrate and (5) sulphate	01.07.21	Nill	—	—	S. Swain,
	06.07.21	2			06.07.21	Nill	—	—	S. Swain
	08.07.21	2			08.07.21	Nill	—	—	S. Swain,
12	13.07.21	2			13.07.21	Nill	—	—	S. Swain
	15.07.21	2			15.07.21	Nill	—	—	S. Swain,
13	20.07.21	2	Experiment – 6 Test for basic radicals (Known): 1. Ammonium 2. Zinc 3. Magnesium 4. Aluminium 5. Calcium 6. Sodium and 7. Potassium	Test for basic radicals (known) : (1) Ammonium (2) Zinc (3) Magnesium (4) Aluminium (5) calcium (6) sodium and (7) potassium	20.07.21	Nill	—	—	S. Swain
	22.07.21	2			22.07.21	Nill	—	—	S. Swain,
14	27.07.21	2			27.07.21	Nill	—	—	S. Swain
	29.07.21	2			29.07.21	Nill	—	—	S. Swain,

19.08.2021
Sr. Lect (Chemistry)

BHUBANANANDA ORISSA SCHOOL OF ENGINEERING, CUTTACK

DEPARTMENT OF MATHEMATICS AND SCIENCE

ACADEMIC SESSION-2020-21

Lesson Plan

Faculty Name – Sasmita Sareen

SUBJECT:-ENGINEERING CHEMISTRY

SEMESTER:- 2nd

BRANCH:- Mechanical

SEC:- "G"

FACULTY NAME:- SASMITA SWAIN

Semester From: - Date.28.04.2021 to 19 /08/2021

No of week:- 15

No of classes available per week: 4

Total period available:15periods

Class duration: 55 minutes

Teaching Method: Online Meeting App, Power point Presentation, Lecture note .PDF

Learning Method: Daily Assignment, Unit test, Moc test

Lesson plan

WEEk No.	Dates	No. of Periods available	Topics to be Covered	Topic actually taken	Date of teaching	Short Fall if any	Reasons	Date of make up of short fall	Initial of Faculty
			Chapter 1: Atomic structure : Fundamental particles (electron, proton & neutron Definition, mass and charge).Rutherford's Atomic model (postulates and failure), Atomic mass and mass number, Definition, examples and properties of Isotopes, isobars and isotones.	Taken by Deepika priyadarshini					

			Chapter 1: Atomic structure : Bohr's Atomic model (Postulates only), Bohr-Bury scheme, Aufbau's principle, Hund's rule, Electronic configuration (up to atomic no 30) **Chapter 2 : Chemical Bonding :** Definition , types (Electrovalent, Covalent and Coordinate bond with examples (formation of NaCl, $MgCl_2$,H_2,Cl_2, O_2, N_2, H_2O,CH_4, NH_3, NH_4^+, SO_2)	Taken by Deepika priyadarshini					
			Chapter 3 : Acid base theory : Concept of Arrhenius, Lowry Bronsted and Lewis theory for acid and base with examples (Postulates and limitations only). Neutralization of acid & base. Definition of Salt, Types of salts (Normal, acidic, basic, double, complex and mixed salts, definitions with 2 examples from each).	Taken by Deepika priyadarshini					

			Chapter 4: Solutions : Definitions of atomic weight, molecular weight, Equivalent weight. Determination of equivalent weight of Acid, Base and Salt. Modes of expression of the concentrations (Molarity , Normality & Molality) with Simple Problems. pH of solution (definition with simple numericals) Importance of pH in industry (sugar, textile, paper industries only	Taken by Deepika priyadarshini					
1	30.04.21	1	**Chapter 5 : Electrochemistry :** Definition and types (Strong & weak) of Electrolytes with example. Electrolysis (Principle & process) with example of NaCl (fused and aqueous solution). Faraday's 1st and 2nd law of Electrolysis (Statement, mathematical expression and Simple numerical) Industrial application of Electrolysis- Electroplating (Zinc only).	→ Defn and types (strong & weak) of electrolytes with example.	30.04.21	Nil	—	—	S.Swain
2	07.05.21	1		→ Electrolysis (principle & process) with example of NaCl (fused state)	07.05.21	Nil	—	—	S.Swain
3	21.05.21	1		→ Electrolysis (principle & process) with example of NaCl aqueous solution.	21.05.21	Nil	—	—	S.Swain
4	28.05.21	1		→ Faraday's 1st law of electrolysis (statement, mathematical expression and simple numerical).	28.05.21	Nil	—	—	S.Swain
5	04.06.21	1		→ Faraday's 2nd law of electrolysis (statement, mathematical expression, simple numericals) Industrial applicatn of electrolysis - electroplating Zn only.	04.06.21	Nil	—	—	S.Swain
6	11.06.21	1	**Chapter 6 : Corrosion:** Definition of Corrosion, Types of Corrosion- Atmospheric Corrosion, Waterline corrosion. Mechanism of rusting of Iron only. Protection from Corrosion by (i) Alloying and (ii) Galvanization.	→ Defn of corrosion, types of corrosion - Atmospheric corrosion. waterline corrosion.	11.06.21	Nil	—	—	S.Swain
7	18.06.21	1		→ Mechanism of rusting of Iron only. protection from corrosion by (i) Alloying and (ii) Galvanization.	18.06.21	Nil	—	—	S.Swain

8	25.06.21	1	**Chapter 7 : Metallurgy:** Definition of Mineral, ores, gangue with example. Distinction betweenOres And Minerals. General methods of extraction of metals. i) Ore Dressing	→ Defn of mineral, Ores, gangue with example. Distinction between ores and minerals.	25.06.21	Nil	—	—	S. Swain
9	02.07.21	1		→ General methods of extraction of metals, (i) ore dressing (ii) concentration (Gravity separation, magnetic separation, froth floatation & Leaching)	02.07.21	Nil	—	—	S. Swain
10	09.07.21	1	ii) Concentration (Gravity separation, magnetic separation, Froth floatation & leaching) iii) Oxidation (Calcinations, Roasting)	→ (iii) Oxidation (calcination & Roasting) (iv) Reduction (smelting, Defn and example of flux, slag)	09.07.21	Nil	—	—	S. Swain
11	16.07.21	1	iv) Reduction (Smelting, Definition & examples of flux, slag) v) Refining of the metal (Electro refining, & Distillation only)	→ (v) Refining of the metal (Electro refining & Distillation only.	16.07.21	Nil	—	—	S. Swain
12	23.07.21	1	**Chapter 8 : Alloys:** Definition of alloy. Types of alloys (Ferro, Non Ferro & Amalgam) with example. Composition and uses of Brass, Bronze, Alnico, Duralumin	Defn of alloy. Types of alloys (Ferro, Non ferro and Amalgam) with example. Composition and uses of Brass, Bronze, Alnico, Duralumin.	23.07.21	Nil	—	—	S. Swain
			Chapter 9 : Hydrocarbons : Saturated and Unsaturated Hydrocarbons (Definition with example) Aliphatic and Aromatic Hydrocarbons (Huckle's rule only). Difference between Aliphatic and aromatic hydrocarbons IUPAC system of nomenclature of Alkane, Alkene, Alkyne, alkyl halide and alcohol (up to 6 carbons) with bond line notation. Uses of some common aromatic compounds (Benzene, Toluene, BHC,	Taken by Deepika priyadarshini					

			Phenol, Naphthalene, Anthracene and Benzoic acid) in daily life.	Taken by Deepika priyadarshini						
			Chapter 10 : Water Treatment : Sources of water, Soft water, Hard water, hardness, types of Hardness (temporary or carbonate and permanent or non-carbonate), Removal of hardness by lime soda method (hot lime & cold lime—Principle, process & advantages) , Advantages of Hot lime over cold lime process. Organic Ion exchange method (principle, process, and regeneration of exhausted resins)	Taken by Deepika priyadarshini						
13	13.08.21	1	**Chapter 11 : Lubricants**: Definition of lubricant, Types (solid, liquid and semisolid with examples only) and specific uses of lubricants (Graphite, Oils, Grease), Purpose of lubrication	Lubricants : Definition of lubricant, Types (solid, liquid and semi solid with examples only) and specific uses of lubricants (Graphite, Oils, Grease) purpose of lubricatn	13.08.21	Nill	—	—	S.Sasain	

14	30.07.21	1	**Chapter 12 : Fuel**: Definition and classification of fuel. Definition of calorific value of fuel, Choice of good fuel. Liquid: Diesel, Petrol, and Kerosene --- Composition and uses.	→ Defn and classification of Fuel, Defn of calorific value of fuel · choice of good fuel. Liquid: Diesel, petrol & Kerosene - composition & uses.	30.07.21	Nil	—	—	S. Swain
15	06.08.21	1	Gaseous: Producer gas and Water gas (Composition and uses). Elementary idea about LPG, CNG and coal gas (Composition and uses only	→ Gaseous : producer gas and water gas (composition and uses) · Elementary idea about LPG, CNG and coal gas (composition and uses only.)	06.08.21	Nil	—	—	S. Swain
			Chapter 13 : Polymer: Definition of Monomer, Polymer, Homo-polymer, Co-polymer and Degree of polymerization. Difference between Thermosetting and Thermoplastic, Composition and uses of Polythene, & Poly-Vinyl Chloride and Bakelite. Definition of Elastomer (Rubber). Natural Rubber (it's draw backs). Vulcanisation of Rubber. Advantages of Vulcanised rubber over raw rubber.	Taken by Deepika priyadarshini					
			Chapter 14: Chemicals in Agriculture: Pesticides: Insecticides, herbicides, fungicides-Examples and uses.Bio Fertilizers: Definition, examples and uses.	Taken by Deepika priyadarshini					

BHUBANANDA ORISSA SCHOOL OF ENGINEERING, CUTTACK

DEPARTMENT OF MATHEMATICS AND SCIENCE

ACADEMIC SESSION-2020-21

Lesson Plan

Faculty Name – Sasmita Swain

SUBJECT:-ENGINEERING CHEMISTRY

SEMESTER:- 2nd

BRANCH:- Mechanical

SEC:- "F"

FACULTY NAME:- Sasmita Swain

Semester From: - Date.28.04.2021 to 31/08/2021

No of week:- 17

No of classes available per week: 4

Total period available:31 periods

Class duration: 55 minutes

Teaching Method: Online Meeting App, Power point Presentation, Lecture note .PDF

Learning Method: Daily Assignment, Unit test, Moc test

Lesson plan

WEEk No.	Dates	No. of Periods available	Topics to be Covered	Topic actually taken	Date of teaching	Short Fall if any	Reasons	Date of make up of short fall	Initial of Faculty
1	29.04.21	1	**Chapter 1: Atomic structure :** Fundamental particles (electron, proton & neutron Definition, mass and charge).Rutherford's Atomic model (postulates and failure), Atomic mass and mass number, Definition, examples and properties of Isotopes, isobars and isotones.	→ Fundamental particles (electron proton & neutron) Defn, mass and charge.	29.04.21	Nil	—	—	S.Swain
	01.05.21	1		→ Rutherford's Atomic model (postulates and failure)	01.05.21	Nil	—	—	S.Swain
2	06.05.21	1		→ Atomic mass and mass number	06.05.21	Nil	—	—	S.Swain
	08.05.21	1		→ Defn, examples and properties of Isotopes, isobars and Isotones.	08.05.21	Nil	—	—	S.Swain

3	13.05.21	1	**Chapter 1: Atomic structure :**	→ Bohr is atomic model (postul-ates only),	13.05.21	N'ill	—	—	S. Swain
	15.05.21	1	Bohr's Atomic model (Postulates only),	→ Bohr – Bury scheme, Aufbau's	15.05.21	N'ill	—	—	S. Swain
4	20.05.21	1	Bohr-Bury scheme, Aufbau's principle,	principle.					
	22.05.21	1	Hund's rule, Electronic configuration (up to atomic no 30)	→ Hund's rule, Electronic configuratn (upto atomic no. 30)	20.05.21	N'ill	—	—	S. Swain
5	29.05.21	1	**Chapter 2 : Chemical Bonding :** Definition , types (Electrovalent, Covalent and Coordinate bond with examples (formation of NaCl, $MgCl_2$,H_2,Cl_2, O_2, N_2, H_2O,CH_4, NH_3, NH_4^+, SO_2)	→ Defn, types of electro-valent bond with example NaCl, $MgCl_2$,	22.05.21	N'ill	—	—	S. Swain
				→ Defn, types of covalent bond with ex:- H_2, Cl_2, O_2, N_2	29.05.21	N'ill	—	—	S. Swain
6	03.06.21	1		→ Defn, types of covalent bond with ex:- H_2O, CH_4, NH_3	03.06.21	N'ill	—	—	S. Swain
	05.06.21	1		→ Defn, types of co-ordinate bond ex:- SO_2, NH_4^+	05.06.21	N'ill	—	—	S. Swain
			Chapter 3 : Acid base theory : Concept of Arrhenius, Lowry Bronsted and Lewis theory for acid and base with examples (Postulates and limitations only). Neutralization of acid & base. Definition of Salt, Types of salts (Normal, acidic, basic, double, complex and mixed salts, ; definitions with 2 examples from each).	Taken by Dr. Arundhati Barik					

			Chapter 4: Solutions : Definitions of atomic weight, molecular weight, Equivalent weight. Determination of equivalent weight of Acid, Base and Salt. Modes of expression of the concentrations (Molarity , Normality & Molality) with Simple Problems. pH of solution (definition with simple numericals) Importance of pH in industry (sugar, textile, paper industries only	Taken by Dr. Arundhati Barik					
7	12.06.21	1	**Chapter 5 : Electrochemistry :** Definition and types (Strong & weak) of Electrolytes with example. Electrolysis (Principle & process) with example of NaCl (fused and aqueous solution). Faraday's 1st and 2nd law of Electrolysis (Statement, mathematical expression and Simple numerical) Industrial application of : Electrolysis- Electroplating (Zinc only).	→ Defn and types (strong and weak) of electrolytes with example.	12.06.21	Nil	—	—	S. Swain
	17.06.21	1		→ Electrolysis principle & process with example of NaCl (fused state)	17.06.21	Nil	—	—	S. Swain
8	19.06.21	1		→ electrolysis principle & process with example of NaCl aqueous soln.	19.06.21	Nil	—	—	S. Swain
	24.06.21	1		→ Faraday's 1st law of electrolysis statement, mathematical expression and simple numericals	24.06.21	Nil	—	—	S. Swain
9	26.06.21	1		→ Faraday's 2nd law of electrolysis statement, mathematical expression and simple numericals.	26.06.21	Nil	—	—	S. Swain
10	01.07.21	1		→ Industrial application of electrolysis - electroplating (zinc only)	01.07.21	Nil	—	—	S. Swain
			Chapter 6 : Corrosion: Definition of Corrosion, Types of Corrosion- Atmospheric Corrosion, Waterline corrosion. Mechanism of rusting of Iron only. Protection from Corrosion by (i) Alloying and (ii) Galvanization.	Taken by Dr. Arundhati Barik					

10	03.07.21 08.07.21	1 1	**Chapter 7 : Metallurgy:** Definition of Mineral, ores , gangue with example. Distinction betweenOres And Minerals. General methods of extraction of metals. i) Ore Dressing	→ Defn of mineral, ores, gangue with example. Distinction betn ores and minerals → General methods of extraction of metals, (i) ore dressing,	03.07.21 08.07.21	Nil Nil	— —	— —	S.Swain S.Swain
11	10.07.21	1	ii) Concentration (Gravity separation, magnetic separation, Froth floatation & leaching) iii) Oxidation (Calcinations, Roasting) iv) Reduction (Smelting, Definition & examples of flux, slag)	(ii) concentration (gravity separation, magnetic separation, froth floatation & leaching → (iii) Oxidation (calcination & Roasting) (iv) Reduction (smelting, Defn and example of flux, slag)	10.07.21	Nil	—	—	S.Swain
12	15.07.21	1	v) Refining of the metal (Electro refining, & Distillation only)	→ (v) Refining of the metal electrorefining and Distillation only.	15.07.21	Nil	—	—	S.Swain
12	17.07.21	1	**Chapter 8 : Alloys:** Definition of alloy. Types of alloys (Ferro, Non Ferro & Amalgam) with example. Composition and uses of Brass, Bronze, Alnico, Duralumin	Defn of alloy. Types of alloys (ferro, non-ferro and Amalgam) with example composition and uses of Brass, Bronze, Alnico, Duralumin.	17.07.21	Nil	—	—	S.Swain
			Chapter 9 : Hydrocarbons : Saturated and Unsaturated Hydrocarbons (Definition with example) Aliphatic and Aromatic Hydrocarbons (Huckle's rule only). Difference between Aliphatic and aromatic hydrocarbons IUPAC system of nomenclature of Alkane, Alkene, Alkyne, alkyl halide and alcohol (up to 6 carbons) with bond line notation. Uses of some common aromatic compounds (Benzene, Toluene, BHC	Taken by Dr. Arundhati Barik					

			Phenol, Naphthalene, Anthracene and Benzoic acid) in daily life	Taken by Dr. Arundhati Barik					
	05.08.21	1	**Chapter 10 : Water Treatment** : Sources of water. Soft water, Hard water, hardness, types of Hardness (temporary or carbonate and permanent or non-carbonate), Removal of hardness by lime soda method (hot lime & cold lime—Principle, process & advantages). Advantages of Hot lime over cold lime process.	→ water Treatment sources of water, soft water, Hard water, hardness, types of Hardness (temporary or carbonate and permanent or non carbonate) → Removal of hardness by lime soda method (hot lime & cold lime - principle, process & advantages), → Advantages of Hot lime over cold lime process	05.08.21	Nill	—	—	S. Swain
13	07.08.21	1			07.08.21	Nill	—	—	S. Swain
14	12.08.21	1	Organic Ion exchange method (principle, process, and regeneration of exhausted resins)	Organic Ion exchange method (principle, process and regeneration of exhausted resins)	12.08.21	Nill	—	—	S. Swain
			Chapter 11 : Lubricants: Definition of lubricant, Types (solid, liquid and semisolid with examples only) and specific uses of lubricants (Graphite, Oils, Grease). Purpose of lubrication	Taken by Dr. Arundhati Barik					

			Chapter 12 : Fuel: Definition and classification of fuel. Definition of calorific value of fuel, Choice of good fuel. Liquid: Diesel, Petrol, and Kerosene --- Composition and uses. Gaseous: Producer gas and Water gas (Composition and uses). Elementary idea about LPG, CNG and coal gas (Composition and uses only	Taken by Dr. Arundhati Barik					
15	22.07.21	1	**Chapter 13 : Polymer**: Definition of Monomer, Polymer, Homo-polymer, Co-polymer and Degree of polymerization. Difference between Thermosetting and Thermoplastic, Composition and uses of Polythene, & Poly-Vinyl Chloride and Bakelite. Definition of Elastomer (Rubber). Natural Rubber (it's draw backs). Vulcanisation of Rubber. Advantages of Vulcanised rubber over raw rubber.	→ Defn of Monomer, polymer, Homopolymer, co-polymer and degree of polymerizatn	22.07.21	Nil	—	—	S. Swain
	24.07.21	1		→ Difference betn thermo-setting and thermoplastic composition and uses of polythene.	24.07.21	Nil	—	—	S. Swain
16	29.07.21	1		→ composition and uses of polyvinyl chloride and Bakelite.	29.07.21	Nil	—	—	S. Swain
	31.07.21	1		→ Defn of elastomers (Rubber) Natural Rubber (It's drawbacks). Vulcanisation of Rubber. Advantages of vulcanised rubber over raw Rubber	31.07.21	Nil	—	—	S. Swain
			Chapter 14: Chemicals in Agriculture: Pesticides: Insecticides, herbicides, fungicides-Examples and uses.Bio Fertilizers: Definition, examples and uses.	Taken by Dr. Arundhati Barik					

	14.08.21	1	Revision, previous year questions and answers discussion, MCQ discussion	Revision, previous year questions and answers discussion, MCQ discussion.	14.08.21	Nill	—	—	S. Swain.
16	19.08.21	1	Quiz test, MCQ discussion	Quiz test, MCQ discussion	19.08.21	Nill	—	—	S. Swain
17									

BOOK REFERENCE: 1. Engineering Chemistry by Y.R.Sharma and P. Mitra, Kalyani Publishers
2. Text Book of Intermediate Chemistry Part -1 and Part -2 by Nanda Das, Sharma, Kalyani Publishers

Study Website:
Online Class link:
(If any

19.08.2021
Sd/- Asst (Mathematics)

BHUBANANANDA ORISSA SCHOOL OF ENGINEERING, CUTTACK

DEPARTMENT OF MATHEMATICS AND SCIENCE

ACADEMIC SESSION-2020-21

Lesson Plan

Faculty Name — Sasmita Swain

SUBJECT:-ENGINEERING CHEMISTRY

SEMESTER:- 2nd

BRANCH:- Civil

SEC:- "A"

FACULTY NAME:- SASMITA SWAIN

Semester From: - Date.28.04.2021 to 19/08/2021

No of week:- 17

No of classes available per week: 4

Total period available: 29 periods

Class duration: 55 minutes

Teaching Method: Online Meeting App, Power point Presentation, Lecture note .PDF

Learning Method: Daily Assignment, Unit test, Mocktest

Lesson plan

WEEk No.	Dates	No. of Periods available	Topics to be Covered	Topic actually taken	Date of teaching	Short Fall if any	Reasons	Date of make up of short fall	Initial of Faculty
1	28.04.21	1 CA)	**Chapter 1: Atomic structure :** Fundamental particles (electron, proton & neutron Definition, mass and charge).Rutherford's Atomic model (postulates and failure), Atomic mass and mass number, Definition, examples and properties of Isotopes, isobars and isotones.	→ Fundamental particles (electron, proton & neutron.	28.04.21	Nil	—	—	S.Swain
	03.05.21	1 CA)		→ Definat n of mass and charge of electron, proton, neutron	03.05.21	Nil	—	—	S.Swain
2	05.05.21	1 CA)		→ Rutherford's Atomic model (postulates & failure)	05.05.21	Nil	—	—	S.Swain
	10.05.21	1 CA)		→ Atomic mass and mass number	10.05.21	Nil	—	—	S.Swain
3	12.05.21	1 CA)		→ Definition, examples and properties of Isotopes, isobars and isotones.	12.05.21	Nil	—	—	S.Swain

	17.05.21	1 (A)	**Chapter 1: Atomic structure :**	→ Bohr's atomic model (postulates only), Bohr-Bury scheme, Aufbau's principle.	17.05.21	Nil	—	—	S. Swain
4	19.05.21	1 (A)	Bohr's Atomic model (Postulates only), Bohr-Bury scheme, Aufbau's principle, Hund's rule, Electronic configuration (up to atomic no 30)	→ Hund's rule, Electronic configuration (up to atomic no. 30)	19.05.21	Nil	—	—	S. Swain
5	24.05.21	1 (A)	**Chapter 2 : Chemical Bonding :**						
	31.05.21	(1) (A)	Definition, types (Electrovalent, Covalent and Coordinate bond with examples (formation of NaCl, $MgCl_2$, H_2, Cl_2, O_2, N_2, H_2O, CH_4, NH_3, NH_4^+, SO_2)	→ Defn, types (Electro-valent bond, ex:- NaCl, $MgCl_2$)	24.05.21	Nil	—	—	S. Swain
6	02.06.21	1 (A)		→ Defn, types of covalent bond ex:- H_2, Cl_2, O_2, N_2	31.05.21	Nil	—	—	S. Swain
7	07.06.21	1 (A)		→ Defn, types of covalent bond ex:- H_2O, CH_4, NH_3	02.06.21	Nil	—	—	S. Swain
				→ Defn, types of Co-ordinate bond :- ex :- SO_2, NH_4^+	07.06.21	Nil	—	—	S. Swain
			Chapter 3 : Acid base theory : Concept of Arrhenius, Lowry Bronsted and Lewis theory for acid and base with examples (Postulates and limitations only). Neutralization of acid & base. Definition of Salt, Types of salts (Normal, acidic, basic, double, complex and mixed salts, definitions with 2 examples from each).	Taken by Dr. Arundhati Barik					

			Chapter 4: Solutions : Definitions of atomic weight, molecular weight, Equivalent weight. Determination of equivalent weight of Acid, Base and Salt. Modes of expression of the concentrations (Molarity , Normality & Molality) with Simple Problems. pH of solution (definition with simple numericals) Importance of pH in industry (sugar, textile, paper industries only	Taken by Dr. Arundhati Barik					
7	09.06.21	1	**Chapter 5 : Electrochemistry :** Definition and types (Strong & weak) of Electrolytes with example. Electrolysis (Principle & process) with example of NaCl (fused and aqueous solution). Faraday's 1st and 2nd law of Electrolysis (Statement, mathematical expression and Simple numerical) Industrial application of Electrolysis- Electroplating (Zinc only).	→ Defn and types (strong & weak) of electrolytes with example	09.06.21	Nil	—	—	S. Swain
8	16.06.21	1		→ Electrolysis principle & process with example of nacl fused state)	16.06.21	Nil	—	—	S. Swain
	21.06.21	1		→ Electrolysis principle & process with example of NaCl aqueous soln.	21.06.21	Nil	—	—	S. Swain
9	23.06.21	1		→ Faraday's 1st law of electrolysis (statement, mathematical expression and simple numericals	23.06.21	Nil	—	—	S. Swain
10	28.06.21	1		→ Faraday's 2nd law of electrolysis statement, mathematical expression and simple numericals	28.06.21	Nil	—	—	S. Swain
	30.06.21	1		→ Industrial application of electrolysis - electroplating (Zn only).	30.06.21	Nil	—	—	S. Swain
			Chapter 6 : Corrosion: Definition of Corrosion, Types of Corrosion- Atmospheric Corrosion, Waterline corrosion. Mechanism of rusting of Iron only. Protection from Corrosion by (i) Alloying and (ii) Galvanization.	Taken by Dr. Arundhati Barik					

11	05.07.21 07.07.21	1 1	**Chapter 7 : Metallurgy:** Definition of Mineral, ores , gangue with example. Distinction betweenOres And Minerals. General methods of extraction of metals. i) Ore Dressing ii) Concentration (Gravity separation, magnetic separation, Froth floatation & leaching) iii) Oxidation (Calcinations, Roasting) iv) Reduction (Smelting, Definition & examples of flux, slag) v) Refining of the metal (Electro refining, & Distillation only)	→ Definition of Mineral, ores, gangue with example. Distinction between ores & Minerals. → General methods of extract of metals, (i) ore Dressing (ii) concentration (Gravity separatn, magnetic separation, froth floatation & leaching) → (iii) oxidation (calcinatn & Roasting) (iv) Reduction (Smelting) Defn and example of flux, slag. → (v) Refining of the metal (Electro refining, & Distillation only.)	05.07.21 07.07.21 14.07.21 19.07.21	Nill Nill Nill Nill	— — — —	— — — —	S. Swain S. Swain S. Swain S. Swain
12	14.07.21	1							
13	19.07.21	1							
14	26.07.21	1	**Chapter 8 : Alloys:** Definition of alloy. Types of alloys (Ferro, Non Ferro & Amalgam) with example. Composition and uses of Brass, Bronze, Alnico, Duralumin	Defn of alloy. Types of alloys (Ferro, Non-ferro and Amalgam) with example composition and uses of Brass, Bronze, Alnico, Duralumin.	26.07.21	Nill	—	—	S. Swain
			Chapter 9 : Hydrocarbons : Saturated and Unsaturated Hydrocarbons (Definition with example) Aliphatic and Aromatic Hydrocarbons (Huckle's rule only). Difference between Aliphatic and aromatic hydrocarbons IUPAC system of nomenclature of Alkane, Alkene, Alkyne, alkyl halide and alcohol (up to 6 carbons) with bond line notation. Uses of some common aromatic compounds (Benzene, Toluene, BHC,	Taken By Dr. Arundhati Barik					

			Phenol, Naphthalene, Anthracene and Benzoic acid) in daily life.	Taken By Dr. Arundhati Barik					
15	09.08.21	1	**Chapter 10 : Water Treatment** : Sources of water, Soft water, Hard water, hardness, types of Hardness (temporary or carbonate and permanent or non-carbonate), Removal of hardness by lime soda method (hot lime & cold lime—Principle, process & advantages), Advantages of Hot lime over cold lime process.	Water Treatment : Sources of water, soft water, Hard water hardness, types of Hardness - temporary or carbonate and permanent or non carbonate)	09.08.21	Nill	—	—	S. Swain
	11.08.21	1		→ Removal of hardness by lime soda method (hot lime & cold lime - principle process and advantages	11.08.21	Nill	—	—	S. Swain
17	16.08.21	1	Organic Ion exchange method (principle, process, and regeneration of exhausted resins)	Advantages of hot lime over cold lime process. → organic ion exchange method (principle process and regeneration of exhausted resins)	16.08.21	Nill	—	—	S. Swain
			Chapter 11 : Lubricants: Definition of lubricant, Types (solid, liquid and semisolid with examples only) and specific uses of lubricants (Graphite, Oils, Grease), Purpose of lubrication	Taken by Dr Arundhati Barik					

			Chapter 12 : Fuel: Definition and classification of fuel, Definition of calorific value of fuel, Choice of good fuel. Liquid: Diesel, Petrol, and Kerosene --- Composition and uses. Gaseous: Producer gas and Water gas (Composition and uses). Elementary idea about LPG, CNG and coal gas (Composition and uses only	Taken by Dr. Arundhati Barik					
15	28.07.21	1	**Chapter 13 : Polymer**: Definition of Monomer, Polymer, Homo-polymer, Co-polymer and Degree of polymerization. Difference between Thermosetting and Thermoplastic, Composition and uses of Polythene, & Poly-Vinyl Chloride and Bakelite.	→ Defn of Monomer, polymer, Homopolymer, co-polymer, and Degree of polymerizatn	28.07.21	Nill	—	—	S.Swain
	02.08.21	1		→ Difference between Thermosetting and Thermoplastic, composition and uses of polythene.	02.08.21	Nill	—	—	S.Swain
16	04.08.21	1	Definition of Elastomer (Rubber). Natural Rubber (it's draw backs). Vulcanisation of Rubber. Advantages of Vulcanised rubber over raw rubber.	→ composition and uses of poly vinyl chloride and Bakelite. Defn of Elastomer (Rubber). Natural rubber (its drawbacks) Vulcanisation of rubber. Advantages of vulcanised rubber over raw rubber.	04.08.21	Nill	—	—	S.Swain
			Chapter 14: Chemicals in Agriculture: Pesticides: Insecticides, herbicides, fungicides-Examples and uses.Bio Fertilizers: Definition, examples and uses.	Taken by Dr. Arundhati Barik					

17	18.08.21	1	Revision, previous year questions answers discussion, MCQ discussion	Revision, previous year questions and answers discussion, MCQ discussion	18.08.21	Nill	–	—	S. Sura
16									
17									

BOOK REFERENCE: 1. Engineering Chemistry by Y.R.Sharma and P. Mitra, Kalyani Publishers
2. Text Book of Intermediate Chemistry Part -1 and Part -2 by Nanda Das, Sharma, Kalyani Publishers

Study Website:
Online Class link:
(If any

SS. Lect (Mathematics)

regd
9/8/21

BHUBANANANDA ORISSA SCHOOL OF ENGINEERING, CUTTACK

DEPARTMENT OF MATHEMATICS AND SCIENCE

ACADEMIC SESSION-2020-21

Lesson Plan

Faculty Name – Sasmita Swain

SUBJECT:-ENGINEERING CHEMISTRY

SEMESTER:- 2nd

BRANCH:- civil

SEC:- "B"

FACULTY NAME:- Sasmita Swain

Semester From: - Date 28.04.2021 to 19/08/2021

No of week:- 17

No of classes available per week: 4

Total period available: 31 periods

Class duration: 55 minutes

Teaching Method: Online Meeting App, Power point Presentation, Lecture note .PDF

Learning Method: Daily Assignment, Unit test, Moc test

Lesson plan

WEEK No.	Dates	No. of Periods available	Topics to be Covered	Topic actually taken	Date of teaching	Short Fall if any	Reasons	Date of make up of short fall	Initial of Faculty
1	29.04.21	1	**Chapter 1: Atomic structure :** Fundamental particles (electron, proton & neutron Definition, mass and charge).Rutherford's Atomic model (postulates and failure), Atomic mass and mass number, Definition, examples and properties of Isotopes, isobars and isotones.	→ Fundamental particles (electron, proton & neutron) Defn, mass and charge.	29.04.21	Nill	—	—	S. Swain
	01.05.21	1		→ Rutherford's Atomic model. (postulates and failure)	01.05.21	Nill	—	—	S. Swain
2	06.05.21	1		→ Atomic mass and mass number	06.05.21	Nill	—	—	S. Swain
	08.05.21	1		→ Defn, examples and properties of Isotopes, isobars and Isotones.	08.05.21	Nill	—	—	S. Swain

3	13.05.21	1	**Chapter 1: Atomic structure :** Bohr's Atomic model (Postulates only), Bohr-Bury scheme, Aufbau's principle, Hund's rule, Electronic configuration (up to atomic no 30) **Chapter 2 : Chemical Bonding :** Definition , types (Electrovalent, Covalent and Coordinate bond with examples (formation of NaCl, $MgCl_2$,H_2,Cl_2, O_2, N_2, H_2O,CH_4, NH_3, NH_4^+, SO_2)	→ Bohr's atomic model (postulates only),	13.05.21	Nil	—	—	S. Swain
	15.05.21	1		→ Bohr-Bury scheme, Aufbau's principle.	15.05.21	Nil	—	—	S. Swain
4	20.05.21	1		→ Hund's rule, electronic configuration (up to atomic no 30)	20.05.21	Nil	—	—	S. Swain
	22.05.21	1		→ Defn, types of electrovalent bond with example NaCl, $MgCl_2$.	22.05.21	Nil	—	—	S. Swain
5	29.05.21	1		→ Defn, types of covalent bond with ex:- H_2, Cl_2, O_2, N_2	29.05.21	Nil	—	—	S. Swain
	03.06.21	1		→ Defn, types of covalent bond with ex:- H_2O, CH_4, NH_3	03.06.21	Nil	—	—	S. Swain
6	05.06.21	1		→ Defn, types of co-ordinate bond ex:- SO_2, NH_4^+	05.06.21	Nil	—	—	S. Swain
			Chapter 3 : Acid base theory : Concept of Arrhenius, Lowry Bronsted and Lewis theory for acid and base with examples (Postulates and limitations only). Neutralization of acid & base. Definition of Salt, Types of salts (Normal, acidic, basic, double, complex and mixed salts, definitions with 2 examples from each).	Taken by Dr. Arundhati Barik					

			Chapter 4: Solutions : Definitions of atomic weight. molecular weight. Equivalent weight. Determination of equivalent weight of Acid. Base and Salt. Modes of expression of the concentrations (Molarity , Normality & Molality) with Simple Problems. pH of solution (definition with simple numericals) Importance of pH in industry (sugar, textile, paper industries only	Taken by Dr Arundhati Barik						
7	12.06.21	1	**Chapter 5 : Electrochemistry :** Definition and types (Strong & weak) of Electrolytes with example. Electrolysis (Principle & process) with example of NaCl (fused and aqueous solution). Faraday's 1st and 2nd law of Electrolysis (Statement, mathematical expression and Simple numerical) Industrial application of : Electrolysis- Electroplating (Zinc only).	→ Definition and types (strong & weak) of electrolytes with example.	12.06.21	Nill	—	—	S.Swain
	17.06.21	1		→ Electrolysis principle & process with example of NaCl (fused state)	17.06.21	Nill	—	—	S.Swain
8	19.06.21	1		→ Electrolysis principle & process with example of NaCl aqueous solution.	19.06.21	Nill	—	—	S.Swain
	24.06.21	1		→ Faraday's 1st law of electro-lysis (statement, mathematical expression and simple numerical	24.06.21	Nill	—	—	S.Swain
9	26.06.21	1		→ Faraday's 2nd law of electro-lysis (statement, mathemati-cal expression and simple numericals.	26.06.21	Nill	—	—	S.Swain
10	01.07.21	1		→ Industrial applicatn of electro-lysis - electroplating (zn only)	01.07.21	Nill	—	—	S.Swain
			Chapter 6 : Corrosion: Definition of Corrosion, Types of Corrosion- Atmospheric Corrosion, Waterline corrosion. Mechanism of rusting of Iron only. Protection from Corrosion by (i) Alloying and (ii) Galvanization.	Taken by Dr Arundhati Barik						

10	03.07.21	1	**Chapter 7 : Metallurgy:** Definition of Mineral, ores , gangue with example. Distinction betweenOres And Minerals. General methods of extraction of metals. i) Ore Dressing ii) Concentration (Gravity separation, magnetic separation, Froth floatation & leaching) iii) Oxidation (Calcinations, Roasting) iv) Reduction (Smelting, Definition & examples of flux, slag) v) Refining of the metal (Electro refining, & Distillation only)	→ Defn of mineral, ores, gangue with example. Distinction betn ores and minerals. → General methods of extractn of metals (i) ore Dressing, (ii) concentratn (gravity sep-aratn, magnetic separatn, Froth flotation & Leaching) → (iii) Oxidation (calcinatn & Roasting) → (iv) reductn (smelting, defn and example of flux, slag) → (v) Refining of the metal (electro refining & Distillation only)	03.07.21	Nill	–	–	S. Swain
11	08.07.21	1			08.07.21	Nill	–	–	S. Swain
	10.07.21	1			10.07.21	Nill	–	–	S. Swain
	15.07.21	1			15.07.21	Nill	–	–	S. Swain
12									
12	17.07.21	1	**Chapter 8 : Alloys:** Definition of alloy. Types of alloys (Ferro, Non Ferro & Amalgam) with example. Composition and uses of Brass, Bronze, Alnico, Duralumin	Defn of alloy. Types of alloys (ferrous, Non-ferrous and Amalgam) with example Composition and uses of Brass, Bronze, Alnico, Duralumin.	17.07.21	Nill	–	–	S. Swain
			Chapter 9 : Hydrocarbons : Saturated and Unsaturated Hydrocarbons (Definition with example) Aliphatic and Aromatic Hydrocarbons (Huckle's rule only). Difference between Aliphatic and aromatic hydrocarbons IUPAC system of nomenclature of Alkane, Alkene, Alkyne, alkyl halide and alcohol (up to 6 carbons) with bond line notation. Uses of some common aromatic compounds (Benzene, Toluene, BHC	Taken by Dr. Arundhati Barik					

			Phenol. Naphthalene. Anthracene and Benzoic acid) in daily life.	Taken by Dr. Arundhati Barik					
13	05.08.21	1	**Chapter 10 : Water Treatment** : Sources of water, Soft water, Hard water, hardness, types of Hardness (temporary or carbonate and permanent or non-carbonate), Removal of hardness by lime soda method (hot lime & cold lime—Principle, process & advantages) , Advantages of Hot lime over cold lime process.	→ Water Treatment : Sources of water, Soft water, Hard water Hardness, types of hardness (temporary or carbonate and permanent or non carbonate) → Removal of hardness by lime soda method (hot lime and cold lime - principle, process and advantages), → Advantages of Hot lime over cold lime process	05.08.21	Nill	—	—	S. Swain
	07.08.21	1			07.08.21	Nill	—	—	S. Swain
14	12.08.21	1	Organic Ion exchange method (principle, process, and regeneration of exhausted resins)	organic Ion exchange method (principle, process, and regeneration of exhausted resins)	12.08.21	Nill	—	—	S. Swain
			Chapter 11 : Lubricants: Definition of lubricant, Types (solid, liquid and semisolid with examples only) and specific uses of lubricants (Graphite. Oils. Grease), Purpose of lubrication	Taken by Dr. Arundhati Barik					

			Chapter 12 : Fuel: Definition and classification of fuel, Definition of calorific value of fuel, Choice of good fuel. Liquid: Diesel, Petrol, and Kerosene --- Composition and uses. Gaseous: Producer gas and Water gas (Composition and uses). Elementary idea about LPG, CNG and coal gas (Composition and uses only	Taken by Dr. Arundhati Barik					
15	22.07.21	1	**Chapter 13 : Polymer**: Definition of Monomer, Polymer, Homo-polymer, Co-polymer and Degree of polymerization. Difference between Thermosetting and Thermoplastic, Composition	→ Defn of Monomer, polymer, Homo-polymer, co-polymer and degree of polymerizatn	22.07.21	Nill	—	—	S. Swain
	24.07.21	1		→ Difference bet'n Thermosetting and Thermoplastic, composition and uses of polythene.	24.07.21	Nill	—	—	S. Swain
16	29.07.21	1	and uses of Polythene, & Poly-Vinyl Chloride and Bakelite.	→ composition and uses of poly vinyl chloride and Bakelite	29.07.21	Nill	—	—	S. Swain
	31.07.21	1	Definition of Elastomer (Rubber). Natural Rubber (it's draw backs). Vulcanisation of Rubber. Advantages of Vulcanised rubber over raw rubber.	→ Defn of Elastomer (Rubber) Natural Rubber (it's draw backs) · vulcanisation of Rubber · Advantages Of vulcanised rubber over raw rubber.	31.07.21	Nill	—	—	S. Swain
			Chapter 14: Chemicals in Agriculture: Pesticides: Insecticides, herbicides, fungicides-Examples and uses.Bio Fertilizers: Definition, examples and uses.	Taken by Dr. Arundhati Barik					

16	14.08.21	1	Revision, previous year quesions & answers discussion MCQ discussion.	Revision, previous yeare quesions & answers discussion, MCQ discussion	14.08.21	Nill	–	–	S. Swain
17	19.08.21	1	Quiz Test, MCQ discussion	Quiz test, MCQ discussion	19.08.21	Nill	–	–	S. Swain
17									

BOOK REFERENCE: 1. Engineering Chemistry by Y.R.Sharma and P. Mitra, Kalyani Publishers
2. Text Book of Intermediate Chemistry Part -1 and Part -2 by Nanda Das, Sharma, Kalyani Publishers

Study Website:
Online Class link:
(If any

19.08.2021
SS. Lect. (Chemistry)