JHARKHAND Rai University
UGC RECOGNISED UNIVERSITY
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Lesson Plan & Tracking

Programe : Diploma in Mining Engineering	**Session : 2022 - 2025**	**Year : 1st**	**Sem: 1st**
Course: Basic Chemistry			
Name of the Faculty: Dr. Sagnika Pradhan	**Commencement Date: 19.09.2022**	**Date of Closure:**	

Lecture No.	Week	Unit	Topics to be Covered	Blended mode			Date	Duration	Tracking of Lectures	Related Course Outcome	Signature of Faculty	Signature of HoD	Remarks (if any)
				ICT Tool/Platform/ LMS	Resources	Activity							
1	1	1	Atomic structure: Definition of atom, Fundamental particles of atom –their mass charge , location, definition of Atomic number										
2		1	Atomic mass no, Isotopes & Isobars,& their distinction with suitable examples, Bohr's theory										
3		1	Definition Shape of the orbital &distinction between orbits And orbitals, Hunds Rule, Filling up the orbital's by Aufbau's (till Atomic no. 30)										
4	2	1	Definition &types of valence (electrovalence& covalent) Octet rule, Duplet rule										
5		1	Formation of electrovalent & covalent compounds										
6		1	NaCl, $CaCl_2$, CO_2, Cl_2, NH_3, C_2H_4, N_2, C_2H_2 Disticion between Electrovalent, covalent compounds, Question answer discussion										

7	3	2	Electrochemistry : Brief study of redox reaction, oxidation potential										
8		2	Electrochemical series for Cation & anion, Electrolysis of CuSO4 solution By using carbon electrode										
9		2	Faraday's first & second law of electrolysis & numerical practice										
10	4	2	Electrochemical cell & batteries ,definition types such as primary & secondary cell & their example										
11		2	Construction, working & Application of electrolysis such as electroplating &electro refining										
12		2	Electrometallurgy & electrotyping in detail with question answer discussion										
13	5	3	Metal l & Alloys: Metal, occurrence of Metal										
14		3	Definition of Metallurgy Mineral, Ore Gangue Flux & Slag, stages of Extraction of metal from it's Ores										
15		3	Extraction of metal from it's Ores in detail such as Fe, Al, Cr, Ni										
16	6	3	Alloys: Definition of alloy, purposes of Making alloy										
17		3	Preparation methods, classification of alloys such as Ferrous & Non Ferrous & their example										
18		3	Question answer discussion										

19	7	4	Non Metallic Materials & Plastics : Basic concept of organic Chemistry										
20		4	Nomenclature of different functional groups & isomerism										
21		4	Definition of Plastic , formation of Plastic by Addition & condensation polymerization.										
22	8	4	Study of Resin, Fillers, Plasticizers, Accelerates, Pigments & their examples										
23		4	Engineering Application of Plastic based on their properties. Rubber natural rubber its processing, Drawbacks of Natural Rubber, vulcanization of rubber with chemical reaction										
24		4	Synthetic rubber, definition & distinction between natural & synthetic rubber										
25	9	4	Thermal insulating material : definition & characteristics of thermal insulator.										
26		4	Preparation, properties & application of thermocol & glass wool										
27		4	Application of Asbestos cork										
28	10		REVISION AND DISCUSSION										
29			REVISION AND DISCUSSION										
30			REVISION AND DISCUSSION										