Lesson Plan

Subject-NON FERROUS METALLURGY (Code):TH.5Name of faculty:Semester: 5th

Class allotted :50/60pBranch :METALLURGY. Session: 2024(w)

Discipline	Semester	From date: 01/07/24To date:26/10/24	Teaching Aid
Subject:	No. of days/ per week: 4p/week	Theory/ Practical –Topics/Lesson	
Week	Date/Period		
1	01/07/2024 TO 06/07/2024	1.0 Discuss the non-ferrous ore reserves in India &non ferrous industries in India. 2.0 Extraction of Metals from Oxide ores.	White board & Marker
2	08/07/2024 TO 13/07/2024	2.1 Extraction of aluminum 2.1.1 Describe the Bayer"s process of alumina production 2.1.2 Explain the fused salt electrolysis of alumina by Hall Heroult process.	White board & Marker
3	15/07/2024 TO 20/07/2024	2.1.3 Discuss anode effect 2.1.4 Explain the method of refining of aluminum 2.1.5 State the uses of aluminum.	White board & Marker
4	22/07/2024 TO 27/07/2024	2.2 Extraction of Tin 2.2.1 Explain the process of tin ore concentration. 2.2.2 Explain the process of concentrate smelting for tin extraction.	White board & Marker
5	29/07/2024 TO 03/08/2024	2.2.3 Describe the process of refining of tin. 2.2.4 State the uses of tin 3.0 **Extraction of Metals from Sulphide Ores.** 3.1 Pyrometallurgical Extraction of Copper. 3.1.1 Describe the process of roasting of copper ore. 3.1.2 Describe the process of matte smelting of copper ore.	White board & Marker
6	05/08/2024 TO 10/08/2024	3.1.3 Explain the process of converting of copper matte. 3.1.4 Explain the refining of copper. 3.1.5 State the uses of copper. 3.2 Pyrometallurgical Extraction of Lead. 3.2.1 Explain roasting and sintering of lead ore.	White board & Marker
7	12/08/2024 TO 17/08/2024	3.2.2 Explain the process of extraction of lead by blast furnace smelter. 3.2.3 Describe in detail the process of refining of base bullion. 3.2.4 State the uses of lead. 3.3 Pyrometallurgical and Hydrometallilrgia1 Method of Extraction of j Zinc.	White board & Marker

		3.3.1 Describe the roasting of zinc ore concentrate. 3.3.2 Explain how zinc is extracted by vertical retot process.	

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8	20/08/2024 TO 24/08/2024	3.3.3 Explain the refining of zinc. 3.3.4 Explain the process of leaching and preparation zinc base solution 3.3.5 Describe the electrolysis of zinc solution 3.3.6 State the uses of zinc	White board & Marker
9	27/08/2024 TO 31/08/2024	3.4 Pyrometallurgical Method of Nickel Extraction. 3.4.1 Explain the roasting of nickel ore. 3.4.2 Explain the method of smelting of nickel concentrate. 3.4.3 Explain the method of refining of nickel 3.4.4 State the uses of nickel	White board & Marker
10	02/09/2024 TO 06/09/2024	4.0 **Extraction of Metals from Halides.** 4.1 Extraction of Titanium 4.1.1 Describe extraction of titanium	White board & Marker
11	09/09/2024 TO 13/09/2024	I.A	White board & Marker
12	14/09/2024 TO 21/09/2024	4.1.2 Explain the type of treatment given to titanium ore. 4.1.3 Explain the process of chlorination and mag	White board & Marker
13	23/09/2024 TO 28/09/2024	. reduction for titanium extraction 5.0 **Extraction of Precious Metals** 5.1 Explain extraction of gold.	White board & Marker
14	30/09/2024 TO 05/10/2024	, 5.2 Explain the process of cyanidation for gold extraction 5.3 State the uses of gold	White board & Marker
15	07/10/2024 TO 09/10/2024	6.0 **Production of Secondary Metals.** Explain the process of production of copper, lead.	White board & Marker

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16	17/10/2024 TO 19/10/2024	, zinc &. aluminum metals from scraps	White board & Marker
17	21/10/2024 TO 26/10/2024	Revision.....	White board & Marker

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Sagarika Palei

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