Lesson Plan

Department of Metallurgical Engineering

UGIE Rourkela

Session- 2020-21

Discipline: **Metallurgical Engineering**

Subject: **Industrial Metallurgy (Th3)**

Semester: **6th**

Total Period allotted: **60**

Period per week: **5**

Name of the Teaching Faculty: **Sumeeta Rani Sarap**

Week	Class No.		Lecture Topics
1	1	Chapter -1: Classification of Welding Processes	Classification of different welding process
	2		-do-
	3		Pressure Welding Processes
	4		Non-Pressure Welding Processes
2	5	Chapter -2: Gas Welding	Different types of flames in gas welding
	6		Gas Welding Equipment's
	7		-do-
	8		Advantages of Gas Welding, Disadvantage of Gas Welding
3	9		Application of Gas Welding
	10	Chapter-3: Arc Welding	Metallic Arc Welding Process
	11		Submerged Arc Welding Process
	12		TIG Welding Process
4	13		MIG Welding Process
	14	Chapter-4: Thermit Welding	Principle of Thermit Welding
	15		Advantages of Thermit Welding, disadvantages of Thermit Welding
	16	Chapter-5:Resistance Welding	Principle of Resistance Welding

5	17		Types of Resistance Welding
	18	Chapter-6: Welding of Steel C.I & Cu. Alloys	Precaution required for welding of steel
	19		Joint design and techniques required for C.I Welding
	20		Describe the welding of copper and its alloys
6	21	Chapter-7: Metallurgy of Welding	Temperature distribution in welding of steel
	22		-do-
	23		Structural changes in weld metal
	24		-do-
7	25		Weldability
	26		Welding defects
	27		-do-
	28		Methods for testing Welding joints
8	29	Chapter-8: Brazing & soldering	Brazing principle and procedure
	30		Various brazing methods
	31		Soldering steps
	32		various types of solders
9	33		Revision
	34		Revision
	35		Important question discussion