

GOVT. POLYTECHNIC MAYURBHANJ LESSON PLAN

Discipline : Metallurgy ENGG.		Semester: 6th Sem		Name of the Teaching Faculty : SUSHREE SUBHASHREE DAS	
Subject : INDUSTRIAL METALLURGY		No. of Days / per week class allotted : 05		Semester From date : 14.02.2023 To Date : 23.05.2023	
MONTH	Week	Day	Unit	Topics	
FEBRUARY	3rd	2nd	UNIT-1	Classification of Welding Processes	
		3rd		Classify different welding process such as pressure welding processes and non pressure welding process	
		2nd	UNIT-2	Gas Welding	
		2nd		Explain different flames, equipments, steps of gas welding	
	4th	3rd	UNIT-3	Advantages, Disadvantages and Application of gas welding	
		2nd		Arc Welding	
		3rd		Describe various arc welding process such as Metallic Arc	
		2nd		Submerged Arc	
	5th	2nd		TIG Welding	
		3rd		MIG Welding	
		2nd	UNIT-4	Thermit Welding	
		3rd		Discuss the principle of Thermit welding	
MARCH	1st	2nd	UNIT-5	Procedure of Thermit welding	
		2nd		Advantages and Disadvantages of Thermit welding	
		3rd		SURPRISE TEST	
	2nd	3rd		DOLO PURNIMA	
		3rd		HOLI	
		2nd		Resistance Welding	
	3rd	2nd	UNIT-6	Explain the principle of resistance welding	
		3rd		Various types of resistance welding	
		2nd		Welding of Steel, C.I. and Cu Alloys	
		3rd		Mention the precaution required for welding of steel	
	4th	2nd	UNIT-7	Explain the joint design required for C.I. welding	
		2nd		Explain the techniques required for C.I. welding	
		3rd		Describe the welding of copper and its alloys	
		2nd		Discuss previous year Questions	
	5th	3rd	UNIT-8	Quiz test	
		2nd		Metallurgy of Welding	
		2nd		Explain the temperature distribution in welding of steel	
		3rd		Discuss the structural changes in weld metal and parent metal after welding	
	2nd	2nd		Define weldability	
		3rd		Mention different welding defects	
		2nd		RAMA NAVAMI	
		2nd		Discuss various methods for testing welding joints	
	3rd	3rd	UNIT-8	Brazing and Soldering	
		2nd		Define brazing and explain its principle and procedure.	
		3rd		Discuss various brazing methods of common ferrous metals	
	3rd	2nd	UNIT-8	Discuss various brazing methods of nonferrous metals	
		2nd		GOOD FRIDAY	
		3rd		CLASS TEST-1	

APRIL	3rd	2nd		CLASS TEST-1
		3rd		Define soldering and explain various types of solders
		2nd		Describe the basic steps of soldering of common metals
		2nd		MAHA VISHUBA SANKRANTI
	4th	3rd	UNIT-9	POWDER METALLURGY
		2nd		Scope of Powder Metallurgy
		3rd		Define powder metallurgy
		2nd		Depict the historical development of powder metallurgy
		2nd		Mention advantages disadvantages and applications of P/M
	5th	3rd	UNIT-10	Briefly describe primary and secondary characteristics of powders
		2nd		INTERNAL
		3rd		INTERNAL
		2nd		Methods of Powder Production
		2nd		Name different methods of powder production
MAY	1ST	3rd	UNIT-11	Describe the mechanical, physical methods
		2nd		Describe the chemical and electro chemical methods
		3rd		Compaction of Metal Powders
		2nd		Give the significance and different methods of conditioning
		2nd		BUDDHA PURNIMA
	2nd	3rd	UNIT-12	Explain different die-compaction techniques
		2nd		Describe isostatic pressing with advantages, limitation applications
		3rd		Give brief outline on continuous compaction
		2nd		Sintering of Metal Powder
	3rd	2nd		Define sintering and Explain its various stages
		3rd		Explain briefly mechanism of sintering process
		2nd		Explain the process variables and furnaces used for sintering
		3rd		Give a note on liquid phase sintering
		2nd	UNIT-13	Flow Sheets of Production
	4th	2nd		SABITRI AMABASYA
		3rd		Give Flow Sheets for the Production of a. Porous bearing
		2nd		b. Sintered friction materials c. Sintered carbides d. Magnetic Materials
		3rd		e. Cermets f. Dispersion strengthened materials
		2nd		Previous year Question discussion
		2nd		CLASS TEST-2