

Discipline: Metallurgical Engineering	Semester: 3rdSemester	Name of the Teaching Faculty: Er. Tushar Das Pattanayak
Subject: Ferrous Metallurgy-1(TH-04)	No of days /week class allotted: 04	Semester from Date: 05-10-2021 to 28-01-2022

Month	week	Class Day	Theory topics
Oct	2nd	1 st	Brief description about BF, Explain about BF Process & Explain Raw materials for BF
		2 nd	Explain Iron Ore ,Flux
		3 rd	Description about Coke
		4 th	Explain Deposits of raw material
	3rd	1 st	Explain Types of ore and characteristics
		2 nd	Explain Evaluation of iron ores
		3 rd	Explain Metallurgical Coal
		4 th	Explain Coke and Coal difference
	4th	1 st	Explain Evaluation of flux
		2 nd	Explain Quality of burden
		3 rd	Explain Agglomeration process
		4 th	Explain Sinter and pellets
	5th	1 st	Explain Function of coke
		2 nd	Explain Quality requirement of coke
		3 rd	Explain Coke preparation
		4 th	Explain Auxiliary fuel and fuel injection
Nov	1st	1 st	Explain Different process in BF
	2nd	1 st	Explain Blowing in , drying
		2 nd	Explain Filling,blowing out, banking in
		3 rd	Explain Blowing down ,tapping, fanning
	3rd	1 st	Explain Back draughting , disposal of slag
		2 nd	Explain Utilization of slag
		3 rd	Explain BF refractories
		4 th	Explain Stack ,hearth ,bosh
	4th	1 st	Explain BF Cooling , tap hole
		2 nd	Explain Tuyere, , cast house
		3 rd	Explain Top charging system
		4 th	Explain BF Gas cleaning
	5th	1 st	Explain BF stove
		2 nd	Explain Blowers,boilers,pumps
Dec	1st	1 st	Explain BF Irregularities
	3rd	1 st	Explain Hanging ,scaffolding
		2 nd	Explain chilled hearth
		3 rd	Explain Pillaring
		4 th	Explain Chocking of gas off take
	4th	1 st	Explain Flooding
		2 nd	Explain Leaking tuyeres tap holes and coolers
		3 rd	Explain channeling
		4 th	Explain Slip and breakout
	5th	1 st	Explain Remedies of irregularities
		2 nd	Explain Remedies of irregularities
		3 rd	Explain Remedies of irregularities
		4 th	Explain Remedies of irregularities
	1st	1 st	Explain BF profile
		2 nd	Explain BF profile
		3 rd	Explain Thermal profile
	3rd	1 st	Explain Chemical profile

Jan		2 nd	Explain Reaction in tuyere ,stack
		3 rd	Explain Reaction in bosh, hearth
		4 th	Explain Efficiency of BF
	2nd	1 st	Explain Direct and indirect reduction
		2 nd	Explain S and Si reaction
		3 rd	Explain Burden calculation
		4 th	Explain Modern development of BF
	3rd	1 st	Explain Bell less charging
		2 nd	Explain High top pressure
		3 rd	Explain Humidification of blast
		4 th	Explain External removal of S and Si
	4th	1st	Brief description about BF
		2 nd	Explain about BF Process