

Subject Code:2142107

Date:25/05/2019

Subject Name: Iron Making

Time:02:30 PM TO 05:00 PM

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		MARKS
Q.1	(a) Write note on pulverized coal injection.	03
	(b) What are different alternative iron making processes?	04
	(c) Discuss briefly the blast furnace irregularities and suggest the remedies.	07
Q.2	(a) Discuss objectives and variables of sintering process	03
	(b) Explain "Dwight-Lloyd" Sintering Machine	04
	(c) What is Pelletization? Explain theory of bonding and mechanism of ball formation in pelletization	07
OR		
	(c) Write short notes on the following: (i) RAFT (ii) Desiliconization	07
Q.3	(a) Explain the importance of maintaining the basicity during refining of Iron ore.	03
	(b) What are the limitations of conventional blast furnace? Suggest the remedies to overcome it.	04
	(c) What is the role of coke and limestone in iron making? Explain	07
OR		
Q.3	(a) What do you mean by desulphurizing index?	03
	(b) State the requirements for desulphurization of hot metal	04
	(c) Explain the factors affecting the charge distribution in blast furnace.	07
Q.4	(a) Discuss objectives and variables of sintering process.	03
	(b) Draw & List only operational steps of blast furnace.	04
	(c) Discuss use of high temperature blast and its effect on coke rate and metal-impurity distribution in slag and metal	07
OR		
Q.4	(a) Explain the Midrex process	03
	(b) Describe the evaluation of iron ore in brief.	04
	(c) Discuss the reaction occurs in different zone of blast furnace.	07
Q.5	(a) Write note on reducibility test.	03
	(b) Explain the mecum test in brief.	04
	(c) Explain theory of bonding and mechanism of ball formation in palletisation	07
OR		
Q.5	(a) Write short note on desiliconization.	03
	(b) How oxygen injection in blast furnace improves the operation? Explain	04
	(c) What is Slag? How it is formed? Explain its importance in Iron making Process.	07
