

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-V • EXAMINATION – WINTER 2013

Subject Code: 152101**Date: 27-11-2013****Subject Name: Iron Making****Time: 10.30 am - 01.00 pm****Total Marks: 70****Instructions:**

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

Q.1 (a) Explain terms ore, slag and flux. List raw materials for Iron making and give their composition and locations in India. **07**

(b) Draw neat sketch of blast furnace and label it properly. **07**

Q.2 (a) What is sintering? Briefly discuss sintering process. **07**

(b) Write detailed note on Palletization. **07**

OR

(b) Discuss different charging systems in blast furnace. **07**

Q.3 (a) What is basicity? Discuss importance of maintaining basicity in iron making. **07**

(b) What are different refractories used in blast furnace? Discuss them. **07**

OR

Q.3 (a) Write note on Blast furnace gas, properties, cleaning and utilization. **07**

(b) Write short note on Iron and Steel industries in India. **07**

Q.4 (a) What are the different reactions occurring in blast furnace in different zones? **07**

(b) Discuss RAFT briefly and 'fuel injection' as method of modification of blast furnace iron making. **07**

OR

Q.4 (a) Discuss oxygen injection and high temperature blast as method of modification of blast furnace iron making. **07**

(b) What are irregularities in blast furnace operations? Briefly discuss them with remedies. **07**

Q.5 (a) What are different alternative iron making processes? Explain mini blast furnace process. **07**

(b) Discuss operational steps of blast furnace. **07**

OR

Q.5 (a) Write short note on Midrex process. **07**

(b) Write short note on history of iron making. **07**
