

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V • EXAMINATION – SUMMER 2013****Subject Code: 152101****Date: 14-05-2013****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) Draw a labeled sketch of Blast furnace and list the functions of important parts. **07**

(b) Discuss about Indian iron ores. **07**

Q.2 (a) Discuss about burden quality. **07**

(b) What is the role of coke and limestone in iron making? Explain. **07**

OR

(b) Explain the factors affecting sinter quality. **07**

Q.3 (a) Discuss blast furnace reactions in- stack, tuyere, bosh and hearth. **07**

(b) List the factors affecting charge distribution in blast furnace. Discuss any two. **07**

OR

Q.3 (a) Write short notes on the following: **07**

(i) RAFT (ii) Desiliconization.

(b) How oxygen injection in blast furnace improves the operation? Explain. **07**

Q.4 (a) Discuss coal based and gas based DRI production. **07**

(b) What is blast furnace slag? Discuss about formation of different types of slag in blast furnace. **07**

OR

Q.4 (a) With a labeled diagram explain disc palletizer. **07**

(b) Discuss briefly blast furnace irregularities and their remedial measures. **07**

Q.5 (a) What are the limitations of conventional blast furnace? Justify the use of Mini blast furnace to overcome them. **07**

(b) Give a brief history of iron making. List integrated steel plants of India. **07**

OR

Q.5 (a) Discuss Dwight-Lloyd sintering machine highlighting its important parts. **07**

(b) State the requirements for desulphurization of hot metal. What is desulphurizing index? **07**
