Seat No.:	Enrolment No.

Subject code: 152101

GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER- V • EXAMINATION – WINTER 2016

Date: 30/11/2016

Subject Name: Iron Making Time: 10:30AM – 01:00PM **Total Marks: 70 Instructions:** 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. 0.1 (a) Draw a labelled sketch of Blast furnace and list the functions of 04+03importantparts. **(b)** Give a brief history of iron making. List integrated steel plants of India. 04+03**Q.2** Discuss about burden quality on productivity of Blast furnace. **07** (a) List the factors affecting charge distribution in blast furnace. **(b)** 07 Discuss any two OR What is the role of coke and limestone in iron making? Explain. **07 (b)** Why Palletization? With a labelled diagram explain disc palletizer **Q.3** 04+03(a) Discuss Dwight-Lloyd sintering machine highlighting its important 03+04**(b)** parts. OR Write Short Notes of the following: 03 +0.3 (a) (1) Bell less charging system (2) Basicity in iron making (3) 02 +Pulverized coal injection 02 Discuss blast furnace reactions in- stack, tuyere, bosh and hearth **(b)** 07 Write note on Blast furnace gas, properties, cleaning and utilization 0.4 07 (a) **(b)** What is blast furnace slag? Discuss about formation of different types 03+04of slag in blast furnace. OR What are different blast furnace irregularities and remedial measures? **Q.4** (a) **07 (b)** Discuss RAFT briefly and 'fuel injection' as method of **07** modification of blast furnace iron making 0.5 Discuss coal based and gas based DRI production. (a) 07 What is humidification of blast in iron making? Discuss its 04 + 03advantages. OR Write short note on the following. 0.5 (a) (a) Direct Reduction and Indirect Reduction 07 (b) Salient features of Mini Blast furnace **07**
