Seat No.:	Enrolment No.
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GUJARAT TECHNOLOGICAL UNIVERSITY PE - SEMESTED-V (NEW) - EXAMINATION - SUMMER 2016

Sul	oject	Name:Steel Making	te:13/05/2016
			al Marks: 70
Inst	ructio		
	2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a)	(i) Write names of the processes in which oxygen, oxygen + lime & Oxygen + hydro carbon are used.	04
	(b)	(ii) Name various Integrated and Mini Steel Plants in India With the help of schematic show different routes of steelmaking.	03 07
Q.2	(a)	Draw and label vertical section through a LD steelmaking shop showing the relative locations of the main equipment	07
	(b)	Explain: Reaction at slag metal interface. OR	07
	(b)	Describe a double slag practice in Electric arc furnace steel making	g. 07
Q.3	(a)	Explain the Oxygen Lance Construction & advantages and disadvantages of single & multi nozzle lance	04+03
	(b)	What is DRI/Sponge Iron? Discuss its characteristics	03+04
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Q.3	(a)	Explain in brief, the effect of Sulphur, Phosphorous and gase Steel.	
	(b)	Explain advantages and drawbacks of "OBM" process of steel mal	king 07
Q.4	(a)	Describe "ASEA-SKF" process of steel treatment	07
	(b)	How the Nitrogen problem in stainless steel making is dealt with? OR	07
Q.4	(a)	(i) List the benefits of Secondary Steel Making and Explain bri Secondary steel making by AOD process.	04
		(ii) Draw and explain- Ladle Furnace Operation	03
~ -	(b)	Discuss the main requirements of "Deoxidizer" in steel making. Explain the purpose and mechanism of its working	04+03
Q.5	(a)	Explain the following with neat diagram. (i) Ladle Injection Metallurgy (ii) D. H. Janasser	04
	(b)	(ii) R-H degassers Explain the salient points of VAR and ESR processes OR	03 07
Q.5	(a)	What is the origin & types of inclusion & What are the measures to control inclusions?	03+04
	(b)	Explain Continuous casting machines with its various units & products	07