Seat No.:	Enrolment No.

Subject Code: 143502

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER- IV EXAMINATION -SUMMER 2015

Date: 03/06/2015

	Tim	ject Name: Chemical Engineering Operations e: 10.30am-01.00pm uctions: 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks.	
Q.1	(a) (b)	Write a short note on differential distillation. Explain solubility curves in a crystallization process.	07 07
Q.2	(a)	List out different parameters affecting efficiency of a roll crusher. A set of crushing rolls of 60 Cm diameter takes a feed of size 5 Cm and reduced it to product of size 10 mm. Determine the value of coefficient of friction of the rolls.	07
	(b)	Draw a neat diagram and explain construction and working of a tunnel drier.	07
	a >	OR	
	(b)	Write a note on ribbon blender.	07
Q.3	(a)	With neat diagram explain construction and working of cyclone separator.	07
Q.S	(b)	Discuss constant pressure vapour liquid equilibrium (VLE) for a binary system.	07
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Ω2	(a)	OR State seven applications of liquid liquid extraction	07
Q.3	, ,	State seven applications of liquid liquid extraction.	
	(b)	Derive a material balance equation for counter current absorber.	07
Q.4	(a) (b)	Draw a neat diagram and explain construction, working and applications of grizzlies. Write a short note on electrodialysis.	07 07
		OR	
Q.4	(a)	What is the role of solvent in absorption? Explain important criteria for solvent selection in absorption operation.	07
	(b)	State seven difference between physical adsorption and chemisorptions.	07
Q.5	(a)	Draw labeled diagram of plate and frame filter and explain its construction and working.	07
	(b)	Answer the following:	
	(1) (2)	Define: (i) drying (ii) adsorption. State five applications of reverse osmosis.	02 05
	(4)		03
Q.5	(a)	OR Write a short note on batch centrifuge.	07
~.	(b)	Write a short note on banbury mixer.	07
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