Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-IV EXAMINATION - SUMMER 2016 Subject Code:143502

Date:06/06/2016

	•	ect Name:Chemical Engineering Operations :10:30 AM to 01:00 PM Total Marks: 70 ections:	
		 Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks. 	
Q.1	(a) (b)	Write a short note on ribbon blender Write a short note on flash distillation.	07 07
Q.2	(a) (b)	Draw Rate of Drying curve and explain the terms constant rate period, falling rate period and critical moisture content. Write short note on batch distillation.	07 07
	(0)		07
	(b)	OR Explain step-wise procedure to calculate number of theoretical plates in a binary distillation usingMcCabe-Thiele method	07
Q.3	(a) (b)	Explain with the neat sketch, the principle and working of spray dryer. Discuss the construction and operation of ball mill. OR	07 07
Q.3	(a)	Why solution must be supersaturated in crystallization operation? What are the methods to achieve supersaturation?	07
	(b)	Describe construction and working of plate and frame filter press	07
Q.4	(a)	What is the role of solvent in absorption? Explain important criteria for solvent selection in absorption operation	07
	(b)	Enlist various industrial screens and with neat diagram explain construction, working and applications of any one in detail OR	07
Q.4	(a) (b)	Define adsorption. Differentiate between physical adsorption and chemisorption Draw a neat diagram and explain construction, working and applications of grizzlies.	07 07
Q.5	(a) (b)	Derive an equation to calculate time required for drying. Explain principle, construction and working of Rotary Drum filter OR	07 07
Q.5	(a) (b)	Write a short note on banbury mixer What is micro filtration? Discuss its industrial applications.	07 07
