Seat No.: Enrolment No.
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## GUJARAT TECHNOLOGICAL UNIVERSITY

DIPLOMA ENGINEERING - SEMESTER-V • EXAMINATION – SUMMER 2013		
Subject Code: 350502	Date: 14-05-2013	
Subject Name: Mass Transfer II		
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. 4. English version is considered to be Authentic.		
Q:1 (a) Explain vapor- Liquid equilibria of distillation.	07	
(b) Define distillation and write six industrial application of	of it. 07	
Q:2 (a) write types of cooling tower and state their principle.	07	
(b) Explain psychometric chart for air-water system.  OR	07	
(b) Define adsorption and explain its various types.	07	
Q:3(a) Explain flash vaporization with material balance. (b) Explain nucleation in detail. OR	07 07	
Q:3 (a) Derive equation of constant rate period and falling rate period (b) Discuss draft tube baffle crystallizer with figure.	riod. 07 07	
Q:4 (a) Classify drying equipments and explain Tray dryer. (b) Define crystallization and explain supersaturation. OR	07 07	
<ul><li>Q:4 (a) Explain characteristics of adsorbents.</li><li>(b) Differentiate azeotropic distillation vs Extractive distillation</li></ul>	on. 07	
Q:5 (a) Explain various types of packing and packing arrangeme (b) Explain packed tower with its operating problem.  OR	nt. 07	
Q:5 (a) Explain ion-exchange with principles and applications. (b) Discuss Meir's theory of crystallization.	07 07	