

SARDAR PATEL UNIVERSITY T.Y. B.Sc. Industrial Chemistry (Semester – VIth) EXAMINATION 17th March 2018, Saturday Course No: US06CICH06 (Mass Transfer Operations)

Total Marks: 25 Times: 11:00 to 12:30 P.M. Q.1: Answer the given multiple choice questions. 1. In case of rectification the portion of condensed liquid that is returned to the column is known as a. Feed c. Product b. Reflux d. None of these 2. The function of flight design in the inside wall of rotary dryer is to....... a. Lift the solids c. Break the lumps of solids b. Move in forward direction d. None of these 3. In Krystal crystallizer supersaturation is achieved by...... a. Evaporation c. Cooling b. Adiabatic Evaporation d. None of these Q.2: Attempt any two: [4] 1. List different conditions of feed. 2. Give the classification of crystallizers. 3. Give the comparison of Evaporation & Drying. Q.3: Answer the following questions: [6] Derive Rayleigh equation for simple distillation. Derive material and energy balance equation for distillation column. Q.4: Answer the following questions: [6] Explain construction and working of Swenson-walker crystallizer with a neat sketch. Explain construction and working of Vacuum crystallizer with a neat sketch. Q.5: Answer the following questions: [6] Write a note on Spray dryer with a neat sketch. Write a note on Rotary dryer with a neat sketch.