

**B.Sc. Sem. – I (Industrial Chemistry) Examination**  
**MAY-2017**  
**Paper – ICHCC – 101: Unit operations of Chemical Engineering – I**  
**Paper Code: 20459**

Time: 2.30 Hours

Maximum Marks: 70

- Que.1 (A) What is filtration? Classify it with example. [07]  
(B) Write a note on plate and frame filter press. [07]
- OR
- Que.1 (A) What do you mean by filter aid. Explain it with example. [07]  
(B) Write a note on centrifuge. [07]
- Que.2 (A) What is mixing? Explain tumbling mixture with neat sketch. [07]  
(B) Explain typical agitation system with neat sketch for liquid-liquid mixing. [07]
- OR
- Que.2 (A) Write a note on ribbon blander with its working. [07]  
(B) What is turbine? Draw sketches of different types of turbine. [07]
- Que.3 (A) Write a short note on formation of crystal. [07]  
(B) Explain agitated tank crystallizer with figure. [07]
- OR
- Que.3 (A) What is distillation? Explain simple distillation in detail. [07]  
(B) Write a note on draft tube crystallizer in detail. [07]
- Que.4 (A) Why drying is necessary in chemical industry? Explain with example. [07]  
(B) Write a note on tray dryer with neat sketch. [07]
- OR
- Que.4 (A) Define evaporation. Write a note on wiped film evaporator. [07]  
(B) Write a note on spray dryer with neat sketch. [07]
- Que.5 (A) What is absorption? State and explain selecting criteria for solvent in gas absorption. [07]  
(B) Explain standard mechanical agitated vessel for absorption in detail. [07]
- OR
- Que.5 (A) Discuss difference between distillation and extraction. [07]  
(B) Write a short note on RDC tower. [07]