Enrollment No:____

PARUL UNIVERSITY FACULTY OF PHARMACY B.Pharm Winter 2018-19 Examination

Semester: 1 Date: 11/12/2018 Time: 2.00 pm to 5.00 pm **Subject Code: 08101102** Subject Name: Unit Operation-I **Total Marks: 75 Instructions:** 1. Figures to the right indicate full marks. 2. Make suitable assumptions wherever necessary. Q.1 Essay type Questions. (Any 2 out of 3) (10 marks each) (20)1. Explain construction, principle, working, advantages, disadvantages an application of fluid energy mill with help of diagram. 2. Enlist equipments used for mixing. Explain principle construction, application, advantages and disadvantages of planetary mixer with diagram. 3. Enlist different types of extraction process and explain any two of them in detail. Q.2 Short Essay type Questions. (Any 7 out of 9) (5 marks each) (35)1. Enlist different industrial hazards . Explain fire hazards in details. 2. Discuss the mier's super saturation theory with its limitation. 3. Write a note on waste water treatment in pharmaceutical industry. 4. Write a note on factor affecting size reduction. 5. Explain sieve shaker with diagram in detail. 6. Classify crystallizers. Explain in detail Swenson-walker crystallizer. 7. Write a note on soxhlet extractor with diagram. 8. Write construction, working and limitation of ball mill. 9. Write a note on supercritical fluid extraction. Q.3 Answer in short. (2 marks each) (20)1. Define terms: 1. Positive mixture 2. Negative mixture 2. Define : Size reduction. Enlist method of size reduction. 3. Define: 1. Crystallization 2. Crystal lattice. 4. What is importance of speed on size reduction using a ball mill? 5. Comment: fluid energy mill is suitable for grinding thermolabile materials. 6. Explain compaction and compression. 7. Explain methods of mixing of powders.

- 8. Classification of size separation methods.
- 9. Write the objectives of mixing.
- 10. Enlist solvent use in extraction. Explain any one in detail.