

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM - SEMESTER- 1 EXAMINATION – WINTER -2019

Subject Code: 2210001**Date: 27-12-2019****Subject Name: Unit Operation-I****Time: 10:30 AM TO 01:30 PM****Total Marks: 80****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Explain mechanism involved in size reduction process. **06**
(b) Explain factors affecting selection of methods of size reduction process **05**
(c) Write a note on Ball mill. **05**
- Q.2** (a) Draw neat labelled diagram of fluid energy mill and also write its advantages, disadvantages applications. **06**
(b) Write a note on cyclone separator. **05**
(c) Write a note on sedimentation tank used in size separation. **05**
- Q.3** (a) Give standards of sieves as per pharmacopeia. **06**
(b) Explain types of mixtures. **05**
(c) Write a note on planetary mixer. **05**
- Q.4** (a) Explain theory of mixing process. **06**
(b) Write a note on propeller mixer. **05**
(c) Explain Mier's supersaturation curve theory in detail. **05**
- Q.5** (a) Explain various steps involved in crystallization process **06**
(b) Discuss the factors affecting caking of crystal. **05**
(c) Write applications of crystallization process. **05**
- Q. 6** (a) Explain theory of extraction process. **06**
(b) Write a note on various solvents used in extraction process. **05**
(c) Discuss Soxhlet extractor for continuous hot extraction. **05**
- Q.7** (a) Enlist the types of extraction process and explain any two in brief. **06**
(b) Discuss prevention of fire hazards. **05**
(c) Define (1) Hazard (2) Accident (3) Process (4) Control (5) Instrumentation **05**
