

GUJARAT TECHNOLOGICAL UNIVERSITY**B. Pharm. - SEMESTER-II • EXAMINATION – SUMMER-2016****Subject Code: 220002****Date: 04/06/2016****Subject Name: Pharmaceutics - II****Time: 10:30 am – 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.**

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| Q.1 | (a) | Enumerate various mills used for size reduction. Explain construction and working of ball mill. | 06 |
| | (b) | Write a short note on colloid mill. | 05 |
| | (c) | Enlist mechanisms of size reduction. Describe briefly the factors influencing size reduction. | 05 |
| Q.2 | (a) | Enlist mixers for powders and semisolids. Explain principle and working of planetary motion mixer with neat and labeled diagram. | 06 |
| | (b) | Classify methods for size separation. Describe cyclone separator in detail. | 05 |
| | (c) | Describe standards of sieve as per IP. | 05 |
| Q.3 | (a) | Describe Mier's super-saturation theory of crystallization along with limitations. | 06 |
| | (b) | Explain construction, working and advantages of Swenson Walker crystallizer. | 05 |
| | (c) | Discuss the factors affecting formation and growth of crystals. | 05 |
| Q.4 | (a) | Enlist different extraction processes. Describe sohxlet extractor for continuous extraction. | 06 |
| | (b) | Describe turbine and propeller mixers. | 05 |
| | (c) | Discuss the importance and mechanisms of solid-solid mixing. | 05 |
| Q.5 | (a) | Define the following: Neutral mixing, Nucleation, Crystal habit, Crystal lattice, Marc, Menstrum. | 06 |
| | (b) | Differentiate between compaction and consolidation. | 05 |
| | (c) | Write short note on percolation. | 05 |
| Q. 6 | (a) | Describe Hecker and Kawakita equations with respect to compression along with the uses. | 06 |
| | (b) | Explain direct compression technology for tablet manufacturing. | 05 |
| | (c) | Classify temperature and pressure measuring elements on the basis of principle. | 05 |
| Q.7 | (a) | Describe key elements for automation of process control systems. | 06 |
| | (b) | Enlist the types of industrial hazards encountered in operation of pharmaceutical plant. Write short note on fire extinguishers. | 05 |
| | (c) | Explain in brief the waste water treatment in pharmaceutical plant. | 05 |
