Seat No.: _____ Enrolment No. _____

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.**

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. Descried 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**

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