

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharmacy Semester-II Examination June 2011

Pharmaceutics-II (220002)

Date: 21/06/11

Max. Marks: 80

Time: 10:30am to 1:30pm

Instructions:

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

- Q.1.** (a) Comment: Ball mill must be operated at critical speed. 02
(b) Describe different mechanisms of size reduction. 04
(c) Describe micronizer with working diagram. 05
(d) Describe energy requirement in size reduction process. 05
- Q.2.** (a) Comment: Cutter mill is suitable for grinding vegetable drugs. 02
(b) Explain angle of repose, Carr's Index and Hausner ratio with significance. 04
(c) Describe cyclone separator. 05
(d) Explain sedimentation. Describe sedimentation tank. 05
- Q.3.** (a) Comment: Propeller mixers are suitable for emulsification. 02
(b) Describe the factors affecting liquid mixing. 04
(c) Enlist mixers for semisolids. Describe sigma-blade mixer. 05
(d) Classify powder mixers. Describe tumbling mixers. 05
- Q.4.** (a) Explain type of polymorphs with examples 02
(b) What is crystal growth? Describe factors affecting crystal growth. 04
(c) Explain supersaturation. Describe methods to achieve supersaturation. 05
(d) Describe crystal cooling crystallizer with diagram. 05
- Q.5.** (a) Explain Marc and Manstrum. 02
(b) Describe percolation method for extraction. 04
(c) Describe methods of solvent recovery in extraction process. 05
(d) Define crystal lattice. Describe different type of crystals. 05
- Q.6.** (a) Explain compaction and compression. 02
(b) Discuss the phases of compression for tableting. 04
(c) Describe Heckel and Kawakita's equation w.r.t. compression process. 05
(d) Describe advantages and limitations of Direct Compression technology. 05
- Q.7.** (a) Describe the key elements for automated process control system. 04
(b) Describe automation for pressure control. 04
(c) Write brief note on water sprinklers. 04
(d) Write in brief about waste water treatment in pharmaceutical industry 04
