

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Ph SEM-II Examination- Dec.-2011

Subject code: 220002

Date: 15/12/2011

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) What are the sources of Fire hazard can occur in a Pharma Plant? What precautions should be taken to prevent these types of hazards? | 06 |
| | (b) Describe methods for waste water treatment in pharmaceutical industry. | 05 |
| | (c) Describe briefly the different devices available for measurement of temperature. | 05 |
| Q.2 | (a) Explain the theory of Compaction & compression. | 06 |
| | (b) Describe Direct Compression technology for tablet manufacturing. | 05 |
| | (c) Describe the Kawakita and Heckle equations in regard to compression. | 05 |
| Q.3 | (a) Discuss properties of material which affect size reduction process. | 06 |
| | (b) Explain in detail the construction, working, merits and demerits of mill used for thermolabile material with labeled diagram. | 05 |
| | (c) Short note on Colloidal mill. | 05 |
| Q.4 | (a) Define: Size separation. Give objectives & methods involved in size separation. | 06 |
| | (b) Describe Principle, construction and working of cyclone separator. | 05 |
| | (c) Discuss Carr's index, Hausner's ratio, Angle of repose with its significance. | 05 |
| Q.5 | (a) Describe the Miers super saturation theory of crystallization. What are the limitations of the Miers theory? | 06 |
| | (b) Explain the construction and working of Swenson Walker crystallizer. | 05 |
| | (c) Define crystallization. Discuss caking in crystals and its remedy. | 05 |
| Q. 6 | (a) Enumerate types of extraction processes. With a neat and labeled diagram describe the Soxhlet extractor for continuous hot extraction. | 06 |
| | (b) Enumerate solvents used for extraction. Describe the properties of water and ethanol as solvents for extraction. | 05 |
| | (c) Write short note on Process of percolation. | 05 |
| Q.7 | (a) Give mechanisms of solid- solid and liquid – liquid mixing. | 06 |
| | (b) Classify mixers for liquids. Describe Propeller mixer. | 05 |
| | (c) Explain terms with examples, positive, negative and neutral mixture. | 05 |
