

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**

**B. Pharmacy Sem-II Remedial Examination September 2009**

**Subject code: 220002**

**Subject Name: Pharmaceutics –II**

**Date: 07/09/2009**

**Time: 02:30pm-5:30pm**

**Total Marks: 80**

**Instructions:**

- 1. Write seat no. and enrolment no. at given location on question paper.**
- 2. Attempt any five questions.**
- 3. Make suitable assumptions wherever necessary.**
- 4. Figures to the right indicate full marks.**

**Q.1**

- Define extraction. Describe various types of extraction. What is the importance of liquid-liquid extraction in pharmaceutical industry? **08**
- With a neat and labeled diagram describe the Soxhlet extractor for continuous hot extraction. **04**
- Write short notes (**any one**) **04**  
1) Process of percolation 2) Dispersed solid leaching

**Q.2**

- How can we control crystal size? Explain the construction and working of Swenson Walker crystallizer. **08**
- Discuss caking in crystals and its remedy. **04**
- What is the importance of crystallization in pharmaceutical industry? **04**

**Q.3**

- Discuss the factors affecting size reduction. Explain with diagram construction, working, advantages, limitations and uses of Fluid Energy Mill. **08**
- Discuss the energy requirement in size reduction. **04**
- A certain crusher accept a feed of rock having a volume - surface mean diameter of 0.75 inch and discharge a product of a volume - surface mean diameter of 0.20 inch. The power required to crush 24 tons per hour is 9.3 hp. What should be the power consumption if the capacity is reduced to 20 tons per hour and volume - surface mean diameter of 0.15 inch? Mechanical efficiency remains unchanged. **04**

**Q.4**

- Enumerate various mixers for powder and semisolid mixing. With a neat and labelled diagram explain the principle and working of Planatory Mixer. **08**
- Discuss the importance of solid-solid mixing in pharmaceutical field. **04**
- Explain the terms: Positive Mixing, Negative Mixing and Neutral Mixing giving suitable examples. **04**

**Q.5**

- Why size separation is required? What are the methods involved in size separation? Discuss the principle and operation of Cyclone Separator. **08**
- Describe principle and working of Multistage Elutriator. **04**

- Q.6**
- (c) Differentiate Elutriation from Sedimentation. **04**
  - (a) With suitable examples describe application of automatic process control in Pharmaceutical industries. **06**
  - (b) Describe briefly the different devices available for measurement of temperature and pressure **06**
  - (c) Discuss role of lubricants in manufacture of Compressed Tablets. **04**
- Q.7**
- (a) What types of Electrical hazards can occur in a Pharma Plant? What precautions should be taken to prevent these types of hazards? **06**
  - (b) Discuss various powder properties that influence its compaction behavior. **04**
  - (c) Write short notes : (**any two**) **06**  
(1) Colloidal Mill (2) Critical speed of Ball Mill (3) Miers theory of super saturation

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