

Seat No.:-----

Enrolment No.:-----

UKA TARSADIA UNIVERSITY
Maliba Pharmacy College
B.Pharm 2nd Semester Internal Examination 2012
030020201- Unit Operation

Time: 1:30 to 4:30 p.m.

Max. Marks: **70**

Date: 16/04/2012

Instructions:

- Question no. **1 is compulsory.**
- From Q.2 to Q.7 attempt any **four** questions.
- Make suitable assumption whenever necessary.
- Figures to the right indicate full marks.

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|-------------|---|-----------|
| Q.1 | (a) Answer the following: (any six)
1 Define crystallization.
2 Enumerate different type of crystals.
3 Write the name of foaming agent in foam extinguisher.
4 Write any two halogenated hydrocarbons.
5 Fluid energy mill works on the principle of _____ and _____.
6 Define mixing.
7 What is the meaning of coarse powder as per British pharmacopoeia? | 06 |
| | (b) Describe in brief: (any four)
1 As humidity increases, powder flow property improves. justify
2 Explain the following: Cohesion force and Adhesion force
3 Write a note on materials used to prepare sieve.
4 Describe physical properties which influence solid mixing process.
5 Write down applications of size separation process in pharmaceutical industry.
6 Comment: When vegetable drug is crushed, nothing must be rejected.
7 Comment: Speed of ball mill is a very critical parameter during size reduction. | 08 |
| Q.2 | (a) Write the factor affecting selection of material for plant construction. | 04 |
| | (b) Define corrosion. Give classification of corrosion, explain cavitation corrosion. | 05 |
| | (c) Write the prevention of corrosion. | 05 |
| Q.3 | (a) Write the applications of crystallization in pharmacy. | 04 |
| | (b) Explain the mechanism of crystallization. | 05 |
| | (c) Draw a neat labeled diagram of Swenson walker crystallizer. Discuss the construction, working, advantages and disadvantages. | 05 |
| Q.4 | (a) Write down methods used to determine powder flow property. | 04 |
| | (b) Write the prevention of fire hazards. | 05 |
| | (c) Write the prevention of mechanical hazards. | 05 |
| Q.5 | (a) Write down objectives of mixing process in pharmaceutical industry. | 04 |
| | (b) Describe factors affecting powder flow property. | 05 |
| | (c) Describe mechanisms of size reduction and classify various mills based on mechanism of size reduction. | 05 |
| Q. 6 | (a) Enlist factors affecting size reduction process. Explain any three of them in detail. | 04 |
| | (b) Explain types of mixtures with suitable example. | 05 |
| | (c) Describe standards of sieve. | 05 |
| Q.7 | (a) Write a short note on hammer mill. | 04 |
| | (b) Explain equipments used for wet sieving method. | 05 |
| | (c) Differentiate between propeller mixer and turbine mixer. | 05 |