

Seat No.:-----

Enrolment No.:-----

UKA TARSADIA UNIVERSITY

Maliba Pharmacy College

B. Pharm 2nd Semester Internal Examination-II, April 2013

030020201- Unit Operation

Time: 10:00 A.M. to 1:00 P.M.

Max. Marks: **70**

Date: 29/04/2013

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.

- Q.1 (a) Answer the following: (any six) 06**
- 1 Comment: Particle density can affect the flowability of powder.
 - 2 Define: Baffle
 - 3 Explain the term: Mixing index
 - 4 Define: Automatic process control
 - 5 State Kick's law for size reduction.
 - 6 Define refrigerant.
 - 7 Differentiate between crystal hydrate and solvate.
 - 8 Enlist materials used to prepare sieves.
- (b) Describe in brief: (any four) 08**
- 1 Explain the importance of powder flow in tablets and capsules manufacturing.
 - 2 What are limitations of Mier's super solubility curve
 - 3 What are objectives of automated process controls systems?
 - 4 What are applications of glass as material for plant construction?
 - 5 What are the applications of humidification in pharmacy?
 - 6 Enlist objectives of mixing process in pharmacy.
- Q.2 (a) Write a note on equipments used for dehumidification process. 04**
- (b) Write a note on mechanical sieving methods. 05**
- (c) Write construction, working and advantages of ribbon blender. 05**
- Q.3 (a) Differentiate between propeller mixer and turbine mixer. 04**
- (b) Write principle, construction, working, uses, advantages and disadvantages of colloid mill. 05**
- (c) Explain basic elements of automated process control systems. 05**
- Q.4 (a) Describe the ways to prevent of mechanical hazards? 04**
- (b) Write construction, working, advantages and applications of belt conveyor. 05**
- (c) Write a note on store design in pharmaceutical industries. 05**
- Q.5 (a) Write a detail note on characterization of powder flow. 04**
- (b) Describe the techniques to improve powder flow. 05**
- (c) Explain the factors affecting flow through an orifice of hopper. 05**
- Q.6 (a) Write principle, construction, working and applications of agitated batch crystallizer. 04**
- (b) Write principle, construction, working and applications of ball mill. 05**
- (c) Write a note on factors affecting selection of material for plant construction. 05**
- Q.7 (a) Describe the applications of size reduction process. 04**
- (b) Enlist types of corrosion. Explain any three in detail. 05**
- (c) Explain types of mixtures with suitable examples. 05**