

Seat No.: _____

MALIBA PHARMACY COLLEGE

Mid semester examination

Sem-I B. Pharm.

Subject: 30020104 Pharmaceutics I (Unit Operation I)

Date: 21/12/2011

Time: 11:00 am to 12:30 pm

Total Marks: 30

Instructions:

1. Attempt all questions. All questions carry equal marks.
 2. Draw suitable diagrams wherever necessary.
 3. Figures to the right indicate marks.
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Q.1 Do as directed

[10]

- a. Define: Filtration and Evaporation. [1]
- b. Explain the mechanism of action of filter aids. [2]
- c. Differentiate evaporation, drying and distillation. [2]
- d. Describe the construction, working, advantages and disadvantages of rotary vacuum (drum) filter. [5]

OR

- d. Explain the construction and working of film evaporators with diagrams. [5]

Q.2 Do as directed

[10]

- a. Suggest a dryer for tablet granules and milk & milk products. [1]
- b. A tray drier is to be used for drying a solid material. Each tray is 3 ft wide, 4 ft long and depth of wet material is 2 inches. The density of material is 50 lb/ft³. The wet material contains 3 lb water per pounds of dry solid. How many trays are required to obtain 3000 lb of a product containing 1 lb of water per 1 lb of dry solid? [2]
- c. Explain briefly principle of centrifugation. [2]
- d. Discuss all the steps involved in freeze drying. Write the applications of freeze drying. [5]

OR

- d. Write a detail note on Fluidized Bed Dryer. [5]

Q.3 Do as directed

[10]

- a. Define Volatility. [1]
- b. A binary mixture of methanol and water having total vapour pressure of 760 mmHg, when the total liquid contains 0.40 mole fraction methanol, the equilibrium vapour contains 0.729 mole fraction of methanol. Calculate relative volatility. [2]
- c. Define Humid heat and Relative humidity. [2]
- d. Describe columns used for fractional distillation. [5]

OR

- d. Explain a distillation method used for distillation of water-immiscible liquids of high boiling point. [5]
