

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharmacy Sem - 1st Regular / Remedial Examination January, 2011

Subject code: 210005

Subject Name: Pharmaceutics I

Date: 10 /01 /2011

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.

- Q.1** (a) Classify the centrifuges. Give the detailed principles of operation of centrifuge used for biological extracts. **06**
(b) Derive equation for relative centrifugal force. **05**
(c) Explain the mechanism of filtration. **05**
- Q.2** (a) Describe compression refrigeration cycle with labeled diagram. **06**
(b) Write a note on psychometric chart & measurement of humidity. **05**
(c) The partial pressure of water vapor is 50mmHg in a mixture of air & water vapor at 110°F & 1atm.pressure. How many of Btu of heat energy must be added to 25 Lb of this mixture to raise the temperature to 125°F? **05**
- Q.3** (a) Write a note on compressible & non compressible cakes. How do we carry out filtration when material is highly compressible? **06**
(b) Explain the construction and working of filter-press. **05**
(c) Write a brief note on cartridge filters. **05**
- Q.4** (a) Explain the construction & working of a forced circular evaporator **06**
(b) Differentiate multiple effect & single effect evaporator. **05**
(c) How film evaporators are differentiated from other conventional evaporators on the basis of their working principle? **05**
- Q.5** (a) Choose the most suitable drying equipment for production of milk powder. Describe its principle & working with labeled diagram. **06**
(b) Describe the drying rate curve for crude fibrous drug. **05**
(c) Discuss important factors affecting choice of dryers for pharmaceuticals. **05**
- Q. 6** (a) Define & differentiate the evaporation, drying & distillation with example. **06**
(b) Write short note on HETP & HTU in distillation process. **05**
(c) Explain in detail about rectification. **05**
- Q. 7** (a) Explain process of distillation of immiscible liquids. **06**
(b) Write a note on Hygrometer. **05**
(c) Discuss application of refrigeration & air –conditioning in pharma industry. **05**
