

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Pharm. - SEMESTER-I • EXAMINATION – SUMMER 2017

Subject Code: 210005

Date: 30/05/2017

Subject Name: Pharmaceutics-I

Time: 02:30 PM to 05:30 PM

Total Marks: 80

Instructions:

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

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|-------------|-----|--|-----------|
| Q.1 | (a) | Enumerate factors affecting rate of filtration and discuss any two of them in detail. | 06 |
| | (b) | Write construction and working of Plate and Frame Filter Press. | 05 |
| | (c) | Write are filter aids? Write its advantages and limitations. | 05 |
| Q.2 | (a) | Define centrifugation and write construction, working, advantages and disadvantages of perforated basket centrifuge. | 06 |
| | (b) | Write principle and working of sediment type centrifuge. | 05 |
| | (c) | Write a note on application of centrifugation in pharmacy. | 05 |
| Q.3 | (a) | Define the term evaporation and explain the factors affecting evaporation. | 06 |
| | (b) | Classify evaporators and briefly explain falling film evaporator. | 05 |
| | (c) | Write a note on Raoult's Law. | 05 |
| Q.4 | (a) | Explain the process of steam distillation and give its importance in pharmacy. | 06 |
| | (b) | What are azeotropic mixtures and how are they separated? | 05 |
| | (c) | Differentiate between evaporation and distillation. | 05 |
| Q.5 | (a) | Explain the theory and process of drying. | 06 |
| | (b) | Write principle, construction and working of tray dryer. | 05 |
| | (c) | Discuss in brief the process of freeze drying. | 05 |
| Q. 6 | (a) | Write a note on HVAC system. | 06 |
| | (b) | Define the terms: Relative humidity, dew point, humid heat, percentage humidity and dry bulb temperature. | 05 |
| | (c) | Write a note on dehumidification operation. | 05 |
| Q.7 | (a) | Write a note on various mechanism behind filtration process. | 06 |
| | (b) | Define the term: Evaporation, filtration, drying and distillation | 05 |
| | (c) | Classify dryers and with neat diagram explain the working of fluidized bed dryer. | 05 |
