

GUJARAT TECHNOLOGICAL UNIVERSITY
B. Pharm. – SEMESTER – IV • EXAMINATION – SUMMER • 2015

Subject Code: 2240001**Date: 29-05-2015****Subject Name: Unit Operations-II****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.**

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| Q.1 | (a) Explain mechanism of filtration. Explain effect of filter aid on rate of filtration. | 06 |
| | (b) Discuss factors affecting filtration Process. | 05 |
| | (c) Explain principal, construction, working of membrane filters with labeled diagram. | 05 |
| Q.2 | (a) Explain theory of centrifugation. Give its applications in pharmacy. | 06 |
| | (b) Differentiate: continuous filtration and batch filtration. | 05 |
| | (c) Discuss in detail continuous horizontal centrifuge. | 05 |
| Q.3 | (a) Classify Dryers. Write a note on drum dryer. | 06 |
| | (b) Explain Theory and mechanism of drying. | 05 |
| | (c) Discuss in detail Fluidized bed dryer. | 05 |
| Q.4 | (a) Explain Raoult's law with its limitation. | 06 |
| | (b) Write a note on Molecular distillation. | 05 |
| | (c) Describe steam distillation with diagram. | 05 |
| Q.5 | (a) Define: Reflux ratio and HETP. Discuss packed columns with respected to Fractional distillation. | 06 |
| | (b) Discuss the factors influencing evaporation process. | 05 |
| | (c) Write a note on falling film evaporator. | 05 |
| Q. 6 | (a) Write a note on psychometric charts with its utility. | 06 |
| | (b) Define: HVAC. Give its application in Pharmacy. | 05 |
| | (c) Explain principles and working of air conditioner with labeled diagram. | 05 |
| Q. 7 | (a) Enlist general parts of distiallator. Give ideal properties of condensers. | 06 |
| | (b) Describe with labeled diagram Spray Dryer. | 05 |
| | (c) Give application of Filtration in field of pharmacy. | 05 |
