

Second B.Pharm (Ayurveda) Degree Examinations, October 2013**Pharmaceutical Engineering****Time: 3 Hours****Total Marks: 100**

- Answer all questions.

Essays:**(2x10=20)**

1. Describe the factors that influence the selection of milling equipment for size reduction in pharmaceutical industry. Explain the construction and working of fluid energy mill
2. Define evaporation and classify them. Describe the working of standard short vertical tube evaporator

Answer briefly:**(10x5=50)**

3. Caking of crystals and prevention of caking
4. Describe the working of spray drier. and its application
5. Automatic process control system used in industries
6. Working of plate and frame filter press
7. Bernoulli's equation
8. Various factors influencing the rate of filtration
9. Define Fourier's laws of conduction of heat through a metal wall and mention its equation
10. Working of an equipment used for the separation of two immiscible liquid phases
11. Distinguish continuous and batch filters with example
12. Mention the outlines of a humidity chart, explain how various humidity related terms could be calculated

Short notes:**(10x3=30)**

13. Define: rate of drying, critical moisture and bound moisture
14. Flash distillation
15. Describe the three modes of heat transfer
16. Reynold's number
17. Differentiate crystalline and amorphous solids
18. List three advantages of fluidized bed drier
19. Valves
20. Define corrosion and distinguish dry & wet corrosion
21. Working of the Roller mill with diagram
22. State Rittinger's law of size reduction