

**Second B. Pharm (Ayurveda) Degree Regular/Supplementary  
Examinations March 2024****Pharmaceutical Engineering****Time: 3 Hours****Total Marks: 100**

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*

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

1. Define drying. Explain the principle, construction, working and applications of fluidized bed dryer
2. Describe about various industrial hazards. Explain in detail about safety precautions for chemical hazards

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

3. Explain the various theories of filtration
4. Swenson walker crystallizer
5. Types and applications of stainless steel used in pharmaceutical industry
6. Distinguish between azeotropic and extractive distillation
7. Explain in detail any one equipment used for semi solid mixing
8. Explain dehumidification. Explain the mechanism of dehumidification
9. Explain the principle, construction and working of fluid energy mill
10. Explain the principle and working of orifice meter
11. Explain the theory of centrifugation.
12. The various factors influencing evaporation

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

13. Distinguish between grey body and black body
14. Explain filter aids and its mechanism
15. Kicks theory and its application
16. Pneumatic conveyor
17. Mechanism involved in liquid mixing
18. Overall heat transfer coefficient
19. Principle and construction of meta filter
20. What are ideal solutions. Explain Dalton's law
21. Explain drying rate curve
22. Briefly explain rotameter