

**Second B.Pharm (Ayurveda) Degree Supplementary Examinations
March (November), 2020****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 filtration. Explain the principle, construction, working, advantages and applications of Filter press.
2. Explain crystallization. Explain the principle, construction and working of Swenson-walker crystallizer

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

3. Explain in detail about electrical hazards and its safety precautions
4. Flash distillation apparatus
5. Explain the principle, construction and working of ball mill
6. Centrifugal pump
7. Explain the principle and working of freeze dryer
8. Explain the principle and construction of venturimeter
9. Discuss the principle and working of vacuum dryer
10. Types and uses of Stainless steel in pharmaceutical industry.
11. Explain the construction and working of perforated basket centrifuge
12. Explain the various mechanisms for dehumidification.

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

13. Meta filter
14. Drying rate curve
15. Raoult's law and applications
16. Factors affecting size reduction
17. Equipments involved in liquid mixing
18. Forced circulation evaporator
19. Overall heat transfer coefficient
20. Belt conveyor
21. Azeotropic distillation
22. Explain Poiseuille's equation