

End Semester Examination –Summer2023

Date:26/07/2023

Course:	B. Pharmacy	Sem:3
Subject Name:	Pharmaceutical Engineering	Subject Code:BP304T
Max Marks:	75	Duration: 3 Hr.

Instructions:

1. All questions are compulsory
2. Draw diagrams / figures wherever necessary
3. Figures to right indicate full marks

Q. 1. Objective Type Questions (Answer all the questions) (10 x 2) = 20

- i) What is Reynold's number? Give its importance.
- ii) What are heat exchangers. Give their types.
- iii) Define evaporation. Classify evaporators.
- iv) Give the applications of drying.
- v) Describe the modes of size reduction.
- vi) Differentiate between solid mixing and liquid mixing.
- vii) Write the advantages and disadvantages of plastics as material of construction.
- viii) Explain the term pitting corrosion and galvanic corrosion.
- ix) Explain the mechanism of filtration.
- x) State Fourier's law with equation.

Q. 2. Long Answers (Answer 2 out of 3) (2 x 10) = 20

- i) Define Centrifugation. Classify centrifuges with suitable examples. Discuss in detail on perforated basket centrifuge.
- ii) Write the advantages of size reduction. Discuss the factors affecting selection of a mill for size reduction.
- iii) Classify distillation. Explain the principle, construction, working and applications of molecular distillation.

Q. 3. Short Answers (Answer 7 out of 9) (7 x 5) = 35

- i) Explain in detail about short tube evaporator.
- ii) With the help of neat labelled diagram explain fluidised bed dryer.
- iii) Write the theory of vortex formation and give its prevention methods.
- iv) Discuss on the various modes of size separation.
- v) What are filter aids? Why are they used. Enlist the filter aids used in pharmacy practice.
- vi) Classify materials of construction. Discuss about various types of ferrous metals used.
- vii) Describe the various modes of heat transfer with suitable examples.
- viii) Explain the factors influencing mixing of solids. Write the principle of planetary mixer

- ix) Explain with the help of diagram the construction and working of a Hammer mill