

SET- I**Subject Code: B132201/R13****II B.Pharmacy II Semester Supplementary Examinations, April – 2018****PHARMACEUTICAL UNIT OPERATIONS-II****Time: 3 hours****Max. Marks: 70**Note: 1. Question Paper Consists of two parts (**Part-A** and **Part-B**)2. Answering the question in **Part-A** is Compulsory,3. Answer any **THREE** Questions from **Part-B**

PART-A

1.
 - a) Explain various modes of heat transfer with examples.
 - b) Define evaporation and mention about theory of evaporation.
 - c) Write a detail note on fractionating column.
 - d) Explain in brief about theory of drying.
 - e) Give an account on laws governing energy and power requirements of a mill.
 - f) Write a note on vortex formation and give various methods for prevention of it. [3+4+4+4+4+3]

PART-B

2.
 - (a) State and explain Fourier's law of conduction of heat through a metallic wall.
 - (b) Give a note on steam pressure and boiler capacity. [8+8]
3.
 - (a) Write the principle, construction and working of climbing film evaporator.
 - (b) Write a note on multiple effect evaporators. [8+8]
4.
 - (a) Define Raoult's law and add a note on principles of rectification.
 - (b) Explain the principle, construction and working of flash distillation. [8+8]
5.
 - (a) Explain the principle, construction and working of freeze dryer.
 - (b) Give a detail note on the dryer used for the drying of sterile products. [8+8]
6.
 - (a) Explain different modes of size reduction and add a note on ball mill.
 - (b) Write in detail about principle, construction and working of fluid energy mill. [8+8]
7.
 - (a) Write a note on theory of solid-solid mixing.
 - (b) Write the principle, construction, working & uses of planetary mixer. [8+8]
