

Subject Code: B132201/R13

II B. Pharmacy II Semester Regular Examinations April - 2017

PHARMACEUTICAL UNIT OPERATIONS-II

Time: 3 hours

Max. Marks: 70

Question Paper Consists of **Part-A** and **Part-B**
Answering the question in **Part-A** is Compulsory,
Three Questions should be answered from **Part-B**

PART-A

1. (a) What are Black body and Grey body?
- (b) Write the concept of phase equilibrium in evaporation.
- (c) Define azeotropic and extractive distillation.
- (d) Explain the Drying Curve with graphical representation.
- (e) Explain modes of stress applied in size reduction.
- (f) Write the principle involved in sigma blade mixer.

[4+3+4+4+3+4]

PART-B

2. (a) What are Heat exchangers? Describe multi pass tubular heater.
 - (b) Write a note on boiler capacity.
 - (c) Explain properties of steam. [8+5+3]
3. Describe the multiple effect evaporators and give a note on its economy. [16]
4. (a) Write short note on lyophilisation.
 - (b) Write principle of molecular distillation.
 - (c) Write the principle, construction and working of water for injection apparatus. [5+5+6]
5. (a) Write principle, construction and working of Tray Dryer and its applications.
 - (b) Write principle, construction and working of Fluidized Bed Dryer. [8+8]
6. (a) Write a note on Laws governing for size reduction.
 - (b) Write principle, construction and applications of hammer mill and Fluid energy mill. [4+12]
7. (a) Write principle, construction and working of any one liquid - liquid mixing equipment.
 - (b) Write a note on any one equipment used for liquid-solids mixing and write their applications in Pharmaceutical industry. [8+8]

