# UNIVERSITY OF JAFFNA, SRI LANKA
## BACHELOR OF PHARMACY
### THIRD YEAR FIRST SEMESTER EXAMINATION – NOVEMBER 2014
### PHAPT 3105 – PHARMACEUTICAL TECHNOLOGY

**Date:  21.11.2014**                                              **Time: 3 Hours**

**ANSWER ALL THE EIGHT QUESTIONS**

1. 1.1  What is meant by "diminution"?                                              (05 Marks)

   1.2  Explain the advantages and disadvantages of diminution.              (40 Marks)

   1.3  Describe characters of raw materials that influence the selection of milling

   equipment for size reduction.                                              (55 Marks)


2. 2.1  Describe the mechanism of filtration with suitable diagram.          (40 Marks)

   2.2  Write Kozeny-Carman equation.                                          (10 Marks)

   2.3  Describe the factors influence the rate of filtration.                  (50 Marks)


3. 3.1  Describe the steps in crystallization.                                  (40 Marks)

   3.2  Describe the principle, construction and working of Krytal crystallizer with the

   help of suitable diagram.                                                  (60 Marks)


4. 4.1  Describe the factors that influence the evaporation of a substance.      (40 Marks)

   4.2  Explain the principle, uses, advantages and disadvantages of falling film

   Evaporator.                                                                (60 Marks)


5. 5.1  Describe drying rate curve (FMC curve) of porous granular solid.          (50 Marks)

   5.2  Explain principle, construction and working of drum dryers with appropriate

   diagram.                                                                  (50 Marks)

6. 6.1 Define the term "size separation".                                    (15 Marks)

   6.2 Explain three methods used in size separation with example.          (30 Marks)

   6.3 Write an account on following screening equipment:

       6.3.1   Cyclone separator                                            (20 Marks)

       6.3.2   Air separator                                                (20 Marks)

       6.3.3   Rotex screen                                                 (15 Marks)


7. 7.1 What is meant by "Mixing".                                           (15 Marks)

   7.2 List purpose of mixing in Pharmaceutical industry.                   (15 Marks)

   7.3 Write an account on following:

       7.3.1 Propeller mixer                                                (35 Marks)

       7.3.2 Agitator mixer.                                                (35 Marks)


8. 8.1 Explain the influence of primary and secondary factors in choosing

       pharmaceutical industry plant location.                             (100 Marks)