

UNIVERSITY OF JAFFNA, SRI LANKA  
FACULTY OF ALLIED HEALTH SCIENCES  
THIRD YEAR FIRST SEMESTER EXAMINATION IN BPharmHons - 2020  
PHAPT 3153 PHARMACEUTICAL TECHNOLOGY

Date: 03.06.2022

Time: 03 Hours

Answer All Eight Questions

Answer Part A & B in separate answer books.

Part A

1.
  - 1.1 1.1.1 What is "mixing" in pharmaceutical operations? (05 Marks)
  - 1.1.2 List the three (03) equipment used in mixing of liquids. (15 Marks)
  - 1.1.3 Briefly describe the different steps involved in the mixing of insoluble powder with liquids. (40 Marks)
  - 1.2 1.2.1 List the application of crystallization process. (15 Marks)
  - 1.2.2 What is caking of crystals? (10 Marks)
  - 1.2.3 How caking of crystals can be prevented? (15 Marks)
2.
  - 2.1 List the factors that affect the evaporation process. (10 Marks)
  - 2.2 Briefly describe the drying of solid materials with the help of drying curve. (30 Marks)
  - 2.3 Write down the working principle of spray dryer. (60 Marks)
3.
  - 3.1 List the application of
    - 3.1.1 size reduction process. (15 Marks)
    - 3.1.2 size separation process. (10 Marks)
  - 3.2 Briefly explain the different mechanisms involved in the size reduction process. (20 Marks)
  - 3.3 3.3.1 Differentiate maceration and percolation processes. (25 Marks)
  - 3.3.2 Briefly describe any one method mentioned in the 3.3.1. (30 Marks)
4.
  - 4.1 Discuss the different stages involved in the compression of solid materials. (35 Marks)
  - 4.2 Briefly describe the different types of granular mechanisms in the formation of granules. (65 Marks)

5. Write an account on
- 5.1 chemical hazards in industries. (50 Marks)
  - 5.2 quality of packaging materials. (50 Marks)

### Part B

6. 6.1 List the factors that affect the filtration rate based on Darcy's law. (15 Marks)
- 6.2 Briefly explain how each factors that are mentioned in 6.1 affect the filtration rate. (40 Marks)
- 6.3 Give the functions of followings. (15 Marks)
- 6.3.1 filter aid (15 Marks)
  - 6.3.2 rotary filter (15 Marks)
- 6.4 Briefly describe the advantages of a rotary filter. (15 Marks)
7. 7.1 7.1.1 Briefly describe how factors influence on relative humidity. (20 Marks)
- 7.1.2 Briefly describe a method to measure the relative humidity in a laboratory. (30 Marks)
- 7.2 Write short notes on vapour compression refrigerator. (50 Marks)
8. 8.1 8.1.1 What is meant by wet corrosion? (15 Marks)
- 8.1.2 List five (05) methods to prevent corrosion. (25 Marks)
- 8.2 8.2.1 Write down the advantages and disadvantages of a fermentation process. (35 Marks)
- 8.2.2 Briefly explain the requirements for the operation of a fermenter. (25 Marks)