

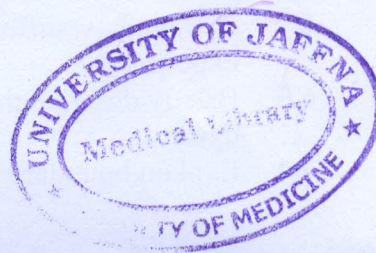
UNIVERSITY OF JAFFNA
BACHELOR OF PHARMACY
THIRD YEAR FIRST SEMESTER EXAMINATION – JANUARY 2016
PHAPT 3105 PHARMACEUTICAL TECHNOLOGY

Date: 16.02.2016.

Time: 03 Hours

ANSWER ALL EIGHT QUESTIONS.

Answer Part A and Part B in separate answer books.



PART A

1.
 - 1.1 1.1.1 Explain how crystallization of compounds take place from their solution. (30 Marks)
 - 1.1.2 List the pharmaceutical application of crystallisation process. (20 Marks)
 - 1.1.3 Name three (03) equipments which are used for the preparation of crystals. (15 Marks)
 - 1.2 Briefly explain the caking of crystals. (20 Marks)
 - 1.3 Enumerate the methods used to prevent caking of crystals. (15 Marks)

2.
 - 2.1 Briefly describe the drying of solids with the help of drying curve. (45 Marks)
 - 2.2 Briefly explain the principle of
 - 2.2.1 freeze drying. (25 Marks)
 - 2.2.2 fluidized drying process. (30 Marks)

3.
 - 3.1 3.1.1 What is an extraction process? (10 Marks)
 - 3.1.2 How extraction battery works? Explain with schematic diagram. (40 Marks)
 - 3.2 List the two applications of evaporation process. (10 Marks)
 - 3.3 3.3.1 Briefly explain the working principle of fluid energy mill. (25 Marks)
 - 3.3.2 List the advantages of fluid energy mill. (15 Marks)

4.
 - 4.1 4.1.1 What do you mean by 'packages'? (15 Marks)
 - 4.1.2 List the environmental conditions which may affect the packages. (15 Marks)
 - 4.2 Briefly describe the different stages involved in the process of compression during pharmaceutical tableting. (70 Marks)

5.
 - 5.1 List fire detectors used in industry. Explain their working principle. (30 Marks)
 - 5.2 Write an account on types of fire extinguishers used in industry. (70 Marks)

PART B

6. 6.1 Define the followings on “Reynold’s experiment” in fluid dynamics.
- 6.1.1 Laminar flow (15 Marks)
 - 6.1.2 Turbulent flow (15 Marks)
- 6.2 Explain how different factors affect fluid flow in “Reynold’s experiment”. (25 Marks)
- 6.3 Briefly describe the significance of “Reynolds number” in fluid dynamics. (25 Marks)
- 6.4 Explain boundary layers in fluid flow. (20 Marks)
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7. 7.1 Briefly explain how different factors affect the rate of filtration. (50 Marks)
- 7.2 7.2.1 Define “Relative Humidity (RH)”. (10 Marks)
 - 7.2.2 Discuss the measurement technique of air humidity in a laboratory with thermometers. (40 Marks)
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8. 8.1 8.1.1 Briefly describe the working principle of a centrifuge. (30 Marks)
- 8.1.2 Give the procedures used in the centrifugation of blood sample. (40 Marks)
- 8.2 List the factors that affect the fermentation process. (30 Marks)

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