

UNIVERSITY OF JAFFNA, SRI LANKA
FACULTY OF ALLIED HEALTH SCIENCES
THIRD YEAR FIRST SEMESTER EXAMINATION IN B.PHARM (HONS) - 2019
PHAPT 3153 PHARMACEUTICAL TECHNOLOGY

Date: 12.05.2021

Time: 03 Hours

ANSWER ALL EIGHT QUESTIONS.

Answer Part - A and Part - B in separate answer books.

Part - A

1.
 - 1.1 Give two processes for manufacturing of pharmaceuticals in which drying is used. (10 marks)
 - 1.2 Briefly explain the different steps involved in the spray drying process. (45 marks)
 - 1.3 List the characteristics of products obtained from spray drying process. (15 marks)
 - 1.4 Explain the reasons for characteristics of products that you mentioned in 1.3. (30 marks)

2.
 - 2.1 Define followings.
 - 2.1.1 Compression (10 marks)
 - 2.1.2 Consolidation (10 marks)
 - 2.2 Explain the different types of deformation that occurs in the compression of solid particles. (30 marks)
 - 2.3 Describe the granulation mechanisms for the granules prepared by dry granulation method. (20 marks)
 - 2.4 Briefly explain the working principle of an evaporator that are used for high viscous liquids. (30 marks)

3.
 - 3.1 Explain the working principle for small and large scale apparatuses that are used for continuous cold extraction. (60 marks)
 - 3.2 Discuss chemical hazards in industries. (40 marks)

- 4.
- 4.1 List the pharmaceutical applications of
 - 4.1.1 crystallization process. (15 marks)
 - 4.1.2 size reduction process. (15 marks)
 - 4.2 Explain the different
 - 4.2.1 steps involved in the formation of crystals. (30 marks)
 - 4.2.2 factors that contribute to caking of crystals during their storage. (20 marks)
 - 4.2.3 factors that affect the mixing of different powders. (20 marks)
5. Write an account on following.
- 5.1 Fluid energy mill (35 marks)
 - 5.2 Tumbling mixer (35 marks)
 - 5.3 Molecular distillation (30 marks)

Part - B

- 6.
- 6.1 Give the applications of a centrifuge in a laboratory. (20 marks)
 - 6.2 Briefly describe the types of centrifuges based on types of rotors used. (30 marks)
 - 6.3 Briefly explain the safety concerns of the centrifuge during its operation. (50 marks)
- 7.
- 7.1 Define filtration. (10 marks)
 - 7.2 Briefly discuss how different factors that affect the rate of filtration? (50 marks)
 - 7.3 Briefly describe the following of a rotary filter.
 - 7.3.1 Working principle (20 marks)
 - 7.3.2 Advantages and disadvantages (20 marks)
- 8.
- 8.1 What is relative humidity? (10 marks)
 - 8.2 Briefly describe a method of measurement of relative humidity using thermometer. (30 marks)
 - 8.3 Briefly explain the working principles of followings.
 - 8.3.1 Vapor compression refrigeration (30 marks)
 - 8.3.2 Vapor absorption refrigeration (30 marks)

