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UNIVERSITY OF JAFFNA, SRI LANKA
FACULTY OF ALLIED HEALTH SCIENCES
THIRD YEAR FIRST SEMESTER EXAMINATION IN BPharmHons - 2021
PHAPT 3153 PHARMACEUTICAL TECHNOLOGY

Date: 03.04.2023

Time: 03 Hours

Answer All Eight Questions

Answer Part A & B in separate answer books.

Part A

1.
 - 1.1 Briefly explain the percolation process. (35 Marks)
 - 1.2
 - 1.2.1 List the pharmaceutical applications of crystallization process. (20 Marks)
 - 1.2.2 Describe the process of formation of crystals. (45 Marks)

2. Discuss the drying process involved in the
 - 2.1 fluidized bed dryer. (60 Marks)
 - 2.2 spray dryer. (40 Marks)

3. Briefly explain the different
 - 3.1 stages involved in the mixing of powders and liquid. (50 Marks)
 - 3.2 types of granulations mechanisms in the formation of granules. (50 Marks)

4. Describe the working principle of the following equipment.
 - 4.1 Cyclone separator (40 Marks)
 - 4.2 Fluid energy mill (60 Marks)

5. Write an account on
 - 5.1 chemical hazards in industries. (60 Marks)
 - 5.2 different mechanisms of size reduction process. (40 Marks)

Part B

- 6.
- 6.1 Give three (03) laboratory applications of a centrifuge. (20 Marks)
 - 6.2 Briefly describe the types of centrifuges based on types of rotors used. (30 Marks)
 - 6.3 Briefly discuss the steps involved in the serum separation from a blood sample by using a centrifuge. (50 Marks)
- 7.
- 7.1 List the factors that affect the filtration rate based on Darcy's law. (20 Marks)
 - 7.2 Briefly explain how each factors that mentioned in 7.1 affect the filtration rate. (40 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 Briefly describe a method for the measurement of relative humidity in a laboratory. (30 Marks)
 - 8.2 Briefly explain the measurement of corrosion rate in the given material. (30 Marks)
 - 8.3 Write a short note on vapour absorption refrigeration. (40 Marks)