UNIVERSITY OF JAFFNA, SRI LANKA

FACULTY OF ALLIED HEALTH SCIENCES

THIRD YEAR FIRST SEMESTER EXAMINATION IN BPharmHons-2021

PHAPT 3112 PHARMACEUTICAL TECHNOLOGY I

Date: 03. 04. 2023 **Time: 02 hours**

ANSWER ALL SIX QUESTIONS

1.

1.1. Briefly describe the

1.1.1. Stages of drying in a wet solid material using drying curve. **(30 Marks)**

1.1.2. Working principle of freeze dryer. **(50 marks)**

1.2. List the characteristics of products obtained by freeze drying. **(20 Marks)**

2.

2.1. Define the following terms:

2.1.1. Compression **(05 Marks)**

2.1.2. Consolidation **(05 Marks)**

2.2. Give the four (04) main steps involved in tableting process. **(20 Marks)**

2.3. Briefly describe the deformation and fragmentation processes occurring during tablet compression. **(30 Marks)**

2.4. Explain the reason for designing the hoppers to have a conical shape. **(40 Marks)**

3.

3.1. List three (03) equipment that are used for mixing immiscible liquids. **(15 Marks)**

3.2. Write down four (04) measures that are employed in liquid mixers to prevent vortex formation. **(20 Marks)**

3.3. Briefly describe the factors affecting the rate of filtration. **(25 Marks)**

3.4. Describe the design and working principle of a conical disc centrifuge. **(40 Marks)**

4. Write an account on following:

4.1. Agitated batch crystallizer **(30 Marks)**

4.2. Cyclone separator **(35 Marks)**

4.3. Machine safeguards **(35 Marks)**

5.

5.1. Briefly describe the chemical factors affecting the selection of materials for construction. **(20 Marks)**

5.2. Differentiate evaporation and distillation processes. **(20 Marks)**

5.3. Briefly explain the working principle of climbing film evaporator. **(30 Marks)**

5.4. Give the advantages and disadvantages of plate and frame press. **(30 Marks)**

6.

6.1. List the mechanisms involved in size reduction process. **(15 Marks)**

6.2. Give an example of large-scale equipment that uses each of the above-mentioned mechanisms. **(20 Marks)**

6.3. Briefly describe the working principle of fluid energy mill. **(25 Marks)**

6.4. Describe the granulation mechanisms involved in wet granulation process. **(40 Marks)**