



International Islamic University Chittagong

Department of Pharmacy

Program: B. Pharm (Hons)

Examination: Final

Session: Autumn-2021

Course Code: Pharm-4711

Course Title: Pharmaceutical Engineering-II

Full Marks: 50

Time: 2 Hours and 30 Minutes

Group A (Marks: 20)

Answer any two questions

1. a) Briefly explain the advantages and disadvantages of milling operation. 4
b) Describe the operational principle of a fluid energy mill. 4
c) Point out the advantages and limitations of hammer mill. 2
2. a) Briefly explain the approaches of dehumidification. 5
b) What is demineralization? How does an ion-exchange resin works? 5
3. a) Explain the components of HVAC system with their functions. 5
b) Mention the factors to be considered during selection of site of a pharmaceutical plant. 3
c) What are the different types of plant layout? 2

Group B (Marks: 30)

Answer any three questions

4. a) Discuss the operation process of tumblers or cylindrical blenders with no mixing blade. What are the advantages and limitations of this mixer? 5
b) Write down about the operation of Air mixer or Fluidized mixer. 5
5. a) Describe the working principle of a planetary mixer. Point out its advantages and disadvantages. 5
b) How does a ribbon mixer works? Mention its limitations. 5
6. a) What are the different types of blender used in solid-solid mixing. 2
b) Describe the features and applications of a twin shell blender. 4
c) Outline the factors affecting a solid-solid blending machine. 4
7. a) Enumerate the stages of semi-solid mixing. 3
b) Mention the types and mixing mechanism of a sigma blender. 4
c) Write a short note on muller. 3