

International Islamic University Chittagong

Department of Pharmacy

(Hon's) Program

Final Examination

Spring Semester 2018

Code: Pharm-4701

Course Title: Pharmaceutical Engineering-II

Full Marks: 50

2 hours 30 minutes

of separate groups should be given in separate scripts. Figures on right margin indicate marks)

Group A (Answer any two questions from the followings) Marks: 20

- a) Mention the factors to be considered during selection of site of a pharmaceutical plant. 3
- b) Discuss plant layout with its importance. Classify plan layout. 3
- c) Briefly describe the commonly used utilities in a pharmaceutical industry. 4

- a) Define size reduction. Mention the factors affecting size reduction. 5
- b) Differentiate between the working principle of Fluid Energy mill and Hammer mill. 5

- a) Invent different types of milling equipment. 2
- b) Write short note on cutter mill. 4
- c) Describe a mill that is very economical, cheap and also useful for batch or continuous operation. 4

Group B (Answer any three questions from the followings) Marks: 30

- a) Explain the triple roller mill used in semisolid mixing. 4
- b) Mention the selection criteria of the mixing equipment for semisolid preparations. 2
- c) Summarize the propeller mixers used in liquid mixing. 4

- a) Explain the types and mechanism involved in solid mixing. 3
- b) Differentiate between the working principles of drum mixers and twin shell blenders. 4
- c) Classify the mixing equipment used in solid mixing. 3

- a) Describe the impeller type and the flow pattern by impellers in liquid mixing. 5
- b) Explain how the formation of vortex can be prevented. 5

Write short notes on the followings –

2.5×4

- i. Impeller
- ii. Batch Muller
- iii. Twin shell blender
- iv. Vortex formation