

FACULTY OF PHARMACY**B. Pharmacy 2/4 I-Semester (Main) Examination, November 2015****Subject : Pharmaceutical Engineering – I****Time : 3 Hours****Max. Marks: 70****Note: Answer all questions. All questions carry equal marks.**

- 1 (a) Discuss the factors to be considered in the selection of materials for plant construction. (5)
(b) Write a note on Dimensional Analysis. (4)
(c) Classify and enumerate the different types of corrosion. (5)
OR
(d) Write about copper and aluminium as material of plant construction. (5)
(e) Explain steady state and unsteady state. (4)
(f) What is Galvanic corrosion and explain how it can be prevented? (5)
- 2 (a) Write a note on :
(i) Bernoulli's theorem and applications (8)
(ii) Stefan Boltzman law (6)
OR
(b) Derive an equation for heat transfer by conduction. (8)
(c) Discuss the problem of foam and its prevention. (6)
- 3 (a) Explain the construction, working and applications of belt conveyor. (8)
(b) Write a note on :
(i) Jet pumps (3)
(ii) Peristaltic pumps (3)
OR
(c) Write a note in equipment available for transportation of gases. (7)
(d) Explain the construction, working and uses of centrifugal pumps. (7)
- 4 (a) Define the following : (4)
(i) Absolute Humidity (ii) Wet bulb temperature
(iii) Dew point (iv) Humid Heat
(b) Discuss in detail about absorption refrigeration cycle with a neat sketch. (10)
OR
(c) Explain the methods available for humidification and Dehumidification. (7)
(d) Discuss the factors that determine the refrigeration load in pharmaceutical plant. (7)
- 5 (a) Compare plate and frame filter press with chamber press. (7)
(b) Describe the construction, working and applications of Edge filters. (7)
OR
(c) Write a note on : (7)
(i) Leaf filters
(ii) Disc centrifuge bowls
(d) Give an account of the different filter media used in small scale and large scale filtration operations. (7)
