

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

- 1 (a) Write about copper and aluminum as material of plant construction along with their merits and demerits. (7)  
(b) What are : (7)  
(i) Fretting corrosion (ii) Galvanic corrosion explain how it can be prevented  
**OR**  
(c) Describe briefly different ways of combating corrosion. (7)  
(d) Write about any two Non-Metals as materials of pharmaceutical plants construction. (7)
- 2 (a) State and explain Fourier's law of heat transmission with an equation. (4)  
(b) Derive an equation for differential manometer. (5)  
(c) Write a note on condensers. (5)  
**OR**  
(d) Explain the principle, construction, working of multi-pass heat exchanger. (10)  
(e) Compare orifice meter with venture meter. (4)
- 3 (a) Enlist the equipments used for transportation of solids. Describe in detail about pneumatic conveyors. (7)  
(b) Write a note on : (7)  
(i) Valves (ii) Ejectors  
**OR**  
(c) Describe the construction and working of rotary positive displacement pump for liquid transport. (7)  
(d) Write a note on : (7)  
(i) Air lift pumps (ii) Fans and Blowers
- 4 (a) Explain the principle, working and operation of absorption refrigeration system with a neat sketch. (7)  
(b) How do you use the Humidity chart? (7)  
**OR**  
(c) Write a note on : (7)  
(i) Brine systems (ii) Cooling towers  
(d) Discuss the principle, constructions and working of Air conditioner (7)
- 5 (a) Describe the effect of pressure and filter aids on the filtration operation. (7)  
(b) Discuss the theoretical principles involved in the design of centrifuge. (7)  
**OR**  
(c) Describe the construction and working of De Laval classifier with a neat diagram with its applications. (7)  
(d) Write a note on Edge filters. (7)

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