

CODE NO: 1171

FACULTY**B. Pharmacy 2/4 I Semester (Suppl) Examination, April 2018****Subject: Pharmaceutical Engineering I****Time: 3 Hrs****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 pharmaceutical plant construction. 14
- OR**
- b) Give an account of the role of ferrous metals and their alloys as materials of plant construction. 14
2. a) What are manometers? Derive an equation used to measure pressure difference using differential manometers. 7
- b) Write a note on Shell and tube Heat exchanger.
- OR**
- c) Describe the construction and working of Disc meter and current meter. 7
- d) What are steam traps? Describe any one in detail. 7
3. a) What is the principle of pneumatic conveying? Describe the construction and working of it. 14
- OR**
- b) Classify centrifugal pumps and explain their characteristic features. Write applications, advantages and limitations of centrifugal pumps. 14
4. a) Define the following
i) Absolute Humidity ii) Relative Humidity iii) Dew Point 6
- b) Describe a refrigeration system using compressor with a neat labeled diagram 8
- OR**
- c) Write a note on
i) Brine system ii) Refrigeration load. 7
- d) Describe the methods employed for Dehumidification of air. Explain the significance of dehumidification in pharmacy. 7
5. a) What are edge filters? Describe any one in detail. 3+4
- b) Write a note on
i) Laboratory centrifuges
ii) Vertical Solid bowl centrifuge. 7
- OR**
- c) Describe the design, working and applications of horizontal centrifuge. 7
- d) Write a note on membrane filters. 7
