

**II B. Pharmacy I Semester Supplementary Examinations, Oct/Nov - 2017**  
**PHARMACEUTICAL UNIT OPERATIONS-I**

Time: 3 hours

Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)  
2. Answering the question in **Part-A** is Compulsory  
3. Answer any **THREE** Questions from **Part-B**

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**PART -A**

1. a) With labeled diagram explain the working of pitot tube. (3M)
- b) Differentiate fans and blowers. (3M)
- c) What are filter aids? Give their mechanism of action. (4M)
- d) Explain material balance in crystallization. (4M)
- e) Explain the terms, percent humidity and relative humidity. (4M)
- f) Write the factors influencing selection of materials for plant construction. (4M)

**PART -B**

2. a) Explain Bernoulli's theorem and its applications. (8M)
- b) Describe the construction, working and applications of Orifice meter. (8M)
3. a) Write the principle, construction and working of volute pump. (8M)
- b) Explain the construction and working of belt conveyor. (8M)
4. a) Give a detailed note on factors affecting rate of filtration. (8M)
- b) Describe the construction and working of perforated basket centrifuge. (8M)
5. a) Explain Mier's theory of super saturation along with its limitations. (9M)
- b) Explain the design and working of Krystal crystallizer. (7M)
6. a) Explain utility of humidity chart. (8M)
- b) With a neat diagram explain principles and working of air conditioner. (8M)
7. a) Discuss types of corrosion and suggest methods to overcome. (10M)
- b) Give an account on chemical hazards and its safety Precautions. (6M)

