

II B. Pharmacy I Semester Regular 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 **FOUR** Questions from **Part-B**
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PART -A

1. a) Write the mechanisms of fluid flow. (2M)
- b) What are pumps? Write any four types of pumps. (2M)
- c) Mention factors to enhance rate of filtration. (2M)
- d) What is cacking of crystals? (2M)
- e) What are primary refrigerants? (2M)
- f) What is corrosion? Write any four different types of corrosion. (2M)
- g) What is filter aid? How to use them? (2M)

PART -B

2. a) Write the principle, construction and working of Venturimeter. (8M)
- b) Write the difference between Orifice meter and Venturimeter. (6M)
3. a) Classify the Reciprocating Pump. Write the construction, working, user and application of simplex double acting piston Pumps. (10M)
- b) Describe Gate valve. (4M)
4. a) Write the Principle, Construction, working of agitated hatch Crystallizer with heat labeled diagram. (10M)
- b) Explain Meir's super saturation theory. What are its drawbacks? (4M)
5. a) Write the Principle, construction and working of Conical Disc Centrifuge. (8M)
- b) Define caking of crystal. What are the factors affecting caking and its prevention methods? (6M)
6. a) Define Fiteration and Explain the various theories of filtration. (7M)
- b) Write the Principle, construction, working, advantages and disadvantages of Plate and Frame Fitter Press. (7M)
7. a) Write brief note on Fire Extinguishers. (7M)
- b) Write the causes and preventions of electrical hazards in pharmaceutical industries. (7M)

II B. Pharmacy I Semester Supplementary Examinations, Oct/Nov - 2017
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Max. Marks: 70

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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)

