**[KP 742]**　　　　　　　**Sub. Code : 4182**

SECOND B.Pharm DEGREE EXAMINATION.

(Revised Regulations)

Paper IV — PHARMACEUTICAL TECHNOLOGY

Time　: Three hours　　　　　Maximum : 75 marks

Theory : Two hours and　　　　Theory :　60 marks

　　forty five minutes

M.C.Q. : Fifteen minutes　　　M.C.Q. :　15 marks

Answer any TWO questions.

I.　Long Essay :　　　　　　　(2 × 20 = 40)

1.　Azeotropic and extractive distillation.

2.　Flow meters (principle, design, operation).

3.　Swenson Walker crystallizer.

4.　Corrosion and its prevention.

II.　Short notes :　　　　　　(4 × 5 = 20)

Answer any FOUR questions.

1.　Stainless steel.

2.　Chemical hazards.

3.　Reynold's experiment.

4.　Principle of centrifugation.

5.　Humidity chart.

6.　Properties and advantages of steam.

7.　Phase diagrams.

————

2　　　　**[KP 742]**

**[KQ 742]**  **Sub. Code : 4182**

SECOND B.Pharm DEGREE EXAMINATION.

(Revised Regulations)

Paper IV — PHARMACEUTICAL TECHNOLOGY

Time : Three hours  Maximum : 75 marks

Theory : Two hours and  Theory : 60 marks
forty five minutes

M. C. Q : Fifteen minutes  M.C.Q. : 15 marks

Answer any TWO questions.

I.  Long Essay :  (2 × 20 = 40)

1.  Explain the principle and applications of refrigeration and air-conditioning in pharmacy.

2.  Discuss the various types of corrosion and the methods to combat the same. Add a note on glass as a material of plant construction.  (15 + 5)

3.  Discuss the construction, working, merits and demerits of washing plate and frame filter press.

4.  What is the importance of solubility data in crystallization? Explain the principle, construction and working of Swenson Walker and Krystal crystallizers.

II.  Short notes write any FOUR :  (4 × 5 = 20)

1.  State and explain various laws governing size-reduction.

2.  Write a note on fractionating columns.

3.  What are the factors that influence drying?

4.  Explain the significance of Reynold's equation and Reynold's number.

5.  Explain the construction working and applications of spray dryer.

6.  Write a note on venturimeter.

7.  Explain the theory of mixing.

_____

2  **[KQ 742]**

**[KS 742]**          **Sub. Code : 4233**

SECOND B. Pharm. DEGREE EXAMINATION.

(Revised Regulations)

Paper IV — PHARMACEUTICAL TECHNOLOGY

Q.P. Code : 564233

Time : Three hours          Maximum : 75 marks

Theory : Two hours and          Theory : 60 marks
    forty five minutes

M.C.Q. : Fifteen minutes          M.C.Q. : 15 marks

Give diagrams and equations wherever necessary.

I.    Long Essay :          (2 × 20 = 40)

Answer any TWO questions.

1.    (a)    Discuss the theories involved in filtration process.

    (b)    Write the principle and working of Filter Press.

2.    (a)    What is Caking of crystal? Write about its prevention.

    (b)    What are the methods to prevent corrosion?

3.    (a)    Explain the construction and working of Fluid Energy Mill.

    (b)    Explain the principles of Steam Distillation process.

4.    (a)    Discuss plastics as a material of plant construction.

    (b)    Explain the factors affecting drying.

II.    Short notes :          (4 × 5 = 20)

Answer any FOUR questions.

1.    Explain the importance of Reynolds number.

2.    Principle of Refrigeration.

3.    Chemical hazards and their prevention.

4.    Theories of Centrifugation.

5.    Construction and working of Krystal crystallizer.

6.    Different types of Valves.

7.    Application in humidity measurements in Pharmacy.

———————

**August 2008**

**[KT 742]**                    **Sub. Code : 4233**

SECOND B.Pharm. DEGREE EXAMINATION.

(Revised Regulations)

Paper IV — PHARMACEUTICAL TECHNOLOGY

Q.P. Code : 564233

Time : Three hours                    Maximum : 75 marks

Give diagrams and equations wherever necessary.

I.     Long Essay :                    $(2 \times 20 = 40)$

Answer any TWO questions.

1.     (a)    Explain the process of Fractional distillation.

       (b)    Write about various Fractionating columns.

2.     (a)    Discuss the theory of centrifugation.

       (b)    Write the Principle, Working, advantages and disadvantages of conical disc centrifuge.

3.     Write the principle, working, advantages and disadvantages of plate and frame press.

# August 2008

II. Short notes : $(5 \times 5 = 25)$

Answer any FIVE questions.

1. Explain the principle of climbing film evaporator.

2. Write the principle and working of krystal crystallizer.

3. Explain the process of Freeze drying.

4. Write the principle working of orificemeter.

5. Discuss stainless steel as material of plant construction.

6. Write the principle and working of silverson mixer emulsifier.

7. Write the principle and working of cyclone separator.

III. Short answers : $(5 \times 2 = 10)$

Answer any FIVE questions.

1. Define "Communication".

2. What is "Calandria"?

3. What is 'Darcy's law'?

4. Define 'Azeotropic distillation'.

5. What is 'Phase rule'?

6. What is "Filter aids"?

7. What is 'Reynolds number'?

——————

**SECOND B.PHARM. DEGREE EXAMINATION**
(Regulations 2004)
Candidates Admitted from 2004-05
Paper IV – PHARMACEUTICAL TECHNOLOGY
*Q.P. Code : 564233*

Time : Three hours        Maximum : 75 marks

**I. Essay Questions :    Answer any TWO questions        (2 x 20 = 40)**

1. Explain Bernouilles theorem and its use in measurement for flow of liquids in orificemeter.
2. **a)** Describe the construction, working and advantages of fractional distillation.
   **b)** Explain Mier's supersaturation theory and its limitations. Write a note on crystal crystallizer.
3. **a)** What are the different approaches for air conditioning. Explain in detail about the equipment used for the same.
   **b)** Briefly explain on various industrial hazards and its safety methods.

**II. Write Short Notes :   Answer any FIVE questions        (5X 5 = 25)**

1. Give the importance of glass as material of plant construction.
2. Write a short note on prevention and control of corrosion.
3. Explain the construction and working of filter press.
4. Derive an equation for relative centrifugal force.
5. Write a note on humidity chart and its uses.
6. Explain the various laws behind size reduction.
7. What are the sources of heat and explain in brief about steam as a heat transfer medium.

**III. Short Answers:      Answer any FIVE questions        (5 x 2 = 10)**

1. What are the different modes of size reduction?
2. What are the different standards for sieves in size separation?
3. Differentiate between drying, evaporation and distillation.
4. Give the advantages of fluid bed dryer.
5. Write the classification of materials for plant construction.
6. Define Raoult's law and give its limitations.
7. List out the equipments used for liquid mixing.

**\*\*\*\*\*\***

**[KV 742]** **Sub. Code: 4233**

## SECOND B.PHARM. DEGREE EXAMINATION
### (Regulations 2004)
### Candidates Admitted from 2004-05
### Paper IV – PHARMACEUTICAL TECHNOLOGY
### *Q.P. Code : 564233*

Time : Three hours                    Maximum : 75 marks

**I. Essay Questions :      Answer any TWO questions        (2 x 20 = 40)**

1. Write the principle, construction, working, application, merits and demerits of Swenson walker crystallizer.
2. **a)** Explain the theories and factories affecting centrifugation.
   **b)** Discuss in detail Plate and Frame filter press.
3. **a)** Describe the principle and factors affecting size reduction.
   **b)** Discuss in detail ball mill.

**II. Write Short Notes :   Answer any FIVE questions        (5X 5 = 25)**

1. Write the methods of prevention of corrosion.
2. Discuss the principle underlying filtration.
3. Explain the principle of freeze drying.
4. Explain the prevention of caking of crystals.
5. Describe Mier's Theory of supersaturation.
6. Explain the principle of steam distillation process.
7. Write the principles underlying fractional distillation.

**III. Short Answers:      Answer any FIVE questions        (5 x 2 = 10)**

1. Define 'Reynolds Number'.
2. Application of stainless steel material in pharmacy.
3. What is azeotropic distillation?
4. Classify dryer with examples.
5. Define filter aids.
6. Define nucleation in crystallization.
7. Write various parts involved in rotary tablet press.

**\*\*\*\*\*\***

## SECOND B.PHARM. DEGREE EXAMINATION
### (Regulation 2004)
### Candidates Admitted from 2004-05
### Paper IV – PHARMACEUTICAL TECHNOLOGY
#### *Q.P. Code : 564233*

Time : Three hours                                **Maximum : 75 marks**

**I. Essay Questions :       Answer any TWO questions       (2 x 20 = 40)**
   1. Write the principle, construction, working, application, merits and demerits of freeze drying.
   2. **a)** Explain the theories and factors affecting filtration.
      **b)** Discuss in detail filters press with washing mechanism.
   3. **a)** Describe the principle and factors affecting size reduction.
      **b)** Discuss in detail fluid energy mill.

**II. Write Short Notes :   Answer any FIVE questions       (5 x 5 = 25)**

   1. Write the methods of prevention of corrosion.
   2. Discuss the principle underlying centrifugation.
   3. Explain Swenson Walker Crystallizer.
   4. Explain the prevention of caking of crystals.
   5. Describe with a diagram 'Venturimeter'.
   6. Explain the principle of refrigeration.
   7. Write the principles underlying fractional distillation.

**III. Short Answers:       Answer any FIVE questions       (5 x 2 = 10)**

   1. Define 'Reynolds Number'.
   2. Application of stainless steel material in pharmacy.
   3. What is azeotropic distillation?
   4. Classify dryer with examples.
   5. Define filter media.
   6. Define nucleation in crystallization.
   7. Write various parts involved in rotary tablet press.

******

**[KX 742]**                                                                **Sub. Code: 4233**

**SECOND B.PHARM. DEGREE EXAMINATION**
**(Regulations 2004)Candidates Admitted from 2004-05**
**and 2009-2010 Lateral Entry Batch)**
**Paper IV – PHARMACEUTICAL TECHNOLOGY**
*Q.P. Code : 564233*

**Time : Three hours**                                        **Maximum : 75 marks**
**I. Essay Questions :**                                              **(2 X 20 = 40)**
**Answer any TWO questions.**

1. Explain the factors affecting evaporation. Describe multiple effect Evaporator and give its advantages.

2. Explain the theory of solid-solid mixing. Name the equipments used in solid mixing. Describe the construction and working of any two mixers used in solid mixing.

3. a) Discuss the concept of Dehumidification and application of humidity measurement. Name the equipments used for dehumidification.
   b) Describe the principle and application of Refrigeration.

**II. Write Short Notes :**                                              **(5X 5 = 25)**
**Answer any FIVE questions.**
1. Industrial hazards.
2. Fluid flow.
3. Source of heat.
4. Steam distillation.
5. Special drying methods.
6. Fluid energy mill.
7. Solubility curves.

**III. Short Answers:**                                                **(5X2 = 10)**
**Answer any FIVE questions.**
1. Application of glass.
2. Examples of filter media.
3. What is latent heat?
4. Name the factors affecting crystallization.
5. Types of liquid movement.
6. Name the dryers used in pharmaceutical industries.
7. What is extractive distillation?

******

**[KY 742]**                                                        **Sub. Code : 4233**

**SECOND B.Pharm. DEGREE EXAMINATION.**

**(Regulations 2004)**

**(Candidates Admitted from 2004-2005 and 2009–2010 Lateral Entry Batch)**

**Paper IV — PHARMACEUTICAL TECHNOLOGY**

*Q. P. Code : 564233*

**Time : Three hours**                                       **Maximum : 75 marks**

**I. Essay questions :**

**Answer any TWO questions.**          **(2 x 20 = 40)**

1. Define corrosion and various types of corrosion. Describe on prevention and control of corrosion.

2. (a) Describe the construction, working, advantages and disadvantages of rotary drum filter.
   (b) Explain the various factors affecting filteration.

3. (a) Enumerate the concept of Dehumidification and its pharmaceutical applications.
   (b) Explain the working principles of film evaporator.

**II. Write short notes :**

**Answer any FIVE questions.**          **(5 x 5 = 25)**

1. Concepts of boundary layer.

2. Principles of centrifugation.

3. Manometers.

4. Solubility curve.

5. Principles and application of air condition.

6. Fractional distillation.

7. Planetary mixer.

**III. Short Answers :**

**Answer any FIVE questions.**          **(5 x 2 = 10)**

1. Reynold's number

2. Define centrifugation.

3. Define distillation.

4. What are alloys give any two examples.

5. Critical moisture content.

6. Nucleation.

7. Crystal lattice.

******