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Total No. of Pages : 02

Total No. of Questions : 10

**B.Pharma (2011 to 2016) (Sem.-3)**  
**PHARMACEUTICS-III (Unit Operation-I)**  
Subject Code : BPHM-303  
M.Code : 46223

Time : 3 Hrs.

Max. Marks : 80

**INSTRUCTION TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of FIFTEEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains FOUR questions carrying TEN marks each and students have to attempt any THREE questions.

**SECTION-A****1. Answer briefly :**

- a. Laminar Flow
- b. Mass flow rate
- c. Pneumatic conveyors
- d. Darcy Law
- e. Woven filter media
- f. Crystal growth
- g. Crystal cracking
- h. Psychrometric chart
- i. Principle of refrigeration
- j. Chemical hazards
- k. Role of pentagon in dust hazards





- l. Applications of glass as material for plant construction
- m. Boundary layer
- n. Factors affecting filtration
- o. Tubular bowl centrifuge

#### **SECTION-B**

- 2. Write a note on various nucleation mechanisms.
- 3. Describe the construction and working of rotary filters.
- 4. Highlight the importance of accident records in industry.
- 5. Give the construction and working of spray ponds.
- 6. Write a note on types of materials used in plant construction.

#### **SECTION-C**

- 7. Describe in detail the principle, construction and working of centrifugal pumps.
- 8. Write a note on various types of crystallizers and tanks.
- 9. What is air conditioning? Highlight its principle and importance in pharmaceutical industry.
- 10. Describe the construction and working of rotameters.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**

