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Total No. of Pages : 02

Total No. of Questions : 10

B.Pharma (2012 to 2016) (Sem.-4)

PHARMACEUTICS IV

(Unit Operation-II)

Subject Code : BPHM-401

M.Code : 46231

Time : 3 Hrs.

Max. Marks : 80

INSTRUCTIONS 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**Q1. Define :**

- a) Differentiate between streamline and turbulent flow.
- b) Give the principle of mixing.
- c) Write the function of rectifying column.
- d) What is Fourier's law?
- e) Enlist the different types of evaporator.
- f) Explain steady and unsteady state.
- g) Give the principle of distillation.
- h) Explain the principle of freeze dryer.
- i) There are various pressures in fluid flow. Discuss.
- j) Differentiate between convection and radiation.
- k) What is Mole Fraction?



- l) What is the objective of size reduction?
- m) Write a note on hammer mill.
- n) What are Azeotropes?
- o) Write full form of :
 - (i) EMC
 - (ii) CMC.

SECTION-B

- Q2. What are the objectives of size reduction? Discuss the laws governing size reduction. (5)
- Q3. Discuss the application of LOD dryers in pharmaceutical industries. (5)
- Q4. Explain the principle and methodology of simple distillation. Differentiate between steam and fractional distillation. (5)
- Q5. Discuss the fluid energy mill. (5)
- Q6. What is Raoult's law? Draw and discuss various phase diagrams. (5)

SECTION-C

- Q7. Discuss any two types of manometers with diagram. Define what is Reynolds's number and its significance? (10)
- Q8. Discuss the principle, objective and mechanism of drying process. (10)
- Q9. What are the different mechanisms of heat transfer? Explain natural convection and forced convection. (10)
- Q10. Discuss the principle and working of flash distillation with diagrams. (10)

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