



NH-014-003101

Seat No. _____

M. P. M. (Sem. I) Examination

January – 2017

Unit Operation - I (BP - 101 T)

Faculty Code : 014

Subject Code : 003101

Time : 3 Hours]

[Total Marks : 80

- Instructions :** (1) Answer any three from each section except question 1 and 5 are compulsory.
(2) Figure to the right indicates marks.
(3) Draw neat and clean diagrams as required.

SECTION - I

- 1** Answer any seven out of given ten questions : **2×7=14**
- (a) What is filtration ?
 - (b) Explain the centrifugal effect.
 - (c) Define Raoult's Law.
 - (d) Enlist different types of dryers.
 - (e) Define distillation and evaporation.
 - (f) Draw well labeled diagram of filter leaf.
 - (g) Differentiate filtration from clarification.
 - (h) Define centrifugation with their types.
 - (i) Explain due point.
 - (j) Define filter media with suitable example.
- 2** Answer the following :
- (a) Write a note on filter press. **7**
 - (b) Explain theory of filtration. **6**
- 3** Answer the following :
- (a) Discuss in detail about rotary filter. **7**
 - (b) Explain principle and theory of centrifugation. **6**

- 4 Answer the following :
- (a) Give application of filtration in pharmacy. 7
 - (b) Give difference of surface and depth filtration. 6

SECTION - II

- 5 Answer any **two** out of given **three** questions : 2×7=14
- (a) Discuss factors influencing filtration.
 - (b) Write a note on fluidized bed dryer.
 - (c) Give the types of refrigeration cycles.
- 6 Answer the following :
- (a) Discuss dehumidification process. 7
 - (b) Explain climbing film evaporator. 6
- 7 Answer the following :
- (a) Explain McCabe Thiele method for calculation of number of theoretical plates. 7
 - (b) Write a note on multiple effect evaporator. 6
- 8 Answer the following :
- (a) Explain the techniques for measurement of humidity. 7
 - (b) Discuss azeotropic distillation. 6
-