PY - 401

B.Pharmacy IV Semester

Examination, December 2015

Pharmaceutics - IV

Pharmaceutical Engineering - II

Time : Three Hours *Maximum Marks : 70*

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.
ii) All parts of each questions are to be attempted at one place.
iii) All questions carry equal marks, out of which part A and B (Max.50 words) carry 2 marks, part C (Max.100 words) carry 3 marks, part D (Max.400 words) carry 7 marks.
iv) Except numericals, Derivation, Design and Drawing etc.

1. a) What is the significance of size-reduction?
   b) Define Henry's law.
   c) Give brief account on material balance.
   d) Write a note on standards of sieves. Describe various factors affecting sieving process.

   OR

   Describe in detail the theory behind the size-reduction process.

2. a) What are the different types of evaporators?
   b) Explain Raoult's law.
   c) Write short notes on adhesion and cohesion of particles.
   d) Explain steps involved in developing a tablet batch, of lab scale to industrial scale batch.

OR

Explain the compression cycle and effect of applied force.

3. a) What are the different factors affecting filtration?
   b) Classify Crystallizers.
   c) What are the different types of dryers?
   d) Write a brief account of Mccabe-Thiele approach for prediction of theoretical plates.

   OR

   What are azeotropic mixtures? How can they be separated?

4. a) Define diffusion battery.
   b) Classify the filters.
   c) Give a brief account on continuous counter current extraction.
   d) What is Meier's theory of supersaturation? Discuss its limitations.

   OR

   Give construction and working of a typical vacuum crystallizer.

5. a) Define filter media.
   b) Classify size reduction machines.
   c) What is the principle of centrifugation?
   d) Write the theory of semi-solid mixing. Give a brief account on the equipment used in semi-solid mixing.

   OR

   Explain the various properties of granules which may affect the tablet preparation.

******