

NRT/KS/19/3155

B.Pharm. (Third Semester) (C.B.S.) Examination
PHARMACEUTICS—III (Unit Operations)
Paper—1

Time : Three Hours]

[Maximum Marks : 80

- N.B. :—** (1) Question No. **1** is compulsory.
(2) Attempt any **FOUR** questions out of remaining.
(3) All questions carry marks as indicated.
(4) Draw neat labelled diagrams wherever necessary.

1. Solve any **FIVE** of the following :
 - (a) Explain different types of sieves used for size separation.
 - (b) Give the mechanisms of liquid mixing.
 - (c) Draw a well labelled diagram of Rotary Drum Filter.
 - (d) Explain modes of stress applied in size reduction.
 - (e) Explain theory of centrifugation in brief.
 - (f) Give Fick's law of diffusion.
 - (g) Give the objectives of conveying. 5×4=20
2. (a) Explain, principle, construction and working of plate and frame filter press. 8
(b) What is filter media and filter aid ? Explain factors affecting filtration. 7
3. (a) Give the disadvantages of size reduction. Explain principle, construction and working of fluid energy mill. 8
(b) Discuss Bernoulli's theorem. 7
4. Discuss principle, construction and working of Belt and Pneumatic Conveyor. 15
5. (a) Discuss devices for liquid mixing. 8
(b) Explain Reynold's experiment. 7
6. (a) Discuss the principle, construction and working of perforated basket centrifuge. 8
(b) Classify powders as per sieve number. Draw a well labelled diagram of cyclone separator. 7
7. Write short notes on (any **THREE**) :
 - (a) Ribbon blender
 - (b) Factors influencing size reduction
 - (c) Types of filtration
 - (d) Mixing of semi-solids. 5×3=15