

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Ph. - SEMESTER– II • EXAMINATION – SUMMER -2018

Subject Code:BP203TP**Date:24/05/2018****Subject Name: PHARMACEUTICAL ENGINEERING****Time: 10:30 AM TO 01:30 PM****Total Marks: 80****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Give the difference between Orifice meter and Venturi meter. **06**
(b) Why size separation is required? What are the methods involved in size separation? Discuss the principle and operation of Cyclone Separator. **05**
(c) Explain Fourier's law in heat transfer. **05**
- Q.2** (a) What is Reynolds number? Give its significance. **06**
(b) Describe ball mill with working principle. **05**
(c) Explain elutriation. Describe multistage elutriation process. **05**
- Q.3** (a) With a neat diagram explain the falling film evaporator & climbing film evaporator. **06**
(b) Explain the factors affecting evaporation. **05**
(c) Write a short note on Azeotropic distillation. **05**
- Q.4** (a) Explain Raoult's law and Dalton's law. **06**
(b) Write a note on theory of drying. **05**
(c) With neat diagram explain Fluidized bed dryer (FBD). **05**
- Q.5** (a) Enlist mixers for semisolids. Describe planetary motion mixer. **06**
(b) Explain the terms: Positive Mixing, Negative Mixing and Neutral Mixing giving suitable examples. **05**
(c) Explain construction and working of filter press. **05**
- Q.6** (a) Explain the conical disc centrifuge or De Laval Clarifier. **06**
(b) Write a note on principle & theory of centrifugation. **05**
(c) Define the filter aid. Give the example of filter aid. **05**
- Q.7** (a) Explain importance of corrosion. Discuss theory of corrosion. **06**
(b) Write a short note on Glass as a material for plant construction. **05**
(c) Write a note on Rotameter. **05**
