

Seat No.: _____

Enrolment No. _____

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 it 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 factor affecting on evaporation. 05
- (c) Write short note on Azotropic 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
