

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Pharm. – SEMESTER II– • EXAMINATION – WINTER -2018

Subject Code:BP203TP

Date:13/12/2018

Subject Name: Pharmaceutical Engineering

Time: 02:30 PM TO 05:30 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) Classify flow meters. Explain Rotameter with general design & working. **06**
(b) Enlist mechanisms of size reduction. Describe fluid energy mill in detail. **05**
(c) Enlist official standards of powders. Discuss the principle and operation of Cyclone Separator. **05**
- Q.2** (a) What is distillation? Explain fractional distillation with detailed diagram. **06**
(b) What is manometer? Explain anyone in detail. **05**
(c) Define evaporation. Give principle & operation of climbing film evaporator. **05**
- Q.3** (a) Explain heat transfer mechanisms in detail. **06**
(b) Describe principle & methodology of steam distillation. **05**
(c) What is Reynolds number? Show how it is dimensionless. What is its significance in fluid flow? **05**
- Q.4** (a) Explain drying curve with its application. **06**
(b) Give principle & construction of freeze dryer with its merits & demerits. **05**
(c) Classify solid mixers. Explain any one in detail. **05**
- Q.5** (a) Write a brief note on objectives & theories of filtration. **06**
(b) Explain filter used for filtration of sterile preparations. **05**
(c) Explain construction & working of supercentrifuge with diagram. **05**
- Q.6** (a) Write short note on Glass as a material for plant construction. **06**
(b) Explain factors affecting selection of materials for pharmaceutical plant construction **05**
(c) Write a short note on theory of corrosion with its importance. **05**
- Q.7** (a) Derive the Bernoulli's equation with proper assumption. **06**
(b) Differentiate Orifice meter and Venturimeter. **05**
(c) Define the filter aid. Give the example of filter aid & methods of addition. **05**
