

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Ph. - SEMESTER– II • EXAMINATION – WINTER-2022

Subject Code: BP203TP**Date: 17/02/2023****Subject Name: Pharmaceutical Engineering****Time: 02:30pm to 05:30pm****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) Enlist types of manometer. Describe inclined manometer in detail. **06**
(b) Enlist mechanisms of size reduction. Describe fluid energy mill in detail. **05**
(c) Describe with a clean and labeled diagram the construction, principle, working, advantages, Dis-advantages and application of cyclone separator **05**
- Q.2** (a) Draw the drying rate curve and explain the different stages of it. **06**
(b) Explain the factor affecting on evaporation. **05**
(c) What is black body? Write a short note on Stefan- Boltzman's law. **05**
- Q.3** (a) Discuss the construction, principle, working, advantages, Dis-advantages of forced circulation evaporator. **06**
(b) Write short note on Azeotropic distillation. **05**
(c) Discuss in detail freeze dryer. **05**
- Q.4** (a) Enlist mixers for semisolids. Describe planetary motion mixer. **06**
(b) Discuss the various mechanisms of filtration process. **05**
(c) Explain the law governing size reduction. **05**
- Q.5** (a) Describe the construction and working of meta filter. **06**
(b) Give the principle and theory of centrifugation. **05**
(c) Write down in detail about different methods of heat transfer. **05**
- Q. 6** (a) What is corrosion? Mention the factors that influence rate of corrosion. **06**
(b) Discuss the various factors affecting selection of material of plant construction. **05**
(c) Explain Fourier's law in heat transfer. **05**
- Q.7** (a) Write a note on Rotameter. **06**
(b) Explain Bernoulli's Theorem in detail. **05**
(c) Explain critical speed of Ball mill. **05**
