

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Pharm. SEMESTER-I • EXAMINATION – SUMMER-2018**Subject Code:210004****Date: 01/05/2018****Subject Name: Pharmaceutical Engineering****Time: 2.30PM To 5.30PM****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) Discuss in details about unit operations and Dimensional equation with their pharmaceutical significances. **06**
(b) Write a note on Tie- substance and Energy balance. **05**
(c) Explain about methods for Graphical presentations. **05**
- Q.2** (a) Discuss in details about Bernoulli's theorem and give it's applications **06**
(b) Write a note on Rotameter and Orifice meter **05**
(c) Differentiate between Pitot tube and venturi meter **05**
- Q.3** (a) Classify different types of valve. Explain Diaphragm valve with suitable diagram. **06**
(b) Compare the characteristics of Reciprocating and Centrifugal Pumps **05**
(c) Give the differences between pipes and tubing. **05**
- Q.4** (a) Describe principle and working of rotameter with labeled diagram. **06**
(b) Write about laws: Dalton's Law and Amagat's Law **05**
(c) Clasify manometers with advantages and dis advantages. Discuss about Inclined Manometers **05**
- Q.5** (a) Enumerate different types of heat exchange equipment. Discuss construction and working of single pass tubular heatexchanger **06**
(b) Define conduction. Write a note on Fourier's law **05**
(c) Discuss in breif about Black body and Grey body. **05**
- Q. 6** (a) Explain various factors affecting on selection of materials for plant construction. **06**
(b) What are the differences between pipes and tubing? **05**
(c) Explain about Plastics used in Pharmaceutical industries with their merits and de-merits. **05**
- Q.7** (a) How to prevent and control of different types of corrosion in industry. **06**
(b) Enlist different types of conveyor. Write in details with a diagram on Bucket conveyer. **05**
(c) Write a short note on solid/fluid mass transfer **05**
