

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.PHARM- SEM-I-EXAMINATION – JUNE 2012

Subject code: 210004

Date: 27/06/2012

Subject Name: Pharmaceutical Engineering

Time: 10:30 am – 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) Discuss the Reynolds number & give its significance. **06**
(b) Classify the manometers. Describe the inclined manometers. **05**
(c) Write a note on Rotameter. **05**
- Q.2** (a) Describe the Fourier's Law. **06**
(b) Explain the film coefficient & overall film coefficient. **05**
(c) List the heat exchangers. Describe any one in details. **05**
- Q.3** (a) Enumerate the different types of valves. Describe gate valve. **06**
(b) Describe the factors affecting the storage of liquids. **05**
(c) Classify the transportation system for solids. Discuss the belt conveyor. **05**
- Q.4** (a) Enlist the factors influencing the selection of material of pharmaceutical plant construction. **06**
(b) Define corrosion. Classify the types of corrosion. How do you prevent the galvanic corrosion? **05**
(c) List the unit operations & unit processes. Write the SI units for mass, length, time, temperature, heat & force. **05**
- Q.5** (a) Describe the Gas Laws. **06**
(b) What is Daltons Law? Derive its corollary. **05**
(c) What is dimensional Analysis? Give its advantages and disadvantages. **05**
- Q.6** (a) Give the influences of mass transfer on unit operations. **06**
(b) Differentiate between Orifice meter & Venturi meter. **05**
(c) Describe the various modes of heat transfer. **05**
- Q.7** Write a note on followings.
(a) Reciprocating pump. **06**
(b) Steam as heating medium. **05**
(c) Total mechanical energy balance. **05**
