

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B. Pharm. – SEMESTER – I • EXAMINATION – WINTER 2013

Subject Code: 210004

Date: 30-12-2013

Subject Name: Pharmaceutical Engineering

Time: 02.30 pm - 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) Define Pharmaceutical engineering. Differentiate unit operation from unit process giving suitable illustration. (8)
- (b) What is the difference between SI unit and CGS unit? What is dimensionless group? Explain it giving suitable illustration. (8)
- Q.2 (a) Define stoichiometry and explain its significance in pharmacy. Write a note on Tie-substance. (8)
- (b) Enumerate various gas laws and their application. (8)
- Q.3 (a) What is the difference between manometer and flow meter? Write a basic equation for fluid flow. (8)
- (b) Write a note on Rotameter. (8)
- Q.4 (a) Write a note on design of a store in Pharma. Industry. (8)
- (b) What is the color coding in various pipe lines to handle fluids in Pharma.Industry.(8)
- Q.5 (a) What do you mean by film as resistance in heat transfer? (8)
- (b) Write a note on ideal properties of steam as a heating media. (8)
- Q.6 (a) Suggest the unit operation involving solid/fluid and fluid/fluid mass transfer. (8)
- (b) Discuss various factors affecting selection of material of plant construction. (8)
- Q.7 (a) What do you mean by corrosion? Discuss any one theory of it. (8)
- (b) Classify material used in pharma. Plant construction and suggest comparison of any two material. (8)
