

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 Grahical 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
