Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharm. – SEMESTER – I • EXAMINATION – WINTER • 2015

Subj	ject	Code: 210004 Date: 29-12-2015	
_	e: 10	Name: Pharmaceutical Engineering 0:30 am - 01:30 pm Total Marks: 80 ons:	
	1.	Attempt any five questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a) (b) (c)	Write a short note on different types of graphical representation. Discuss the importance of pharmaceutical engineering in the field of pharmacy. Explain the terms (1) Gas constant and (2) Reynolds number	06 05 05
Q.2	(a) (b) (c)	Define stoichiometry and discuss its significance in Pharmacy. Discuss material balance and energy balance. Write a short note on fuels.	06 05 05
Q.3	(a) (b) (c)	Discuss Rotameter in detail. Write a short note on frictional losses. Draw neat and labeled diagram of orificemeter and venturimeter.	06 05 05
Q.4	(a) (b) (c)	Classify the solid transportation system. Discuss belt conveyor. Define valves. Draw neat and labeled figure of globe valve.	06 05 05
Q.5	(a) (b) (c)	Discuss Fourier's law and derive its equation. Describe the various modes of heat transfer. Define Black Body. Write a short note on Stefan-Boltzmann law.	06 05 05
Q. 6	(a) (b) (c)	Discuss the principle involved in Mass transfer. Enumerate unit operations in which mass transfer operation is involved. Write a note on various types of glasses used in a pharmaceutical industry. Discuss different ways for prevention and control of corrosion in industry.	06 05 05
Q.7	(a) (b) (c)	Define Manometer? Derive equation applicable for simple manometer. What are differences between Pipe and Tubings? Derive the equation for the rate of heat transfer when the resistances are in series.	06 05 05
