

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Pharm. – SEMESTER II– • EXAMINATION – WINTER -2018

Subject Code:BP203TP

Date:13/12/2018

Subject Name: Pharmaceutical Engineering

Time: 02:30 PM TO 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)	Classify flow meters. Explain Rotameter with general design & working.	06
	(b)	Enlist mechanisms of size reduction. Describe fluid energy mill in detail.	05
	(c)	Enlist official standards of powders. Discuss the principle and operation of Cyclone Separator.	05
Q.2	(a)	What is distillation? Explain fractional distillation with detailed diagram.	06
	(b)	What is manometer? Explain any one in detail.	05
	(c)	Define evaporation. Give principle & operation of climbing film evaporator.	05
Q.3	(a)	Explain heat transfer mechanisms in detail.	06
	(b)	Describe principle & methodology of steam distillation.	05
	(c)	What is Reynolds number? Show how it is dimensionless. What is its significance in fluid flow?	05
Q.4	(a)	Explain drying curve with its application.	06
	(b)	Give principle & construction of freeze dryer with its merits & demerits.	05
	(c)	Classify solid mixers. Explain any one in detail.	05
Q.5	(a)	Write a brief note on objectives & theories of filtration.	06
	(b)	Explain filter used for filtration of sterile preparations.	05
	(c)	Explain construction & working of supercentrifuge with diagram.	05
Q. 6	(a)	Write short note on Glass as a material for plant construction.	06
	(b)	Explain factors affecting selection of materials for pharmaceutical plant construction	05
	(c)	Write a short note on theory of corrosion with its importance.	05
Q.7	(a)	Derive the Bernoulli's equation with proper assumption.	06
	(b)	Differentiate Orifice meter and Venturimeter.	05
	(c)	Define the filter aid. Give the example of filter aid & methods of addition.	05
