Seat No.:	Enrolment No.

## **GUJARAT TECHNOLOGICAL UNIVERSITY** B.Pharm. - SEMESTER-I • EXAMINATION – SUMMER 2017

Subject Code: 210005 Date: 30/05/2017

**Subject Name: Pharmaceutics-I** 

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)	Enumerate factors affecting rate of filtration and discuss any two of them in detail.	06
	(b) (c)	Write construction and working of Plate and Frame Filter Press. Write are filter aids? Write its advantages and limitations.	05 05
Q.2	(a)	Define centrifugation and write construction, working, advantages and disadvantages of perforated basket centrifuge.	06
	(b) (c)	Write principle and working of sediment type centrifuge. Write a note on application of centrifugation in pharmacy.	05 05
Q.3	(a) (b) (c)	Define the term evaporation and explain the factors affecting evaporation. Classify evaporators and briefly explain falling film evaporator. Write a note on Raoult's Law.	06 05 05
Q.4	(a) (b) (c)	Explain the process of steam distillation and give its importance in pharmacy. What are azeotropic mixtures and how are they separated? Differentiate between evaporation and distillation.	06 05 05
Q.5	(a) (b) (c)	Explain the theory and process of drying. Write principle, construction and working of tray dryer. Discuss in brief the process of freeze drying.	06 05 05
Q. 6	(a) (b)	Write a note on HVAC system.  Define the terms: Relative humidity, dew point, humid heat, percentage humidity and dry bulb temperature.	06 05
	(c)	Write a note on dehumidification operation.	05
Q.7	(a) (b) (c)	Write a note on various mechanism behind filtration process.  Define the term: Evaporation, filtration, drying and distillation  Classify dryers and with neat diagram explain the working of fluidized bed dryer.	06 05 05

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