Seat No.: Enr	olment No.
---------------	------------

GUJARAT TECHNOLOGICAL UNIVERSITY B. PHARM. - SEMESTER-IV • EXAMINATION - SUMMER - 2017

Subject Code: 2240001 Date: 02/05/2017

Subject Name: Unit Operation - II

Time: 02:30 PM to 05:30 PM **Total Marks: 80**

Instructions:

1.	Attemnt	any five	questions.
1.	Attempt	any nve	questions.

- Make suitable assumptions wherever necessary.
 Figures to the right indicate full marks.

Q.1	(a) (b) (c)	Define filtration. Discuss mechanisms and types of filtration Give a detail note on filter aid used in pharmaceutical filed Write principle, construction, working, advantages, disadvantages and applications of plate and frame filter press	06 05 05
Q.2	(a) (b) (c)	Define centrifugation. Write applications of centrifugation process in field of pharmacy Describe Principle and theory of centrifugation Describe principle, construction, working, advantages, disadvantages and applications of continuous horizontal centrifuge	06 05 05
Q.3	(a) (b) (c)	Describe principle, construction, working, merits and demerits of fluidized bed dryer with labeled diagram. Discuss in detail freeze dryer Define the following term: Drying, EMC, CMC, FMC, LOD	06 05 05
Q.4	(a) (b) (c)	Classify the distillation methods. Discuss in detail simple steam distillation process used at laboratory scale Write a note on molecular distillation with its application Discuss in detail fractionating columns	06 05 05
Q.5	(a) (b) (c)	Write a note on factors influencing on evaporation Describe principle, construction, working, advantages, disadvantages and applications of forced circulation evaporator Write a detail note on Duhring's Rule and Raoult's law with respect of evaporation	06 05 05
Q. 6	(a) (b) (c)	Discuss in detail psychometric chart with it application Explain with neat and labeled diagram of refrigeration cycle Enlist method used to determine humidity. Explain hygrometers	06 05 05
Q.7	(a) (b) (c)	Write principle, construction, working, advantages, disadvantages and applications of filter leaf Discuss in detail air conditioning system Discuss principle, construction, working, merits and demerits of spray dryer with labeled diagram.	06 05 05
