Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY B. Pharm. – SEMESTER – VIII • EXAMINATION – WINTER • 2016

Subject Code: 2280001 Date: 18-11-2016

Subject Name: Dosage Form Design-II

Time: 02:30 pm - 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) (b) (c)	Explain loading and maintenance dose in control release formulations with their equations. Describe the advantages and limitations of sustained release formulations. Give the difference between conventional and controlled release system. Describe the evaluation of oral controlled drug delivery system.	06 05 05
Q.2	(a) (b)	Describe the key components of oral osmotic drug delivery system with examples. Describe pharmacokinetic parameters to be considered in development of controlled release formulations.	06 05
	(c)	Discuss limitations of ophthalmic formulations. Describe ophthalmic in situ gel.	05
Q.3	(a)	Explain transdermal drug delivery. Describe formulation of transdermal drug delivery system.	06
	(b) (c)	When colon targeting is needed? Describe pH dependent approach for colon targeting. Explain liposomes and niosomes. Describe any one method for their preparation.	05 05
Q.4	(a) (b) (c)	Which are rationales for gastro-retentive drug delivery? Explain floating approach. Describe preparation and evaluation of parenteral emulsion. What is oromucosal drug delivery? Write a note on buccal drug delivery system.	06 05 05
Q.5	(a) (b) (c)	Explain pharmacokinetics. Explain a typical plasma level time curve after single oral dose. What are pharmacokinetic models? Explain in detail non-compartmental approach. Describe Wagner-Nelson method for determination of absorption rate constant.	06 05 05
Q. 6	(a) (b) (c)	What is nonlinear pharmacokinetics? Explain Michaelis-Mentan equation for the same. What is extraction ratio? Define clearance, total body clearance and organ clearance. Write a note on: Hydrogel.	06 05 05
Q.7	(a) (b)	Explain dosage adjustment in patients with hepatic failure. Explain term: Drug interaction. Discuss ADME drug interactions with suitable examples. Explain clinical pharmacokinetics? Enlist its applications in drug therapy.	06 05
