Seat No.: _____ *Enrolment No._____*

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharm-Semester-VIII Summer-2012 Examination

Subject code: 280001

Subject Name: Dosage Form Design-II

Time: 10:30am to 1:30pm **Date:16 -05-2012**

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)	Enlist various approaches for pharmacokinetic analysis of experimental data and explain compartmental models in detail.	**06**
	(b)	Enlist the methods for determination of absorption rate constant. Explain any one method in detail.	**05**
	(c)	What process of drug ADME are known to show non linearity Explain giving suitable examples	**05**
Q.2	(a)	Explain in detail: Ideal requirements for sustained release formulations.	**06**
	(b)	Why loading dose is required in sustained release formulations? Give the equations for loading dose and maintenance dose.	**05**
	(c)	Explain osmotic pressure controlled drug delivery system.	**05**
Q.3	(a)	Define "Drug interaction". Explain pharmacokinetic drug interactions giving suitable examples	**06**
	(b)	Explain dosage adjustment in patients with renal and hepatic failure.	**05**
	(c)	Explain volume of distribution and distribution coefficient	**05**
Q.4	(a)	Define clearance, total body clearance and organ clearance. What is extraction ratio?	**06**
	(b)	Name different methods for determination of Ke from urinary excretion data. Give the criteria for obtaining valid urinary excretion method.	**05**
	(c)	Write a note on Wagner Nelson method.	**05**
Q.5	(a)	Explain targeted drug delivery systems giving examples.	**06**
	(b)	Discuss formulation of diffusion layer controlled drug delivery systems.	**05**
	(c)	Write a note on matrix based controlled drug delivery system.	**05**
Q. 6	(a)	Discuss in detail formulation of transdermal drug delivery system.	**06**
	(b)	Explain gastro retentive drug delivery systems.	**05**
	(c)	Write a note on buccal drug delivery systems.	**05**
Q.7	(a)	Enlist different approaches for formulation of colon targeted drug delivery system and explain any two of them.	**06**
	(b)	Write a note on ophthalmic controlled release systems	**05**
	(c)	Differentiate between microspheres and micro capsules	**05**

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