

Seat No.:-----

Enrolment No.:-----

UKA TARSADIA UNIVERSITY

Maliba Pharmacy College

M. Pharm 2nd Semester Internal Examination April 2014 (*Mid-Sem*)

040040202-Drug Delivery Systems-I

Time: 1:30 a.m. To 4:30 p.m.

Max. Marks: **70**

Date: 07/04/2014

Instructions:

- Attempt any **SEVEN** questions.
- Each question carries **10** marks.
- Make suitable assumption whenever necessary.
- Figures to the right indicate full marks.

Q.1	Explain zero order and slow first order drug release with suitable graph and equations.	10
Q.2	Explain the following terms with suitable graph (a) delayed release (b) sustained release (c) prolonged release.	10
Q.3	How will you perform in vivo evaluations of solid controlled release dosage forms?	10
Q.4	Explain the pharmacokinetic and pharmacodynamic characteristics of the drug for controlled release formulations.	10
Q.5	A) What are controlled release systems? Give their advantages and disadvantages.	05
	B) Differentiate between sonophoresis and iontophoresis.	05
Q.6	A) Explain with examples membrane permeation controlled systems for Transdermal drug delivery.	07
	B) Describe osmogens employed in osmotic drug delivery systems.	03
Q.7	Mr. Manoj wants to formulate floating microspheres. Describe the advantages, qualitative formula, formulation and evaluation aspects of the said dosage form.	10
Q.8	Describe in detail about the Elementary osmotic pump and push pull osmotic pump along with examples and evaluation aspects.	10
Q.9	Discuss the <i>in vitro</i> and <i>in vivo</i> evaluation techniques for Transdermal drug delivery systems.	10