

Seat No.:-----

Enrolment No.:-----

**UKA TARSADIA UNIVERSITY**

Maliba Pharmacy College

M.Pharm 2<sup>nd</sup> Semester Internal Examination April 2012

**040040202- Drug Delivery Systems-I**

Time: 1:30 to 4:30 p.m.

Max. Marks: **70**

Date: 21/04/2012

**Instructions:**

- Question no. **1 is compulsory.**
- From Q.2 to Q.7 attempt any **four** questions.
- Make suitable assumption whenever necessary.
- Figures to the right indicate full marks.

<b>Q.1</b>	(a)	Answer the following: (any six)	<b>06</b>
	1	Enlist different pathways for drug transport.	
	2	Enlist methods for manufacturing thin films.	
	3	Define first order and zero order drug release.	
	4	Define lag time and floating time in context of GRDDS.	
	5	What is glass transition temperature?	
	6	What is the threshold pH value for Eudragit L100 & Eudragit S100?	
	7	Define Mucociliary clearance.	
	8	What is active and passive targeting?	
	(b)	Describe in brief: (any four)	<b>08</b>
	1	What are the advantages and disadvantages of controlled release systems?	
	2	Enlist the microorganisms present in colon micro flora.	
	3	What are the desirable properties of a drug for formulating it as transdermal delivery systems?	
	4	Classify polymers based on their structure and give suitable examples.	
	5	How can one formulate parenteral implants?	
	6	Explain the steps involved in the process of mucoadhesion.	
<b>Q.2</b>	(a)	Write a note on dissolution controlled release systems.	<b>04</b>
	(b)	Discuss the various delivery systems utilizing enzymes for drug release.	<b>05</b>
	(c)	Enlist the factors to be considered for designing a controlled release dosage form. Discuss any three in detail.	<b>05</b>
<b>Q.3</b>	(a)	Classify type of depot preparations.	<b>04</b>
	(b)	How will you formulate and characterize a long acting suspension for parenteral administration?	<b>05</b>
	(c)	Write a short note on solid lipid nanoparticles.	<b>05</b>
<b>Q.4</b>	(a)	Discuss in detail about characterization of polymers.	<b>04</b>
	(b)	Explain the mechanism of biodegradation.	<b>05</b>
	(c)	Describe in detail about the applications of polymers in delivery systems.	<b>05</b>
<b>Q.5</b>	(a)	Write a note on controlled porosity osmotic pump.	<b>04</b>
	(b)	Compare effervescent and non-effervescent floating dosage forms.	<b>05</b>
	(c)	Discuss prodrug approach for colon targeting.	<b>05</b>

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- Q. 6** (a) Discuss the factors which should be considered while designing a nasal drug delivery system. **04**
- (b) What do you understand by naso-lacrimal drainage system? Discuss the pharmacokinetics of a drug following its instillation into cul-de-sac. **05**
- (c) Differentiate between bioadhesion and mucoadhesion. Discuss, briefly, various methods employed for the assessment of bioadhesion. **05**
- Q.7** (a) Classify penetration enhancers and explain their mechanisms. **04**
- (b) Compare iontophoresis and sonophoresis. **05**
- (c) Discuss different approaches employed in development of transdermal delivery systems. **05**

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