UKA TARSADIA UNIVERSITY

M.Pharm 2nd Semester

040040202- Drug Delivery Systems-I

Time : 2:30 pm to 5:30 pm Date : 30/11/2013

Max. Marks: **70**

Instructions:

- All questions are **compulsory.**
- Make suitable assumption whenever necessary.
- Figures to the right indicate full marks.

Section 1

Q.1	(a)	Answer the following:	**08**
	1	Merits and demerits of monolithic and reservoir systems.	
	2	Explain the terms-'tacticity' of a polymer; 'Young's moduli; 'therapeutic index' and 'peripheral compartment'.	
		OR	
	(a)	Answer the following:	
	1	Enlist various grades and applications of Hypromellose USP.	
	2	timed release systems for colonic delivery	
	(b)	Describe in brief:	**03**
	1	Oral diffusion controlled systems.	
Q.2	(a)	Drug A possesses absorption window in the stomach. Suggest a suitable drug delivery system for the drug giving its advantages. Provide a qualitative formula, manufacturing and evaluation aspects of the dosage form.	**06**
		OR	
	(a)	Classify polymers. Describe in detail the characterization of polymers.	
	(b)	Mr. Anil is interested in formulating EOP. Provide him with the following details- advantages, formulation and evaluation aspects.	**06**
Q.3		Answer the following: (any three)	**12**
	(a)	Explain the working of OROS-CT® & CLAVERSAL®.	
	(b)	Intelligent drug delivery systems utilizing enzymes.	
	(c)	Classify biodegradable polymers and discuss in detail their applications with examples.	
	(d)	Physicochemical properties of drug affecting fabrication of oral controlled release systems.	

Section 2

Q.4 (a) Answer the following: **08**

1 Describe the formulation and evaluation aspects of thin films.

2 Write a note on parenteral depot formulations.

OR

(a) Answer the following:

1 Describe about nasal mucoadhesive drug delivery.

2 Merits and demerits of niosomes. Evaluation aspects of niosomes

(b) Describe in brief: **03**

1 Advantages and disadvantages of transdermal drug delivery systems.

Q.5 (a) Mr. Mahesh wants to formulate a buccal mucoadhesive drug delivery for a poorly permeable drug. As a formulator, suggest the manufacturing formula, formulation and evaluation aspects of the dosage form. **06**

OR

(a) What are liposomes? Enlist the materials used for preparing liposomes? Discuss any two methods in detail.

(b) Explain microreservoir dissolution controlled transdermal systems. **06**

Q.6 Answer the following: (any two) **12**

(a) Explain the various mechanisms of mucoadhesion. Give the methods of assessment of mucoadhesion.

(b) What are the advantages and disadvantages of parenteral controlled release formulations? Discuss the formulation and evaluation of parenteral emulsions.

(c) Write a note on sonophoresis.
