Seat No.:---------- *Enrolment No.:----------*

UKA TARSADIA UNIVERSITY

Maliba Pharmacy College

M. Pharm. Pharmaceutics **3rd** Semester Internal Examination December 2013

040040302 Drug Delivery System - II

Time: 10:30 a.m. To 1:30 p.m. Max. Marks: **70**

Date: 12/12/2013

Instructions:

- Attempt any **FIVE** questions.
- Each question carries **14** marks.
- Make suitable assumption whenever necessary.
- Figures to the right indicate full marks.

Q.1	A)	Define liposomes and classify them on the basis of their size and lamellarity. Enlist the typical formulation components of a liposomal system. Classify the methods for preparing liposomes. Discuss the formulation of liposomes using mechanical dispersion methods. Enlist the merits and demerits of each of them.	08
	B)	Enlist the important methods of preparation of solid lipid nanoparticles. Discuss high pressure homogenization in detail. Enlist its merits and demerits over other methods.	6
Q.2	A)	Discuss the phenomena of enhanced permeability and retention effect? Why do we observe such a phenomena with nanoparticulate drug delivery systems?	03
	B)	What do you understand by resealed RBCs. Discuss the hypo-osmotic lytic methods of drug loading into resealed RBCs.	05
	C)	Define a microemulsion. Differentiate between a conventional emulsion and microemulsion. Discuss the advantages of microemulsions over other vesicular systems.	06
Q.3	A)	Define nanoparticles. Discuss various particle properties which are important during formulation of nano-particulate drug delivery systems. Give appropriate example in each case.	08
	B)	Explain the objectives of performing surface modification of multi-particular carrier systems. Discuss various strategies of surface modification.	06
Q.4	A)	Explain barriers for protein and peptide delivery.	04
	B)	What are the limitations to effective oral delivery of proteins and peptides? Describe various approaches to improve oral delivery of proteins and peptides.	04
	C)	Explain the general structure of antibodies. How do monoclonal antibodies differ from polyclonal antibodies? Discuss the method of preparation of monoclonal antibodies using hybridoma technology.	06
Q.5	A)	Discuss merits and limitations of targeted drug delivery system.	04
	B)	What are the complications arise in pharmacokinetic study of proteins and peptides.	04
	C)	Explain techniques to measure drug uptake in brain.	06
Q.6	A)	Write a note on fluid bed processing in pharmaceuticals.	04
	B)	Discuss biological process involves in brain targeting.	04
	C)	Enlist pelletization techniques. Explain extrusion-spheronization and solution layering technique in detail.	06