

# UKA TARSADIA UNIVERSITY

M. Pharm (Pharmaceutics) (3rd Semester)  
Subject : 040040302-Drug Delivery System II

Time : 10:00 am to 01:00 pm

Duration : 3Hours

Date : 08/01/2014

Max. Marks : 70.

## Section - I

- 1.a) Explain the terms nanotechnology and nanoparticles. (4 + 7 = 11)  
or  
1.a) Differentiate between dendrimers and cyclodextrins.
- 1.b) Define monoclonal antibodies and describe in detail their production methods.
2. a) Write a note on phase diagrams for optimization of microemulsions. (4 + 8 = 12)  
or  
2.a) Differentiate SNEDDS and SMEDDS
- 2.b) Discuss the methods of developing nanoparticles and enumerate their evaluation parameters.  
Explain the importance of polydispersibility index (PDI).
3. Answer any Three (4 x 3 = 12)
- (i) Explain resealed erythrocytes.  
(ii) Enumerate various vesicular systems with examples.  
(iii) Write a note on formulation and evaluation of SMEDDS.  
(iv) Applications of solid lipid nanoparticles.

## Section – II

4. What are targeted drug delivery systems? Enumerate various types of targeted drug delivery systems and explain the advantages and disadvantages of each of them. (11)  
or  
4. What is pelletization? Discuss different techniques of pelletization. Give the applications of pelletized dosage forms in pharmaceutical field.
5. What is PEGylation? Give a brief account of its medical applications and manufacturing challenges. (12)  
or  
5. Write a note on biology, pharmacology and pathophysiology of BBB. Give its importance for the delivery of drugs specifically to the brain.
6. Answer any Three (4 x 3 = 12)
- (I) Factors affecting drug absorption from colon targeted drug delivery.  
(II) Various approaches for floating drug delivery systems.  
(III) Explain fluid bed processing of pharmaceuticals.  
(IV) Explain protein and peptide drug delivery.