INTERNAL EXAM

MALIBA PHARMACY COLLEGE

M.Pharm. Pharmaceutics (3rd Semester)

8-11-2012 **Subject : Drug Delivery System - II**

Duration: 3 Hours **Max. Marks: 70.**

Instructions:

1. Attempt all questions.
2. Write each section in a separate answer book.
3. Make suitable assumptions wherever necessary.
4. Figures to the right indicate full marks allocated to that question.
5. Draw diagrams/figures whenever necessary.

Section-1

Q-1 (A) Answer the following. **[07]**

I) What is extravascation?

II) What is zeta potential?

III) Write the importance of particle size distribution in multiparticulate systems.

IV) Define Hematocrit value.

V) Define super critical fluid. Give an example.

VI) Enlist the mechanisms of drug transport across the BBB.

VII) Enlist the objectives of surface modification of drug carriers.

Q-1 (B) Answer the following in brief. (Any 4) **[08]**

I) Explain enhanced permeability and retention (EPR) effect.

II) Enlist the advantages and disadvantages of Hot high pressure homogenization.

III) Enlist the main advantages of resealed RBCs as drug carrier system.

IV) Discuss in brief the models depicting delivery of drugs to brain via nasal route.

V) Classify non ionic surfactants with examples.

VI) Give the equation of polydispersivity index. State the ideal value and importance.

Q-2 Answer the following. **[10]**

A) Discuss the applications of Monoclonal antibodies.

OR

A) Enlist the methods of preparation of Solid lipid nanoparticles. Explain emulsification-solvent diffusion method.

B) Explain membrane emulsification technique for multiple emulsions. Discuss stabilization techniques of multiple emulsions.

OR

B) Discuss the particle properties which govern the biological fate of nanoparticulate carrier systems.

Q-3 Answer the following in detail. (Any 2) **[10]**

A) Discuss the preparation, ternary phase diagram and evaluation of SMEDDS. Discuss the advances of SMEDDS.

B) Describe the methods of preparation of neosomes with their merits and demerits and examples.

C) Explain the drug loading and resealing methods of resealed erythrocytes.

Section-2

Q-4 (A) Answer the following. **[07]**

I) Enlist conditions that denature proteins.

II) What do you understand by transcytosis?

III) Define Pellets.

IV) Enlist novel techniques of pelletization.

V) Which vein is cannulated for in infusion techniques of drug retention in brain?

VI) Enlist different types of fluidized bed for processing of pharmaceuticals.

VII) What are pericytes?

Q-4 (B) Answer the following in brief. (Any 4) **[08]**

I) Classify proteins according to their biological roles.

II) Classify structure of protein.

III) What are the essential features of enzymatic barrier for delivery of proteins and peptides?

IV) What are the demerits of cryopelletization techniques?

V) What are the merits of tangential spray process in fluid bed processing?

VI) What are the important functions of BBB?

Q-5 Answer the following. **[10]**

A) Explain in vivo techniques for measurement of brain uptake studies.

OR

A) Explain different problems associated with delivery of proteins and peptides.

B) Discuss the concept of targeted drug delivery system.

OR

B) Explain biological processes and events involved in drug targeting.

Q-6 Answer the following in detail. (Any 2) **[10]**

A) Explain any two novel pelletization techniques..

B) Write a note on agglomeration and coating material used for fluid bed processing of pharmaceuticals.

C) Explain delivery of proteins and peptides via any two routes.