Code No: B134203 **R13** SET - 1

IV B. Pharmacy II Semester Regular/Supplementary Examinations, April - 2019
CONTROLLED RELEASE AND NOVEL DRUG DELIVERY SYSTEMS

Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)
2. Answering the question in **Part-A** is Compulsory
3. Answer any **THREE** Questions from **Part-B**

~~~~~~

PART –A

1. a) Write the qualities of drugs suitable for controlled release dosage forms. (4M)
   b) Write the principle in the formulation of altered density systems. Mention their applications. (4M)
   c) Write about permeation enhancers suitable for transdermal drug delivery systems. (3M)
   d) Write the principle of mucoadhesion. (3M)
   e) Write about stability problems of liposomes and approaches for stabilization. (4M)
   f) Write the applications of natural gums in the design of controlled drug delivery. (4M)

PART -B

2. a) Explain the approaches for the calculation of loading and maintenance doses. (8M)
   b) Write the need for controlling the drug release. Discuss the factors influencing the design of controlled drug release. (8M)

3. a) Write about ion exchange resins suitable controlled release dosage forms and explain their formulation approaches. (8M)
   b) Explain the formulation of elementary osmotic pump. What are its advantages and drawbacks? (8M)

4. a) Explain the mechanisms of bioadhesion. (8M)
   b) Write about evaluation tests for mucoadhesive systems. (8M)

5. a) Explain the methods of preparation of nanoparticles. (8M)
   b) Write about resealed erythrocytes and their applications. (8M)

6. a) Write about quality control tests for transdermal systems. (7M)
   b) Explain the formulation of reservoir type of transdermal system. (9M)

7. a) Give the differences between biodegradable and biocompatible systems. Enumerate the biodegradable polymers. (9M)
   b) What are hydrogels? Write about their advantages and applications. (7M)
~~~~~~