

IV B. Pharmacy II Semester Regular/Supplementary Examinations, April - 2018
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**
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PART -A

1. a) Write the characteristics of drugs suitable for controlled drug delivery giving suitable examples. (4M)
- b) Explain the principle of osmotic drug delivery systems. (4M)
- c) Discuss the role of plasticizers in transdermal drug delivery systems. (3M)
- d) Give the differences between mucoadhesion and bioadhesion. (3M)
- e) Write about active targeting. (4M)
- f) What are biodegradable polymers? Give the differences between biodegradable and biocompatible polymers. (4M)

PART -B

2. a) Explain the approaches for calculation of loading and maintenance doses for sustained release formulation. (8M)
- b) Explain the evaluation methods for controlled drug delivery systems. (8M)
3. a) Explain the approaches for establishing the release mechanism for controlled drug delivery systems. (8M)
- b) Discuss the formulation and evaluation of altered density systems. (8M)
4. a) Explain the evaluation tests for mucoadhesive drug delivery systems. (8M)
- b) Write about bioadhesive polymers with suitable examples. (8M)
5. Give the classification of transdermal drug delivery systems. Explain the formulation and evaluation of reservoir and matrix type systems. (16M)
6. Define liposomes. Write advantages, disadvantages and preparation methods of liposomes. (16M)
7. a) Give the classification of hydrogels. Explain their formulation and evaluation. (9M)
- b) Write about natural polymers suitable for controlled release. (7M)