

Code No: B134203

R13

SET - 1

IV B. Pharmacy II Semester Supplementary Examinations, July- 2017
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 principle of sustained release formulation. (3M)
- b) Write the principle and advantages of pH dependent systems. (4M)
- c) Write the specific advantages of transdermal drug delivery systems. Give one example of marketed transdermal drug delivery system. (3M)
- d) What is the need for mucoadhesive systems? Mention their advantages. (4M)
- e) Mention the advantages and disadvantages of drug targeting and give suitable examples of diseases for which targeting is required. (4M)
- f) Write the differences between biodegradable and biocompatible polymers. Give two examples each. (4M)

PART -B

2. a) Write are the qualities of drugs suitable for controlled and sustained drug delivery systems. Give suitable examples. (7M)
- b) Explain the regulatory requirements for controlled release formulations. (9M)
3. a) Differentiate between dissolution controlled and diffusion controlled systems. Mention their relative advantages. (7M)
- b) Explain the applications of ion exchange resins and osmotic based systems in the design of controlled drug delivery. (9M)
4. a) Write about the formulation excipients used in transdermal drug delivery systems. (8M)
- b) Explain the evaluation tests for transdermal drug delivery systems. (8M)
5. a) Write about mucoadhesive polymers with suitable examples. (6M)
- b) Explain the formulation and evaluation of mucoadhesive drug delivery system. (10M)
6. Describe the merits, demerits, preparation and evaluation of resealed erythrocytes. (16M)
7. a) Mention the advantages of hydrogels and explain their preparation. (8M)
- b) Write about biodegradable polymers and their applications. (8M)