

Code No. D-8260/PCI

**FACULTY OF PHARMACY**

**B. Pharmacy VII - Semester (PCI) (Backlog) Examination, September 2022**  
**Subject: Novel Drug Delivery Systems**

**Time: 3 Hours**

**Max. Marks: 75**

**PART – A**

**Note: Answer all questions.**

**(10 x 2 = 20 Marks)**

1. Define terms sustained, controlled and targeted release dosage forms.
2. Write ideal characters suitable for selection of drug for controlled drug delivery system.
3. Explain about inflatable systems.
4. Explain the Nasal and Pulmonary routes of drug delivery.
5. Write the advantages and disadvantages of gastroretentive drug delivery system.
6. Explain various coating materials used in microencapsulation.
7. Write a note on transmucosal permeability.
8. What is floating time and floating lag time.
9. Write the applications of monoclonal antibodies.
10. Compare and contrast liposomes and niosomes.

**PART – B**

**Note: Answer any two questions.**

**(2 x 10 = 20 Marks)**

11. Explain in detail physiochemical and biological factors affecting controlled release formulations.
12. Explain in detail coacervation phase separation method with suitable examples.
13. Discuss about advantages and disadvantages and development of intra uterine devices and applications.

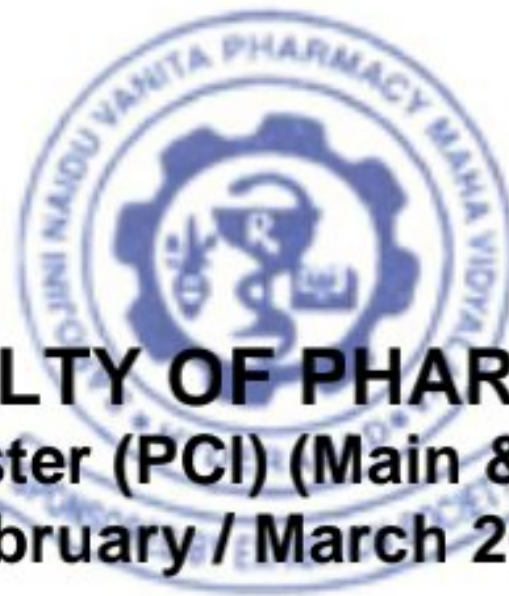
**PART – C**

**Note: Answer any seven questions.**

**(7 x 5 = 35 Marks)**

14. Discuss the classification and applications of polymers used in controlled drug delivery system.
15. Explain the theories of mucoadhesion.
16. Explain about factors affecting permeation in transdermal drug delivery system.
17. Discuss the approaches used in development of gastroretentive drug delivery system.
18. Explain about nasal sprays and nebulizers.
19. Explain about osmotic pump.
20. Discuss the ocusert with neat sketch.
21. Explain the preparation methods of nanoparticles.
22. Explain dry powder and metered dose inhalers.

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Code No. D-8185/PCI

**FACULTY OF PHARMACY**  
**B. Pharmacy VII-Semester (PCI) (Main & Backlog) Examination,**  
**February / March 2022**

**Subject: Novel Drug Delivery Systems**

**Time: 3 Hours**

**Max. Marks: 75**

**PART - A**

**Note: Answer all questions:**

**(10 x 2 = 20 Marks)**

1. Define terms sustained, controlled and targeted release dosage forms.
2. Enlist ideal characters suitable for selection of drug for controlled drug delivery system.
3. Define microencapsulation, write its applications.
4. What are implantable drug delivery system with examples?
5. Write the advantages and disadvantages of mucoadhesive drug delivery system.
6. Explain various coating materials used in microencapsulation.
7. Write a note on permeation enhancers with examples.
8. What is floating time and floating lag time?
9. Write the applications of monoclonal antibodies.
10. Write the methods of evaluation of liposomes.

**PART - B**

**Note: Answer any two questions:**

**(2 x 10 = 20 Marks)**

11. Explain in detail physicochemical and biological factors affecting controlled release formulations.
12. Explain the methods of microencapsulation.
13. Discuss the basic components, formulation approaches for development of transdermal drug delivery system.

**PART - C**

**Note: Answer any seven questions:**

**(7 x 5 = 35 Marks)**

14. Discuss the classification and applications of polymers used in controlled drug delivery system.
15. Explain the theories of mucoadhesion.
16. Write a note on osmotic pump.
17. Discuss the approaches used in development of gastroretentive drug delivery system.
18. Explain about nasal sprays and nebulizers.
19. Write a note on niosomers.
20. Discuss the ocuserts with neat sketch.
21. Explain the applications of intrauterine devices.
22. Explain the formulation considerations of buccal drug delivery system.

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Code No.12335/PCI

**FACULTY OF PHARMACY**

**B. Pharmacy VII-Semester (PCI) (Backlog) Examination,  
September 2021**

**Subject: Novel Drug Delivery Systems**

**Time: 2 Hours**

**Max. Marks: 75**

**PART – A**

**Note: Answer any seven questions.**

**(7 X 3 = 21 Marks)**

1. Define the following dosage forms?  
(a) Controlled drug delivery systems (b) Targeted drug delivery system.
2. Differentiate between matrix and reservoir systems?
3. List out the methods used for microencapsulation?
4. Define the following: (a) Implants (b) Transdermal drug delivery system.
5. Types of permeation enhancers used in TDDS with examples?
6. Define the following: (a) Liposomes (b) Niosomes
7. Differentiate between Zero Order and First Order release kinetic?
8. List out the different types of nanoparticles?
9. Enumerate the applications of monoclonal antibodies?
10. Write the advantages of Ocuserts?

**PART – B**

**Note: Answer any one questions.**

**(1 X 14 = 14 Marks)**

11. Discuss the formulation of Transdermal drug delivery systems with the components and examples? Add a note on factors affecting permeation?
12. Write in detail about the coacervation phase separation technique with examples?
13. Write in detail about the following:  
(a) Explain about the Alzet osmotic pump?  
(b) Mucoadhesive drug delivery system?

**PART – C**

**Note: Answer any five questions.**

**(5 X 8 = 40 Marks)**

14. Discuss about the factors influencing formulation of controlled drug delivery system?
15. Write the polymerization techniques?
16. Explain the Wuster process for microencapsulation with an example?
17. Explain the different theories of mucoadhesion?
18. Describe the formulation of floating drug delivery systems?
19. Discuss about the metered dose inhalers?
20. Write a note on intraocular barriers? Describe the methods to overcome the problem?
21. Write about the different types and applications of Intra-uterine devices?
22. Write about the elementary osmotic pump?

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Code No.12227/PCI

## FACULTY OF PHARMACY

B. Pharmacy VII-Semester (PCI) (Main) Examination, March 2021

Subject: Novel Drug Delivery Systems

Time: 2 Hours

Max. Marks: 75

### PART – A

Note: Answer any seven questions.

(7 X 3 = 21 Marks)

1. Write the advantages and disadvantages of controlled release dosage forms.
2. Explain various pharmacokinetic properties for selection of drug for controlled drug delivery system.
3. What are niosomes, write its structural components.
4. What are transdermal drug delivery system. Write its applications.
5. Write the advantages and disadvantages of mucoadhesive drug delivery system.
6. Define microspheres and microcapsules.
7. Write note on permeation enhancers with examples.
8. What is floating time and floating lag time.
9. Write the applications of targeted drug delivery system.
10. Write about classification of liposomes.

### PART – B

Note: Answer any one question.

(1 X 14 = 14 Marks)

11. Explain the approaches used in development of gastro retentive drug delivery systems.
12. Explain in detail coacervation phase separation with suitable examples.
13. Discuss classification, properties and applications of polymers used in controlled drug delivery system.

### PART – C

Note: Answer any five questions.

(5 X 8 = 40 Marks)

14. Discuss the physicochemical factors affecting controlled drug delivery system.
15. Explain the principles of mucoadhesion.
16. Write a note on metered dose inhaler.
17. Discuss the basis used in development of transdermal drug delivery system.
18. Explain about intra-uterine devices.
19. Write about production of monoclonal antibodies.
20. Discuss the ocular barriers, methods to overcome barriers.
21. Explain the approaches used in development of controlled drug delivery systems.
22. Explain the formulation considerations of buccal drug delivery system.

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