

Roll No: 

--	--	--	--	--	--	--	--	--	--

**The Assam Royal Global University, Guwahati**  
**Royal School of Pharmacy**  
**B. Pharmacy VII Semester**  
**Special Supplementary Examination, August 2024**  
**Course Title: Novel Drug Delivery System**  
**Course Code: PHR232C704**

**Time: 3 Hours**

**Maximum Marks: 75**

**Note: Attempt all questions as per instructions given.**

*The figures in the right-hand margin indicate marks.*

---

**Section – A**

1. Attempt **all questions**. (Maximum word limit 50) **2.5 x 8**
- a) Define controlled drug delivery systems with examples.
  - b) Write about the advantages and disadvantages of controlled drug delivery systems.
  - c) Write examples of microspheres with its ideal characteristics.
  - d) Write the applications of microencapsulation.
  - e) Write a note on non-degradable implantable drug delivery system.
  - f) Outline the disadvantages of transdermal drug delivery system.
  - g) Enlist the disadvantages of gastro retentive DDS.
  - h) What are the applications of monoclonal antibodies for targeted DDS?

**Section – B**

2. Attempt **any one** of the following: **13 x 1**
- a. Explain about the formulation consideration for buccal drug delivery system with suitable example.
  - b. Define mucosal drug delivery system. Describe the mechanism involved in bio adhesion in MDDS.
3. Attempt **any two** of the following: **7x 2**
- a. Define microencapsulation. Write the applications of microencapsulation. Explain air suspension technique for microencapsulation.
  - b. What is an implant? Give examples for implantable drug delivery systems. Explain the concept, advantages and disadvantages of implants.
  - c. Write a note on classification of polymers with example along with its advantages.
4. Attempt **any two** of the following: **7 x 2**
- a. Describe about the advantages and formulation approaches to design gastro retentive DDS.
  - b. What is nasal drug delivery system? Write about its advantages and disadvantages.
  - c. Write a short note on permeation enhancers in transdermal DDS.
5. Attempt **any two** of the following: **7 x 2**
- a. Define nanoparticle. Explain the different methods of preparation of liposome.
  - b. What are niosomes? Write its applications in targeted drug delivery system.
  - c. Explain concept, advantages and disadvantages of liposome.