

**Rajiv Gandhi University of Health Sciences, Karnataka**  
**VII Semester B. Pharm Degree Examination – 05-May-2025**

**Time: Three Hours**

**Max. Marks: 75 Marks**

**NOVEL DRUG DELIVERY SYSTEM**

**Q.P. CODE: 5032**

Your answers should be specific to the questions asked  
Draw neat labeled diagrams wherever necessary  
All the Questions are compulsory

**LONG ESSAYS**

**2 x 10 = 20 Marks**

1. Explain the physicochemical and biological properties of drugs in designing controlled drug delivery systems.  
**OR**  
Define transdermal drug delivery systems. Explain basic components of the same.
2. Discuss in detailed different approaches in designing gastro-retentive drug delivery systems.

**SHORT ESSAYS**

**7 x 5 = 35 Marks**

3. Write the concept of advantages and disadvantages of liposomes.  
**OR**  
Explain inflatable type of gastro-retentive drug delivery systems.
4. Write about the various types of osmotic pumps.  
**OR**  
Write the applications of bio-degradable polymers in drug delivery systems.
5. Write applications of transdermal drug delivery system.
6. Write briefly about metered dose inhalers.
7. Write advantages, disadvantages and applications of nanoparticles.
8. Write ocular formulations with examples.
9. What are advantages and disadvantage of intrauterine drug delivery systems?

**SHORT ANSWERS**

**10 x 2 = 20 Marks**

10. Define microcapsules.
11. Name any four polymers used in controlled drug delivery system.
12. Write the advantages and disadvantages of controlled drug delivery systems.
13. Explain the applications of pulmonary drug delivery systems.
14. Enlist different methods of microencapsulation.
15. Write two examples of permeation enhancers used in transdermal drug delivery system.
16. Enlist excipients used in nasal spray formulations.
17. Write the different types of niosomes.
18. What are monoclonal antibodies?
19. What are advantages and disadvantages of implants?

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