

Bachelor of Pharmacy Fourth Year First Semester-2025

Novel Drug Delivery System

Time: Three hours

Full Marks: 75

Answer any FIVE questions taking at least TWO questions from Group A, and One each from Groups B and C

Group A

1. a) Write about the limitations of conventional drug delivery system. b) Write in detail the rational for the development of a controlled release drug delivery system. 5+10=15
2. a) Define with example of Tacticity, Isotactic, and Syndiotactic configurations of polymer. Classify and elaborately discuss the polymers based on molecular forces. 6+9=15
3. a) What are number-average molecular weight and weight average molecular weight of polymer? b) Discuss the mechanical properties of polymers. 5+10=15
4. Define monoclonal antibody. Write about the different types of monoclonal antibody with example. Write the hybridoma technology for the production of monoclonal antibody. 1+4+10=15

Group B

5. Write in details about the attempts to be made to combat poor ocular bioavailability. (15)
6. Write shorts on (any two): (a) Intrauterine drug delivery systems (b) Coacervation phase separation microencapsulation (c) preservative used in ocular delivery systems. (15)

Group C

7. i. What are the basic components of a Transdermal patch? Explain all with example. ii. Discuss about the in-vitro test OR Adhesive tests of TDDS. 5+5+5=15
8. i. Write the potential and non-potential candidates of GRDDS. ii. Explain the Floating Approaches to GRDDS retention. Explain with Diagram. 5+5+5=15
9. i. Differentiate between DPI and MDI. ii. Write the classification of Implantable drug delivery system. Explain ALZET and DUROS Pump system. 5+5+5=15
