

[Total No. of Questions - 15] [Total No. of Printed Pages - 2]  
(2064)

14823

M. Pharmacy 2nd Semester Examination

Advanced Pharmaceutics

MP-121

Time : 3 Hours

Max. Marks : 90

*The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.*

**Note :** Attempt any one question from Section-A, any three questions from Section B and any seven questions from Section C.

**SECTION - A**

1. Discuss the role of physico chemical factors in skin drug permeation. How permeation can be enhanced? Discuss different approaches for development of transdermal drug delivery systems. (25)
2. What do you understand by advanced drug delivery systems? Discuss formulation development of liposomes & niosomes. How are they evaluated? (25)

**SECTION - B**

3. Discuss preparation & characterization of microspheres.
4. Explain the methods of preparation, evaluation techniques & stability of resealed erythrocytes.
5. Describe in detail the formulation & evaluation aspects of implantable devices.

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6. Elaborate the optimization techniques in pharmaceutical formulation & processing. (3×10=30)

**SECTION - C**

7. Discuss the fundamental concepts of controlled release.
8. Explain gel diffusion controlled drug delivery systems.
9. Give formulation & evaluation of osmotic pumps.
10. Describe mechanism of mucoadhesion in detail.
11. Write a note on iontophoretic drug delivery.
12. Discuss briefly the delivery of peptides & proteins.
13. Explain the concept of optimization.
14. Write biopharmaceutical considerations of controlled drug release.
15. Write a note on statistical design and optimization methods. (7×5=35)