

Date & Time: 05-Dec-2018 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

Manipal Academy of Higher Education, Manipal MPharm Theory End-Semester Examinations.
Specialization: Industrial Pharmacy
Date-05-12-2018

Novel Drug Delivery Systems [PCE-MIP103T]

Marks: 75

Duration: 180 mins.

SECTION - A

Answer all the questions.

Answer the following (10 marks x 5 = 50 marks)

- 1) Enlist different system parameters affecting controlled drug delivery. Explain any TWO in detail (10)
- 2) Explain iontophoresis, sonophoresis and microneedle techniques for transdermal delivery with the help of diagram. (10)
- 3) Define liposomes. Give in detail a method for the preparation of liposomes. How the liposomes are different than niosomes? (10)
- 4) Write advantages and disadvantages of nasal drug delivery system. Explain any SIX factors affecting nasal drug absorption. (10)
- 5) Describe in detail different types of oral controlled release drug delivery systems. (10)

SECTION - B

Answer all the questions.

Answer the following (5 marks x 5 = 25 marks)

- 6) Explain addition polymerization technique. (5)
- 7) Explain the role of nanotechnology in any TWO cosmeceutical products. (5)
- 8) Discuss various pharmaceutical applications of 3D printing technology. (5)
- 9) What are monoclonal antibodies. Give their production procedure. (5)
- 10) Write a note on protein and peptide drug delivery system. (5)

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