

Question Paper

Exam Date & Time: 29-Nov-2017 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

MANIPAL COLLEGE OF PHARMACEUTICAL SCIENCES END SEMESTER THEORY EXAMINATIONS - NOVEMBER 2017

PROGRAM: MPHARM SEMESTER 1

DATE: 29/11/2017

TIME: 2:00PM - 5:00PM

Drug Delivery Systems [PCE-MPH102T]

Marks: 50

Duration: 180 mins.

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Answer all the questions.

Answer the following (5 marks x 8 = 40 marks)

- 1) Discuss the mechanisms of drug release from dissolution controlled SR/CR formulations (5)
- 2) Explain the mechanism of mucoadhesion. How are mucoadhesive drug delivery systems evaluated? (5)
- 3) Describe the working of vapor pressure powered implantable infusion pumps (5)
- 4) What are the barriers for protein delivery? (5)
- 5) Write the principle and composition of matrix tablets. (5)
- 6) Explain the principle of expansive and effervescent dosage forms for their gastro-retentive property. (5)
- 7) Mention different types of Ocular inserts. Add a note on any ONE type of Ocular insert. (5)
- 8) What are different types of Transdermal drug delivery systems and explain any ONE type. (5)

Answer the following with specific answers (2 marks x 5 = 10 marks)

- 9) What are smart polymers? Give examples (2)
 - 9A)
 - 9B) Write the mechanism of action of copper IUDs (2)

- 9C) List out the various approaches for the nasal delivery of protein and peptide drugs (2)
- 9D) Mention different routes by which transdermal permeation of drugs takes place. (2)
- 9E) Give examples of commercially available anion and cation exchange resins. (2)

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