

Question Paper

Exam Date & Time: 02-May-2019 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

Specialization: Pharmaceutics
MPharm Semester II - End Semester Examination May 2019
Exam Date: 02-05-2019

Molecular Pharmaceutics Nano Tech and Targeted DDS [PCE-MPH201T]

Marks: 75

Duration: 180 mins.

SECTION - A

Answer all the questions.

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

- 1) Define and classify Nanoparticles. Mention different methods of preparation of polymeric nanoparticles and explain any ONE method in detail. (10)
- 2) Explain the methods of preparation of resealed erythrocytes. (10)
- 3) What are dendrimers? Classify dendrimers. Enumerate the applications of dendrimers. (10)
- 4) Write about the various approaches for brain targeting. Mention the various methods to prepare carbon nanotubes and nanofibers. (10)
- 5) Discuss the approaches for gene therapy. (10)

SECTION - B

Answer all the questions.

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

- 6) What are different methods of preparation of microspheres? Explain any ONE method in detail. (5)
- 7) Add a short note on Evaluation of Liposomes. (5)
- 8) Discuss different drug delivery systems used for intra-nasal delivery of drugs. (5)
- 9) Write a note on Evaluation of Pulmonary controlled drug delivery systems. (5)
- 10) Add a note on Biosimilars. (5)

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MANIPAL ACADEMY OF HIGHER EDUCATION

MPharm Theory End-Semester Examinations.
Specialization: Pharmaceutics and Industrial Pharmacy Specializations

MPharm Semester II - End Semester Examination May 2019

PCE-MPH202T Advanced Biopharmaceutics and Pharmacokinetics
(MPharm Pharmaceutics)

PCE-MIP201T Advanced Biopharmaceutics and Pharmacokinetics
(MPharm Industrial Pharmacy)

Exam Date: 04-05-2019

Advanced Biopharmaceutics and Pharmacokinetics [PCE-MPH202T]

Marks: 75

Duration: 180 mins.

SECTION - A

Answer all the questions.

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

- 1) Discuss the construction and working of rotating basket apparatus for dissolution testing. (10)
- 2) Explain the effect of formulation excipients on drug absorption from tablets. (10)
- 3) Explain dissolution profiles comparisons using f_1 and f_2 factors. (10)
- 4) With suitable graphs and equations discuss the one compartment model when a drug is given intravenously and orally. (10)
- 5) Discuss on the effect of drug protein-binding interactions and drug-tissue-binding interactions. Support answers with suitable examples. (10)

SECTION - B

Answer all the questions.

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

- 1) Discuss the different levels of IVIVC. (5)
- 2) Explain the effect of dose on pharmacological response. (5)
- 3) What is drug accumulation? What is its importance? Discuss and explain. (5)
- 4) What is the purpose of Bioavailability? Discuss. (5)
- 5) Write briefly on Bioequivalence studies by Cross-over study design. (5)

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Question Paper

Time: 06-May-2019 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

MPharm Theory End-Semester Examinations.

Specialization: Pharmaceutics

MPharm Semester II - End Semester Examination May 2019

Subject Code: PCE-MPH203T

Subject Title: Computer Aided Drug Delivery Systems

Exam Date: 06-05-2019

Computer Aided Drug Delivery Systems [PCE-MPH203T]

Marks: 75

Duration: 180 mins.

SECTION - A

Answer all the questions.

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

- 1) Explain the Simplex method of optimization. (10)
- 2) Explain patents as an IPR tool for protection of innovative uses of computers. (10)
- 3) Describe parameter sensitive analysis, virtual trials, model construction and ACAT model with respect to computer aided biopharmaceutical characterisation of drugs. (10)
- 4) Explain various types of data collection systems employed in clinical development. List any two advantages. (10)
- 5) 5A. How AI is the future of Pharma? (5 marks) (10)
5B. What is the role of CFD in Pharmaceutical Industry? (5 marks)

SECTION - B

Answer all the questions.

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

- 1) Write briefly on Statistical modelling in Pharmaceutical research and development. (5)
- 2) Discuss the levels of computer simulations in pharmacokinetics and pharmacodynamics. (5)
- 3) Write the steps of Quality by Design. Explain the role of ICH Q9 guideline in quality by design. (5)
- 4) Write about different computational approaches used in modelling the solubility of drugs. (5)
- 5) Discuss the factors to be considered and computational modelling techniques to study intestinal permeation. (5)



MANIPAL ACADEMY OF HIGHER EDUCATION

Manipal MPharm Theory End-Semester Examinations.
MPharm - Pharmaceutics Specialization

MPharm Semester II- End-Semester Examination May 2019

Exam Date: 08-05-2019

Cosmetic and Cosmeceuticals [PCE-MPH204T]

Marks: 75

Duration: 180 mins.

SECTION - A

Answer all the questions.

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

- 1) Explain the cosmos guidelines with respect to herbal cosmetics. (10)
- 2) Define cosmeceuticals. "Cosmeceuticals are effective in treatment of acne" Justify and explain one such formulation. (10)
- 3) How building blocks concept help in developing hair care products? (10)
- 4) Discuss the causes and treatment of bad breath. (10)
- 5) Discuss the causes for body odor and cosmetic products to combat body odor. (10)

SECTION - B

Answer all the questions.

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

- 6) Enlist 5 offences along with respective penalties with respect to manufacture of cosmetics. (5)
- 7) Define loan license & enlist the regulatory prohibitions for manufacture or sale of certain cosmetics. (5)
- 8) Differentiate between Sunscreens and SPF with a suitable example. (5)
- 9) What are the controversial ingredients in cosmetics? Briefly discuss. (5)
- 10) Discuss nail care products. (5)

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