

Exam Date & Time: 03-May-2018 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

MANIPAL COLLEGE OF PHARMACEUTICAL SCIENCES
END SEMESTER THEORY EXAMINATIONS- MAY 2018
PROGRAM: MPHARM SEMESTER 2 (PHARMACEUTICS)

DATE: 03/05/2018

TIME: 2:00 PM - 5:00 PM

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

Marks: 50

Duration: 180 mins.

a

Answer all the questions.

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

- 1) What are different methods of preparation of Nanoparticles? Explain any TWO methods of preparation of Nanoparticles. (5)
- 2) Add an account on evaluation tests for microspheres (5)
- 3) Define Resealed erythrocytes. Explain any TWO methods of preparation of Resealed erythrocytes. (5)
- 4) What are different types of pulmonary drug delivery systems? Explain any TWO systems in detail. (5)
- 5) Write about biological processes and events involved in drug targeting (5)
- 6) What are the advantages of gene therapy? Discuss the approaches for gene therapy (5)
- 7) Discuss about the various transport routes across the blood brain barrier (5)
- 8) Briefly discuss the preparation methods of Nanocrystals (5)

b

Answer all the questions.

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

- 9) What are the advantages of phytosomes? (2)

A)

- B) What are advanced propellants? What is the reason behind the use of such propellants (2)
- C) Enlist different evaluation tests for intranasal drug delivery systems. (2)
- D) Define and classify Liposomes. (2)
- E) Write any FOUR applications of Monoclonal antibodies (2)

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



MANIPAL ACADEMY OF HIGHER EDUCATION

MANIPAL COLLEGE OF PHARMACEUTICAL SCIENCES

END SEMESTER THEORY EXAMINATIONS- MAY 2018

PROGRAM: MPHARM SEMESTER 2 (PHARMACEUTICS and INDUSTRIAL PHARMACY)

DATE: 05/05/2018

TIME: 2:00 PM - 5:00 PM

Advanced Biopharmaceutics and Pharmacokinetics [PCE-MPH202T]

Marks: 50

Duration: 180 mins.

a

Answer all the questions.

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

- 1) Explain the limitations of pH partition hypothesis. (5)
- 2) Discuss the construction and working of USP apparatus 1 for dissolution testing. (5)
- 3) Explain the effect of polymorphism of drugs on their absorption. (5)
- 4) Explain the effect of Binders and Disintegrants on the dissolution of tablets. (5)
- 5) Explain the characteristic features of active transport of drugs. (5)
- 6) Describe the Pharmacokinetics of one compartment model for an IV bolus drug administration. Support your answer with appropriate graphs and equations. (5)
- 7) What are the causes of nonlinear pharmacokinetics of a drug? Explain with suitable graphs. (5)
- 8) Write and explain the importance of BCS classification system. Give examples. (5)

b

Answer all the questions.

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

- 9) How Clearance and Volume of Distribution related? How useful this relation is? (2)

A)

- B) What is the loading dose required for drug A if Target concentration is 10 mg/L, is 0.75 L/kg and Patient's weight is 75 kg (2)
- C) Show in a graph the Plasma concentration of drug, when the Rate of infusion of drug is equal to the rate of elimination? (2)
- D) Why apparent volume of distribution tends to decrease for protein drugs?
- E) Why the pharmacokinetic parameters calculated using plasma data does not represent the actual pharmacokinetics of the drug from targeted delivery systems? (2)

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Exam Date & Time: 07-May-2018 (02:00 PM - 05:00 PM)

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MANIPAL ACADEMY OF HIGHER EDUCATION

MANIPAL COLLEGE OF PHARMACEUTICAL SCIENCES
END SEMESTER THEORY EXAMINATIONS- MAY 2018
PROGRAM: MPHARM SEMESTER 2 (PHARMACEUTICS)

DATE: 07/05/2018

TIME: 2:00 PM - 5:00 PM

Computer Aided Drug Delivery Systems [PCE-MPH203T]

Marks: 50

Duration: 180 mins.

a

Answer all the questions.

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

- 1) What is Statistical model? How it is useful in Pharmaceutical research? Write a note on Mechanistic model with example. (5)
- 2) Explain the steps to achieve quality by design. (5)
- 3) Discuss the manufacturing automation in Pharmaceutical Industry. (5)
- 4) Discuss about the various challenges involved in developing computational models for drug distribution. (5)
- 5) Explain with neat diagram the 'reflection' with respect to sequential simplex optimization process. (5)
- 6) Explain copyright as an IPR tool for protection of innovative uses of computers. (5)
- 7) Briefly explain the role of Parameter sensitive analysis in computer aided biopharmaceutical characterization (5)
- 8) Discuss the computer simulations in pharmacokinetics and pharmacodynamics of whole organism. (5)

b

Answer all the questions.

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

- 9) What is Hybrid system in clinical development? (2)

- A)
- B) Write a note on staff training in clinical data collection and management. (2)
- C) Describe the Empirical approach followed in modelling the solubility of drug molecules. (2)
- D) Intestinal permeability is difficult to predict solely based on molecular mechanism. Give reason. (2)
- E) In vitro In silico approach can be used to waive in vivo BE studies (2)

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Exam Date & Time: 09-May-2018 (02:00 PM - 05:00 PM)

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MANIPAL ACADEMY OF HIGHER EDUCATION

MANIPAL COLLEGE OF PHARMACEUTICAL SCIENCES
END SEMESTER THEORY EXAMINATIONS- MAY 2018
PROGRAM: MPHARM SEMESTER 2 (PHARMACEUTICS)

DATE: 09/05/2018
TIME: 2:00 PM - 5:00 PM

Cosmetic and Cosmeceuticals [PCE-MPH204T]

Marks: 50

Duration: 180 mins.

a

Answer all the questions.

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

- 1) Define loan license and enlist the regulatory prohibitions for manufacture or sale of certain cosmetics. (5)
- 2) Briefly explain the cosmos guidelines with respect to herbal cosmetics. (5)
- 3) Enlist 5 offences along with respective penalties with respect to manufacture of cosmetics. (5)
- 4) Define cosmeceuticals. How to address acne through cosmeceutical formulations? (5)
- 5) Explain the hair growth cycle. (5)
- 6) Discuss the problems associated with oral cavity and formulations used for oral care. (5)
- 7) Explain the formulation aspects of creams. (5)
- 8) Explain the concept of building blocks in manufacturing of cosmetics. (5)

b

Answer all the questions.

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

- 9) Define COSMOS. (2)
- A)

- B) Define SPF.
- C) Write notes on "nature's cavity fighter" used in toothpastes.
- D) Mention the causes for wrinkles and body odor.
- E) What is fragrance wheel perfume classification?

(2)
(2)
(2)

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