Exam Date & Time: 11-Sep-2021 (02:00 PM - 05:00 PM)

MANIPAL ACADEMY OF HIGHER EDUCATION

Manipal Academy of Higher Education, Manipal MPharm Theory End-Semester Examinations.

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) a) How have computers become an important tool in Pharmaceutical Research? Discuss. (5 marks)

b) Write briefly on how Artificial Intelligence (AI) is used by Pharmaceutical Industries for the drug development and
formulation development. (5 marks)   (10)

2) Enlist the steps to develop the QbD. Discuss them in detail.

(10)

3) Discuss on EVOP optimization method and different optimization parameters. (5+5)

(10)

4) Explain the features of the Advanced Compartment and Absorption Transit Model of the human gastrointestinal tract. Write a note on biowaiver considerations.   (10)

5) What is data collection system? Discuss in detail about various data collection systems with its significance.   (10)

SECTION - B

Answer all the questions.

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

6) Discuss the complexity of computational modelling study of drug distribution.   (5)

7) What are molecular docking simulations and pharmacophore modelling?   (5)

8) What is bio computation? Describe PBPK model.   (5)

9) Explain any 4 ethical issues of computing in pharmaceutical research   (5)

10) Discuss various techniques/ approaches used in Computational Modelling of Drug Disposition   (5)

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