Question Paper

MANIPAL ACADEMY OF HIGHER EDUCATION

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

Computer Aided Drug Delivery Systems [PCE-MPH203T -S3]

Marks: 75   **Duration: 180 mins.**

SECTION - A

Answer all the questions.

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

1)	What is statistical modelling What are its objectives, advantages, disadvantages? Explain the importance of population modelling and optimal design.	(10)
2)	Discuss the key elements of pharmaceutical quality by design.	(10)
3)	How Artificial Intelligence can be used in formulation development? Write a note on Pharmaceutical robotics.	(10)
4)	Describe the different features of the ACAT model. Write a note on the assumptions and working of the ACAT model.	(10)
5)	Write the importance of computational modelling in studying the disposition of drugs. Briefly write about the approaches used in modelling the drug solubility.	(10)

SECTION - B

Answer all the questions.

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

6)	Define confidence region and write its significance.	(5)
7)	What is meant by ASFs? How are they calculated? What is a biowaiver?	(5)
8)	Explain various types of effects plots in screening designs.	(5)
9)	Describe the role of any THREE transporters in drug absorption and their structural criteria.	(5)
10)	How computational fluid dynamics is useful for solid processing in pharma production? Discuss.	(5)

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