

# Question Paper

Exam Date & Time: 29-Mar-2021 (01:30 PM - 04:30 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

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

### Advanced Medicinal Chemistry [PCH-MPC103T]

Marks: 75

Duration: 180 mins.

#### SECTION - A

Answer all the questions.

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

- 1) Explain the various inspirational sources for analog design (10)  
What is Bioisosterism? Explain how it helps in Analog design with an example
- 2) Write with explanation the various methods of designing a functional analog. (10)  
Write a notes on a) Vinylogy as a strategy in Analog design  
b) Twin drugs
- 3) Explain the different types of assays methods used in HTS. (10)  
How combinatorial synthesis is different front conventional synthesis? Explain with an example the mix and split technique of synthesizing peptides.
- 4) What are the advantages and disadvantages of using NMR technique in lead identification and bioassay? Explain. (10)  
Explain about transition state analogs with example.
- 5) Explain the role of water and hydrophobic interactions with drug targets. (10)  
Explain Michaelis-Menten equation.

#### SECTION - B

Answer all the questions.

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

- 6) Elaborate the structural requirements, enzyme inhibition kinetics pattern of Competitive Inhibitors. (5)
- 7) What are pharmaceutical objectives of prodrugs? Give any two examples for achieving these pharmaceutical objectives. (5)
- 8) With suitable schematic diagram explain Carrier linked prodrug and their types. (5)
- 9) Write a note on absorption and stereo selectivity of drugs. Give three examples (5)
- 10) Explain six important strategies employed in Peptidomimetic drug design by manipulation of amino acids (5)

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