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

MANIPAL ACADEMY OF HIGHER EDUCATION

Manipal Academy of Higher Education, Manipal MPharm Theory End-Semester Examinations.
Specializaion: Pharmaceutical Chemistry
Date: 03-12-2018
Advanced Organic Chemistry I [PCH-MPC102T]

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

SECTION - A

Answer all the questions.

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

1) Discuss with an example the mechanism involved in Suzuki Mayaura reaction. (10)

2) Explain the properties and synthetic applications and safety precautions in handling oxalyl chloride and NBS (10)

3) a) In retrosynthesis, explain the strategies in synthetic planning. (5)
b) What are nitrenes? Explain the methods of their formation and their applications (5) (10)

4) Explain with mechanism, any two methods of preparation of quinoline. (10)

5) Explain the various methods for protection of carboxyl and amino group (10)

SECTION - B

Answer all the questions.

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

6) What is DCC? Give the properties and its synthetic applications (5)

7) What are multi component reactions? Give an example. Mention its advantages (5)

8) Explain the formation and synthetic applications of carbocations. (5)

9) Explain with mechanism Meerwein-Pondorff-Verley reduction. (5)

10) Draw structures for the following IUPAC names. (5)
a) benzo [f] quinoline b) dibenz [b, f] azepine
c) oxazolidine-2,4-dione d) 3-pyrazoline
e) piperazine-2,5-dione

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WED
05/12/18

MPharm – Pharmaceutical Chemistry

MPharm First Semester- End-Semester Examination-2018

PCH-MPC103T Advanced Medicinal Chemistry

Date: **Duration:** - 3 Hr **Max. Marks:** 75

SET NO.: 2

Instructions: Answer ALL questions.

Answer the following **5 Q × 10 marks = 50 marks**

Question	Marks	Evaluation by
1. Explain the various strategies for finding/ identifying a Lead molecule	10	Aravind Pai
2. Explain homology by monoalkylation and homology in cyclic compounds as tools in analogue design	10	Ruchi Verma
3A. Discuss the different types of receptors with example. 3B. Explain the categories of the enzyme inhibitors with examples.	5+5	Ruchi Verma
4A. What are prodrugs? Give examples. Explain the different types of prodrugs with examples. 4B. What is Michaelis-Menton equation? Mention its significance. List out the advantages of prodrugs	5+5	Ruchi Verma
5A. Write about deconvolution techniques used in combinatorial chemistry. 5B. Write short notes on cell based assays and biochemical assays.	5+5	Aravind Pai

Answer the following with specific answers **5 Q × 5 marks = 25 marks**

Question	Marks	Evaluation by
6. What is the goal of fragment based drug design? Explain the process of FBDD	5	Aravind Pai
7. Outline the methods used in high throughput screening	5	Aravind Pai
8. Outline Merrifield's method of peptide synthesis.	5	Ruchi Verma
9. Classify stereoisomers. Explain with examples ,where the stereoisomers exhibit independent therapeutic activity, one isomer is inactive, distomer having harmful effects and eutomer, distomer have opposite activity.	5	Aravind Pai
10. Write a note on analogues by Vinology in analogue design	5	Aravind Pai

me: 07-Dec-2018 (02:00 PM - 05:00 PM)

MANIPAL ACADEMY OF HIGHER EDUCATION

Manipal Academy of Higher Education, Manipal MPharm Theory End-Semester Examinations.
Specialization: Pharmaceutical Chemistry
Date: 07-12-2018
Chemistry of Natural Products [PCH-MPC104T]

Duration: 180 mins.

Marks: 75

SECTION - A

Answer all the questions.

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

1) Explain the principle and applications of gene therapy, hybridoma technology and r DNA technology (10)

2) Classify flavonoids giving one structure from each class and explain the general structural elucidation of flavonoids. (10)

3) Explain the chemistry of taxol and podophyllotoxin (10)

4) Explain the structural elucidation of atropine and discuss the stereochemistry of alkaloids. (10)

5) Enlist the various enzymes used in organic synthesis with suitable examples and their relevance in organic synthesis (10)

SECTION - B

Answer all the questions.

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

6) Write the SAR for quinine and give their specific applications (5)

7) Classify cephalosporins and give one structure under each generations with specific examples. (5)

8) Classify terpenoids giving one structure from each class and explain the isolation procedure for mono,di and tri terpenoids. (5)

9) What are glucocorticoids and mineralocorticoids and discuss the nomenclature and stereochemistry of steroids. (5)

10) Enlist four important marine natural products with their applications . (5)

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