

# Question Paper

Exam Date & Time: 02-May-2019 (02:00 PM - 05:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

Manipal Academy of Higher Education, Manipal MPharm Theory End-Semester Examinations.  
MPharm - Pharmacology  
MPharm Semester II - End-Semester Examination May 2019  
Date : 02/05/2019

### Advanced Pharmacology II [PHA-MPI 201T]

Duration: 180 mins.

Marks: 75

#### SECTION - A

Answer all the questions.

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

- 1) Explain the protein synthesis in bacteria. Compare and contrast the mechanisms of drugs affecting the bacterial protein synthesis. (10)
- 2) Discuss the pathophysiology and pharmacological management of asthma. (10)
- 3) When the innate immune responses fail to resolve the infection, explain how a pathogen is eliminated from the body? (10)
- 4) Discuss thyroid hormone synthesis and explain how anti-thyroid drugs interfere with this. (10)
- 5) Discuss the drugs used in the control of gastric acidity, with the mechanism of action. Illustrate your answers with the help of representative drugs from each category. (10)

#### SECTION - B

Answer all the questions.

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

- 6) Explain the different types of free radical and their production in the body. (5)
- 7) What are the different types of biological rhythms? Explain the clinical implications of biological rhythms. (5)
- 8) Explain the mechanism of action of Teneligliptin and Acarbose (5)
- 9) Explain the any two therapeutically useful pharmacological actions of corticosteroids. (5)
- 10) Explain the mechanisms of actions of anticancer agents targeting the enzyme. (5)

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# Question Paper

Exam Date & Time: 04-May-2019 (02:00 PM - 05:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

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

MPharm - Pharmacology

MPharm Semester II - End-Semester Examination May 2019

Date : 04/05/2019

### Pharmacological and Toxicological Screening Methods II [PHA-MPL202T]

Marks: 75

Duration: 180 mins.

#### SECTION - A

Answer all the questions.

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

- 1) Discuss the different types of audits that are conducted for regulatory toxicity study. (10)
- 2) Draw a neat flow chart describing the procedural activities involved in acute dermal toxicity studies as per OECD guidelines. (10)
- 3) Why do we prefer conscious monkeys for the respiratory drug screening? Discuss role of end-tidal CO<sub>2</sub> measurement and functional lung dynamics in respiratory screening (10)
- 4) Write a detailed note on animal reuse, dose selection and species selection for cardiovascular drug screening as per ICH7A guidelines. (10)
- 5) What is chromosomal aberration test? Explain it with advantages and disadvantages. (10)

#### SECTION - B

Answer all the questions.

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

- 6) Explain different screening methods for locomotor activity and motor coordination activity (5)
- 7) Explain the principle and procedure for In-vitro mouse lymphoma TK +/- assay (5)
- 8) Distinguish between fetotoxicity, teratogenicity and maternal toxicity in preclinical studies (5)
- 9) Describe the daily, weekly and terminal observations performed in chronic toxicity studies (5)
- 10) A series of new molecules were evaluated for anti-diabetic activity by a pharmacological team. Now the desired molecules are to be taken up for the regulatory toxicity. The Head of the Research wing invited you to audit the pharmacological data generated and set criteria for selecting the compounds to be considered for safety (5)

(PTO)



assessment. What would be your approach on this?

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# Question Paper

Exam Date & Time: 06-May-2019 (02:00 PM - 05:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

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

MPharm - Pharmacology

MPharm Semester II - End-Semester Examination May 2019

Date : 06/05/2019

### Principles of Drug Discovery [PHA-MPL203T]

Marks: 75

Duration: 180 mins.

#### SECTION - A

Answer all the questions.

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

- 1) Discuss the methods of traditional drug design with their advantages and disadvantages over the modern methods. (10)
- 2) With the help of examples describe the target identification and validation process in drug discovery (10)
- 3) With examples explain the applications of X-ray crystallography and NMR spectroscopy in drug discovery (10)
- 4) Discuss the advantages and disadvantages of combinatorial chemistry and high throughput screening (10)
- 5) Discuss structure-based and ligand-based drug design with examples (10)

#### SECTION - B

Answer all the questions.

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

- 6) How the protein structure can be predicted using computers? (5)
- 7) What are the basic concepts of bioinformatics? (5)
- 8) Which steps are involved in de novo drug design. What are the primary and secondary target constraints? (5)
- 9) What are the strategies in the development of a pro-drug? (5)
- 10) What are the advantages of QSAR in drug design. (5)

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