

Question Paper

10/6/19

Exam Date & Time 10-Jun-2019 (09:30 AM - 12:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

BPharm - Semester -IV
End Semester Examination, JUNE- 2019

Course Code: PCH-BP401T
Course Title: PHARMACEUTICAL ORGANIC CHEMISTRY-III (THEORY)
Date: 10 June 2019

Pharmaceutical Organic Chemistry-III [PCH-BP401T]

Marks: 75

Duration: 180 mins

II Long Answers

Answer all the questions.

- 1) Explain the electrophilic substitution reactions of indole with examples. Give (10)
the structure of isoniazid, primaquine, sulphapyridine, acriflavin and
caffeine.
- 2) Give the structure and uses of Frusemide and nitrofuraxime. Write one (10)
method of synthesis of furan and discuss the electrophilic reactions of furan
with an example.

III Short Answers

Answer all the questions.

- 1) Give the structure and uses of chloroquine and papaverine (5)
- 2) What is Birch reduction? Explain (5)
- 3) What are meso compounds? Explain with examples. (5)
- 4) What is racemic modification? Explain the methods of resolution of racemic (5)
mixture.
- 5) Discuss stereospecific reactions with an example (5)
- 6) Explain the stereochemistry of biphenyl compounds (5)
- 7) Discuss the aromaticity of furan pyrrole and thiophen (5)

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Question Paper

Exam Date & Time: 12-Jun-2019 (09:30 AM - 12:30 PM)

12/6/19



MANIPAL ACADEMY OF HIGHER EDUCATION

BPharm Semester IV - End Semester Examination JUNE 2019

PCH-BP 402T: Medicinal Chemistry I

Date: 12 June 2019

Medicinal Chemistry-I [PCH-BP402T]

Marks: 75

Duration: 180 mins.

II Long Answers

Answer all the questions.

- 1) 1A Explain the importance of any three physicochemical properties in relation to the drug action. 5M (10)
1B Classify general anesthetics with one example and its structure under each class. Outline the synthesis of Ketamine HCl. 5M
- 2) What are Adrenergic agents? Classify them by giving one structure under each class. Explain the bio synthesis of catecholamines. Outline the synthesis of propranolol (10)

III Short Answers

Answer all the questions.

- 3) Classify anticholinergics giving one structure from each class. (5)
- 4) Give the synthesis of carbachol and dicyclomine. (5)
- 5) Discuss the SAR cholinergic blockers. (5)
- 6) Classify phenothiazine derivatives as antipsychotic drugs giving one structure from each class. Discuss the SAR of benzodiazepines 2+3 =5 M (5)
- 7) Write the structure and uses of
a) Diazepam b) Phenobarbital c) Phenytoin d) Meprobamate. (5)
- 8) Classify opioid analgesics giving examples. Write the structure of Morphine. (5)
- 9) Give the synthesis of Diclofenac and Mefenamic acid. Write the IUPAC nomenclature of these two drugs. What are the uses of salicylates? (5)

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Question Paper

Exam Date & Time: 14-Jun-2019 (09:30 AM - 12:30 PM)

14/6/19



MANIPAL ACADEMY OF HIGHER EDUCATION

BPharm Semester IV End Semester Examination June 2019

PCE-BP403T: Physical Pharmaceutics II (Theory)

Date: 14 June 2019

Physical Pharmaceutics-II [PCE-BP403T]

Marks: 75

Duration: 180 mins.

II Long Answers

Answer all the questions.

- 1) Explain the thixotropy measurement for plastic fluid at 'constant rate' and 'varying rate' of shear. (10)
- 2) Explain in detail the coulter counter method for determination of particles volume. (10)

III Short Answers

Answer all the questions.

- 1) Write any five salient features of lyophobic colloids. (5)
- 2) Discuss on surfactant as an emulsifier. (5)
- 3) Write short note on wetting agent in the dispersion of solids in water. (5)
- 4) Discuss on different factors affecting the viscosity of a liquid. (5)
- 5) Explain DLVO theory with potential energy versus particle distance curve. (5)
- 6) Deduce the units for specific zero order rate constant. (5)
- 7) Explain effect of hydrolysis on the stability of drugs with their preventive methods. (5)

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Question Paper

17/6/19

Exam Date & Time: 17-Jun-2019 (09:30 AM - 12:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

BPharm Semester IV End Semester Examination June..2019

PHA-BP 404T: Pharmacology - I

Date: 17 June 2019

Pharmacology-I [PHA-BP404T]

Marks: 75

II Long Answers

Duration: 180 mins.

Answer all the questions.

- 1) Classify receptors with suitable examples. Explain G-Protein coupled signal transduction with diagram. (2+8) (10)
- 2) Discuss the cholinergic transmission with diagram. Mention the drugs affecting it. (10)

III Short Answers

Answer all the questions.

- 1) Explain the combined effect of two drugs when given simultaneously or in quick succession. (5)
- 2) With suitable examples, explain any five patient-related factors modifying drug action (5)
- 3) Explain the mechanism of action of benzodiazepines and barbiturates with a labelled diagram of GABA_A receptor. (5)
- 4) Classify drugs for the treatment of depression. Explain the mechanism of action of monoamine oxidase inhibitors and serotonin reuptake inhibitors. (5)
- 5) Define microsomal enzyme induction and inhibition with example. Mention any two consequences of each. (5)
- 6) Explain the mechanism of actions of drugs used in the treatment of Parkinsonism. (5)
- 7) Explain the mechanism of action General anesthetics. Mention various stages of general anesthesia. (5)

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